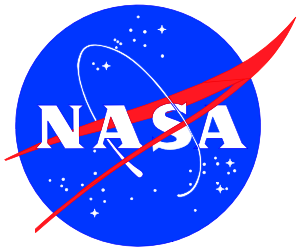
# CONTRACTORS ROAD HEAVY EQUIPMENT AREA
# SWMU 055
# CORRECTIVE MEASURES IMPLEMENTATION PROGRESS REPORT
# KENNEDY SPACE CENTER, FLORIDA

**Prepared for:**




**National Aeronautics and Space Administration**
**Kennedy Space Center, Florida**

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**Revision 1**

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## PROFESSIONAL CERTIFICATION AND APPROVAL

Based on the information contained in the attached document titled Contractor's Road Heavy Equipment Area SWMU055 Correctives Measures Implementation Progress Report dated August 2015, I hereby certify that the scope of work described in the above-referenced document was performed in accordance with appropriate hydrogeologic standards of practice.

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# ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| ADP | Advanced Data Package |
| BLS | Below Land Surface |
| cDCE | cis-1,2-Dichloroethene |
| CMS | Corrective Measure Study |
| CMI | Corrective Measures Implementation |
| CRHE | Contractor's Road Heavy Equipment |
| CVOC | Chlorinated Volatile Organic Compound |
| 1,1-DCE | 1,1-Dichloroethene |
| DPT | Direct-Push Technology |
| EE | Engineering Evaluation |
| EVS | Environmental Visualization System |
| EZVI | Emulsified Zero-Valent Iron |
| ft | feet |
| FDEP | Florida Department of Environmental Protection |
| GCTL | Groundwater Cleanup Target Level |
| HCP | High Concentration Plume |
| HS | Hot Spot |
| HS1 | Hot Spot 1 |
| HS2 | Hot Spot 2 |
| KEDD | KSC Electronic Data Deliverable |
| KSC | John F. Kennedy Space Center |
| LCP | Low Concentration Plume |
| LTM | Long-Term Monitoring |
| LUCIP | Land Use Control Implementation Plan |
| MIP | Membrane Interface Probe |
| MNA | Monitored Natural Attenuation |
| NADC | Natural Attenuation Default Criteria |
| NASA | National Aeronautics and Space Administration |
| PCE | Tetrachloroethene |
| RCRA | Resource Conservation and Recovery Act |
| RFI | RCRA Facility Investigation |
| SVE | Soil Vapor Extraction |
| SWMU | Solid Waste Management Unit |
| SZ | Source Zone |
| TCE | Trichloroethene |

ABBREVIATIONS AND ACRONYMS (continued)

| | |
|---|---|
| VAB | Vehicle Assembly Building |
| VC | Vinyl Chloride |
| VOC | Volatile Organic Compound |

# SECTION I

# INTRODUCTION

This Corrective Measures Implementation (CMI) Progress Report, Revision 1, for Contractor's Road Heavy Equipment (CRHE) Area Solid Waste Management Unit (SWMU) Number 055 was prepared by Geosyntec Consultants (Geosyntec) for the National Aeronautics and Space Administration (NASA) under contract number NNK09CA02B, Delivery Order NNK09CA62D and Project Number PCN ENV-2324. This CMI Progress Report documents: (i) activities conducted as part of supplemental assessment activities completed from June 2009 through November 2014; (ii) Engineering Evaluation (EE) Advanced Data Packages (ADPs); and (iii) recommendations for future activities related to corrective measures at the Site.

Applicable meeting minutes are provided as Appendix A. The following EE ADPs for CRHE are included with this CMI Progress Report:

- Supplemental Site Characterization ADP (Step 1 EE) (Appendix B)
- Site Characterization ADP (Step 1 EE) for Hot Spot 1 (HS1) (Appendix C)
- Remedial Alternatives Evaluation (Step 2 EE) ADP for HS1 (Appendix D)
- Interim Measures Work Plan (Step 3 EE) ADP for HS1 (Appendix E)
- Site Characterization ADP (Step 1 EE) ADP for Hot Spot 2 (HS2), High Concentration Plume (HCP), and Low Concentration Plume (LCP) (Appendix F)

A summary of direct-push technology (DPT) and groundwater monitoring well sampling results are provided in Appendices G and H, respectively. The Interim Land Use Control Implementation Plan (LUCIP) is provided as Appendix I. Monitoring well completion reports, other applicable field forms, survey data, and analytical laboratory reports are provided as Appendices J through M, respectively, in the electronic copy of this document. Selected Site photographs are provided in Appendix N. The interim groundwater monitoring plan and document revision log are included as Appendices O and P, respectively. KSC Electronic Data Deliverable (KEDD) files are provided on the attached compact disk.

# SECTION II

# SITE LOCATION AND BACKGROUND

## 2.1 SITE LOCATION AND OVERVIEW

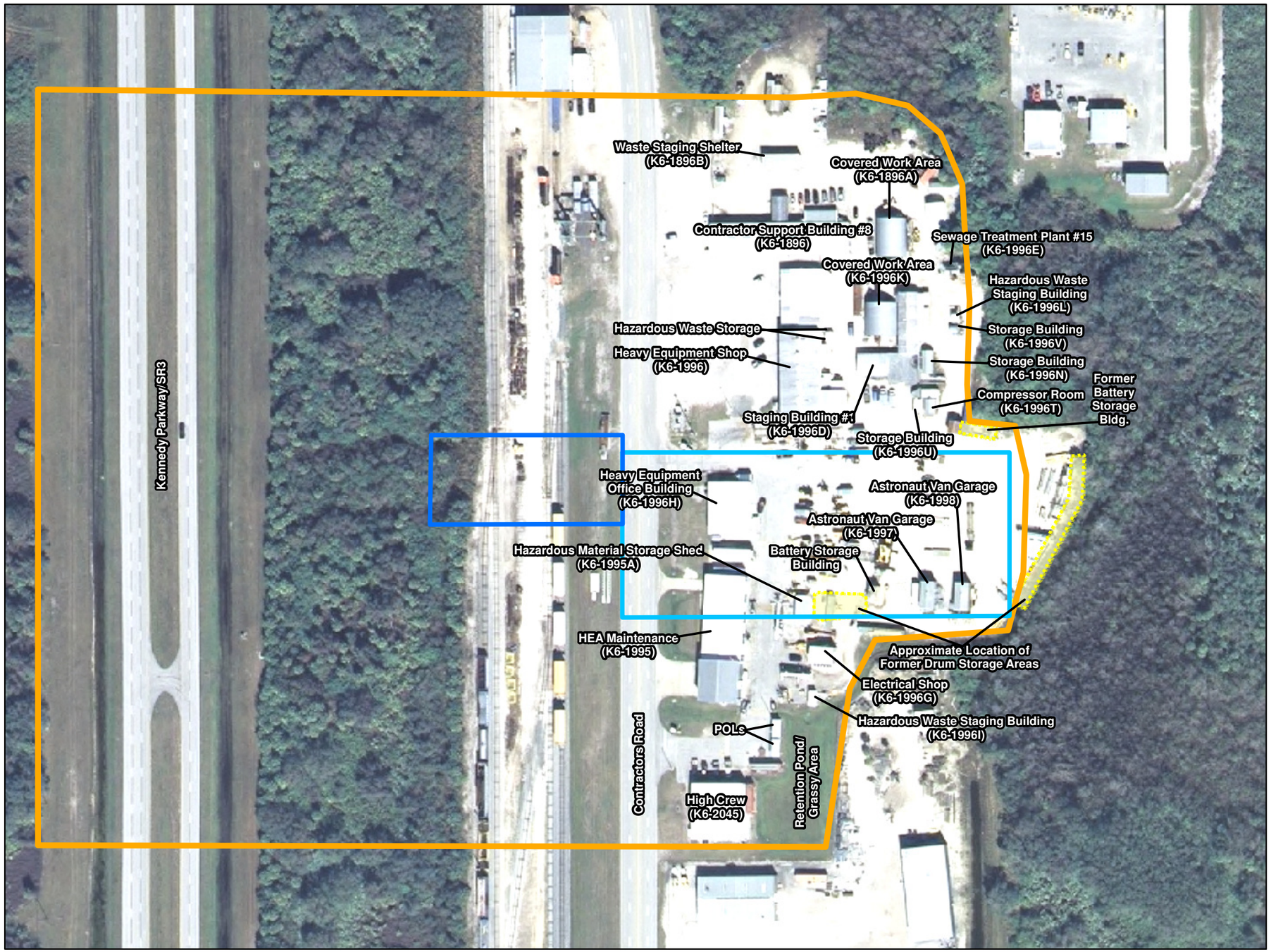
The CRHE Area is located at the John F. Kennedy Space Center (KSC), Florida, and includes SWMU Number 055 under KSC's Resource Conservation and Recovery Act (RCRA) Corrective Action program. The area encompassed by SWMU055 is approximately 23 acres in size and is located east of Highway 3 on either side of Contractor's Road approximately one-half mile north of Schwartz Road. The CRHE Area has been used for a variety of operations including heavy equipment storage and maintenance dating back to the construction of NASA's Vehicle Assembly Building (VAB), and for staging of regulated and hazardous waste. Currently, the CRHE Area is used for heavy equipment storage and maintenance; hazardous wastes are no longer stored on Site. The area consists of numbered buildings and support structures, including the Heavy Equipment Maintenance Shop (K6-1995), Hazardous Material Storage Shed (K6-1995A), Heavy Equipment Office Building (K6-1996H), Battery Storage Building (K6-1996M), and Astronaut Van Garages (K6-1997) (Figure 2-1). Portions of the Site are paved, but the majority of the Site is gravel or dense woods/wetlands. There are many underground utilities at the Site and thick road base in some areas to support the movement and storage of heavy equipment at the Site.

## 2.2 SITE BACKGROUND AND RCRA FACILITY INVESTIGATION SUMMARY

A RCRA Facility Investigation (RFI) was performed in the 1990s to characterize the nature and extent of environmental impacts through soil, sediment, surface water, and groundwater sampling. Volatile organic compounds (VOCs) were detected above regulatory screening criteria in nine of seventeen shallow and intermediate monitoring wells. Additional locations were selected for groundwater sampling using a Waterloo Profiler sampler driven by a DPT rig to further characterize the extent of VOC groundwater impacts. Based on DPT sampling results, four additional intermediate monitoring wells were installed resulting in a permanent well network consisting of 15 shallow monitoring wells, screened between 0.5 and 17 feet (ft) below land surface (BLS), and five intermediate monitoring wells, screened between 30 and 50 ft BLS. An approximate five acre plume was identified, with the highest concentrations observed between 15 and 45 ft BLS; however, no source area was identified. During these activities, some Site monitoring wells were sampled and analyzed for 1,4-dioxane. The results were non-detect with detection limits elevated over the Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Level (GCTL).

In 2000, the Corrective Measure Study (CMS) Report concluded that chlorinated volatile organic compounds (CVOCs) were attenuating and the vinyl chloride (VC) GCTL would be met in approximately ten years, resulting in no recommendations for active corrective measures. The selected remedy was monitored natural attenuation (MNA) with groundwater monitoring, which was conducted from 2001 to 2008, with incorporation of the Site into the VAB long-term monitoring (LTM) program in 2005.

Increasing concentrations of cis-1,2-dichloroethene (cDCE) and VC were observed in CRHE-IW0019I from 2007 to 2009 and supplemental assessment activities were recommended to further evaluate the presence and source(s) of CVOCs in groundwater at the Site. In May 2010, the team approved discontinuing groundwater monitoring under the VAB LTM program at the Site until further assessment was completed.




Note: Historical Site Features were obtained from the 1999 RFI Report.

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Figure 2-1
Site Map

# SECTION III

# SUPPLEMENTAL ASSESSMENT ACTIVITIES

## 3.1 OVERVIEW

Supplemental assessment activities were conducted by Geosyntec from June 2009 through November 2014 to evaluate Site lithology and refine the delineation of the horizontal and vertical extents of the CVOC impacts to groundwater. Results of the supplemental assessment activities were presented to the Team in Step 1 ADPs presented during the June 2012, December 2013, and April 2015 Team Meetings which are provided in Appendices B, C, and F, respectively. The supplemental assessment included the following activities:

- Advancement of seven soil borings to an approximate maximum depth of 80 ft BLS to evaluate Site lithology.
- Collection of 2,338 DPT groundwater samples from 363 locations for mobile laboratory analysis of CVOCs (analytical results from DPT sampling are summarized in Appendix G).
- Collection of two membrane interface probe (MIP) profiles for subsurface detection of CVOCs and identification of the likely distribution of mass in the SZ.
- Installation and development of 18 new monitoring wells to augment the existing monitoring well network, including installation of CRHE-MW0040 (installed by others) to evaluate potential dragdown in the source area.
- Collection of three rounds of comprehensive water level measurements.
- Collection of groundwater samples from 25 monitoring wells during the 2012 groundwater sampling event and from monitoring well CRHE-MW0040 in July 2013 with laboratory analysis of the samples for CVOCs (analytical results from monitoring well sampling are summarized in Appendix H).
- Incorporation of groundwater assessment results into a comprehensive Site-wide Environmental Visualization Software (EVS) model to create isosurface contours and cross sections of CVOC impacts.

Monitoring well construction details are provided in Table 3-1 and the survey data and groundwater elevations are provided in Table 3-2. The monitoring well results for field water quality parameters are provided in Table 3-3.

## 3.2 SUMMARY OF SITE CONDITIONS

### 3.2.1 SITE LITHOLOGY

Lithologic conditions at the Site are generally consistent with conditions encountered at other KSC sites in the vicinity. The underlying lithology generally consists of: (i) medium sand and silty sand of varying color in the upper 8 to 10 ft BLS; (ii) fine to medium sand with shell from approximately 8 to 15 ft BLS; (iii) black and grey fine sand with increasing amounts of shell from approximately 15 to 50 ft BLS; (iv) grey silty sand with varying amounts of clay and shell from approximately 50 to approximately 77 ft BLS; and (v) fine silty sand with shell fragments from approximately 77 ft BLS to the maximum depth of penetration (80 to 82 ft BLS).

Overall, the lithology at the Site is primarily sand from ground surface to approximately 50 ft BLS, where the lithology transitions to a silty sand with varying amounts of clay. The silty sand with varying amounts of clay layer acts as a semi-confining layer beneath the Site. The lithology transition is based on visual observations, MIP results, and correlating DPT groundwater results.

### 3.2.2 SITE HYDROGEOLOGY

The permanent groundwater monitoring network for the Site is shown on Figure 3-1. Groundwater zones for this Site have been defined as follows: (i) shallow groundwater less than 15 ft BLS; (ii) intermediate groundwater from 25 to 50 ft BLS; and (iii) deep groundwater from 60 to 70 ft BLS. Water levels were collected in March 2012 and July 2013 to evaluate the groundwater flow in the shallow, intermediate, and deep groundwater zones at the Site.

Groundwater flow in the shallow zone (less than 15 ft BLS) was to the west in March 2012. Shallow groundwater flow has been influenced by wetlands that surround the Site to the north, east, and west; therefore, easterly shallow groundwater flow as seen in July 2013 is not unexpected. Shallow groundwater elevations varied from 0.27 to 0.98 ft BLS in March 2012 and from 2.96 to 1.94 ft BLS in August 2013. Groundwater flow in the intermediate zone (25 to 50 ft BLS) is generally to the west and southwest. The deep groundwater flow is toward the southwest (based on data from three monitoring wells). Groundwater flow velocity is estimated to be 28 ft/year in the shallow zone and 69 ft/year in the intermediate zone (based on specific capacity tests on shallow and intermediate wells during RFI).

The average horizontal groundwater gradient across the Site was estimated based on 2013 groundwater elevation data to be 0.015 ft/ft in the eastern shallow zone (based on well pair CRHE-IW0009S/CRHE-MW0024) and 0.001 ft/ft in the western shallow zone (based on well pair CRHE-IW0004S/CRHE-MW0030), 0.004 ft/ft for the intermediate zone (based on well pair CRHE-IW0004I/CRHE-MW0029), and 0.001 ft/ft for the deep zone (based on well pair CRHE-IW0014D/CRHE-MW0022).

### 3.2.3 SUMMARY OF SOIL CONDITIONS

As documented in FDEP's letter dated 25 February 2014, there are no identified soil issues and no further actions associated with soil at the Site are required.

### 3.2.4 SUMMARY OF GROUNDWATER IMPACTS

High frequency DPT groundwater sampling was conducted with the objective of vertical and horizontal delineation of: (i) LCP (CVOC concentrations greater than GCTLs); (ii) HCP (CVOC concentrations greater than Natural Attenuation Default Criteria [NADC]); (iii) hot spots (HSs) (CVOC concentrations greater than 10xNADCs); and (iv) the source zone (SZ) (approximate 1% TCE solubility or TCE concentrations greater than 11,000 micrograms per liter [µg/L]). Groundwater sampling activities completed to date delineated a site-wide LCP, separate HCPs in the northern and southern portions of the Site, and two HSs in the southern portion of the Site (Figure 3-2). Based on results from assessment activities conducted to date, impacts to the Site groundwater consist primarily of TCE, cDCE, and VC. The only other constituent detected at a concentration above its GCTL during supplemental assessment activities was 1,1-dichlorothene (1,1-DCE).

The LCP covers approximately 15 acres and extends from the eastern side of operational facilities along Contractor's Road to the western side of Kennedy Parkway. Groundwater impacts in the LCP are present from approximately 8 to 70 ft BLS.

The northern HCP is approximately one and a half acres and the southern HCP is approximately three acres for a combined area of approximately four and a half acres. CVOC impacts in the northern HCP are present from approximately 26 to 65 ft BLS and in the southern HCP from approximately 8 to 60 ft BLS. Maximum CVOC concentrations in groundwater samples from the northern HCP were: cDCE at 2,100 µg/L in DPT0036; and VC at 910 µg/L in DPT0036. TCE was not detected above laboratory reporting limits in the northern HCP. Maximum CVOC concentrations in groundwater samples from the southern HCP were: TCE at 3,000 µg/L in DPT0092; cDCE at 6,900 µg/L in DPT0211; and VC at 1,000 µg/L in DPT0220.

HS1, which encompasses approximately three acres, was defined to incorporate the identified TCE SZ. CVOC impacts are present from 8 to 50 ft BLS; however, the contaminant mass is concentrated from 36 to 40 ft BLS. MIP results correlate well with DPT groundwater data and observed Site lithology. Maximum concentrations observed in DPT groundwater samples collected from the HS1 area included TCE at 160,000 µg/L in DPT072, cDCE at 110,000 µg/L in DPT200, and VC at 19,000 µg/L in DPT200. CRHE-MW0040 was installed in the SZ (co-located with DPT072) to evaluate potential dragdown in this area and the non-detect results for VOCs confirmed the vertical delineation within the SZ. Within the HS1 area, the area with TCE

SZ concentrations covers 0.06 acres, the area with concentrations greater than 10xNADC (i.e., HS) is 0.43 acres, the area with concentrations greater than NADC (i.e., HCP) covers 0.78 acres, and the area with concentrations greater than GCTLs (i.e., LCP) covers 1.99 acres.

HS2 (cDCE and VC concentrations above 10xNADC), which covers approximately 0.5 acres, is also shown on Figure 3-2 and was defined as the area of cDCE and VC concentrations outside of HS1 exceeding 10xNADC. HS2 has CVOC impacts from 31 to 55 ft BLS, with the majority of the mass in the 31 to 45 ft BLS interval. The maximum DPT groundwater concentrations observed within the HS2 area include TCE at 3,400 µg/L in DPT0139, cDCE at 9,900 µg/L in DPT0231, and VC at 4,500 µg/L in DPT0271.

**Table 3-1. Monitoring Well Construction Details**
**Contractors Road Heavy Equipment Area SWMU 055**

| Well ID | TOC Elevation | Bottom of Screen (ft) | Top of Screen (ft) |
|---|---|---|---|
| CRHE-IW0001S | 5.74 | 13 | 3 |
| CRHE-IW0002S | 7.04 | 13 | 3 |
| CRHE-IW0003S | 5.83 | 12.5 | 2.5 |
| CRHE-IW0004I | 6.87 | 40 | 30 |
| CRHE-IW0004S | 6.98 | 13 | 3 |
| CRHE-IW0005S | 6.85 | 13 | 3 |
| CRHE-IW0006S | 5.64 | 12 | 2 |
| CRHE-IW0007S | 6.04 | 10.5 | 0.5 |
| CRHE-IW0008S | 5.52 | 12 | 2 |
| CRHE-IW0009S | 5.51 | 12 | 2 |
| CRHE-IW0010S | 4.46 | 11.5 | 1.5 |
| CRHE-IW0011S | 6.28 | 12 | 2 |
| CRHE-IW0012S | 6.65 | 12 | 2 |
| CRHE-IW0013S | 6.37 | 12.5 | 2.5 |
| CRHE-IW0014D | 5.23 | 70 | 65 |
| CRHE-IW0014I | 6.72 | 45 | 35 |
| CRHE-IW0015I | 6.41 | 45 | 35 |
| CRHE-IW0016I | 5.72 | 45 | 35 |
| CRHE-IW0017I | 5.37 | 35 | 25 |
| CRHE-IW0018I | 4.57 | 45 | 35 |
| CRHE-IW0019I | 5.32 | 45 | 35 |
| CRHE-IW0020I | 5.42 | 50 | 40 |
| CRHE-IW0021I | 2.54 | 50 | 40 |
| CRHE-IW003M | 7.04 | 50 | 45 |
| CRHE-MW0022 | 4.6 | 70 | 60 |
| CRHE-MW0023 | 5.45 | 70 | 60 |
| CRHE-MW0024 | 4.00 | 15 | 5 |
| CRHE-MW0025 | 4.16 | 35 | 25 |
| CRHE-MW0026 | 4.36 | 40 | 30 |
| CRHE-MW0027 | 4.51 | 50 | 40 |
| CRHE-MW0028 | 5.58 | 45 | 35 |
| CRHE-MW0029 | 4.56 | 50 | 40 |
| CRHE-MW0030 | 5.26 | 15 | 5 |
| CRHE-MW0031 | 5.17 | 50 | 40 |
| CRHE-MW0032 | 5.78 | 50 | 40 |
| CRHE-MW0033 | 6.35 | 50 | 40 |
| CRHE-MW0034 | 5.4 | 40 | 30 |
| CRHE-MW0035 | 5.34 | 50 | 40 |
| CRHE-MW0036 | 4.92 | 15 | 5 |
| CRHE-MW0037 | 5.07 | 35 | 25 |
| CRHE-MW0038 | 3.23 | 15 | 5 |
| CRHE-MW0039 | 3.22 | 35 | 25 |
| CRHE-MW0040 | NS | 75 | 65 |

**Notes**:
1. ft indicates feet.
2. TOC indicates top of casing.
3. NS indicates not surveyed.

**Table 3-2. Monitoring Well Survey Data and Groundwater Elevations**
**Contractors Road Heavy Equipment Area SWMU 055**

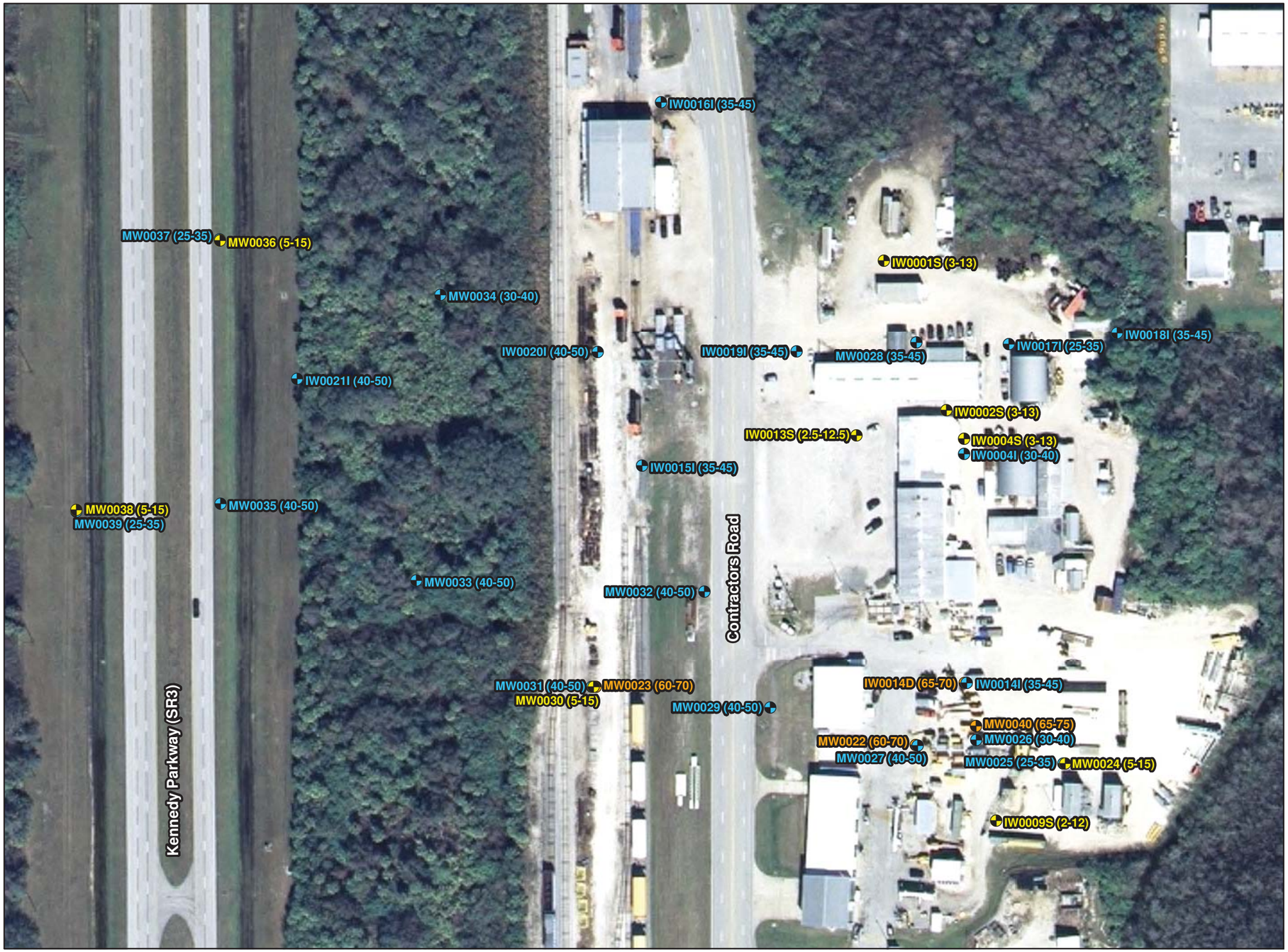
| Well ID | TOC Elevation | 20-Mar-12 | | 11-Jul-13 | |
|---|---|---|---|---|---|
| | | Depth to Water (ft) | Groundwater Elevation (ft) | Depth to Water (ft) | Groundwater Elevation (ft) |
| CRHE-IW0001S | 5.74 | 3.67 | 2.07 | NM | |
| CRHE-IW0002S | 7.04 | 4.84 | 2.20 | 3.46 | 3.58 |
| CRHE-IW0003S | 5.83 | NM | | NM | |
| CRHE-IW0004I | 6.87 | 4.71 | 2.16 | 3.38 | 3.49 |
| CRHE-IW0004S | 6.98 | 4.73 | 2.25 | 3.35 | 3.63 |
| CRHE-IW0005S | 6.85 | NM | | NM | |
| CRHE-IW0006S | 5.64 | NM | | NM | |
| CRHE-IW0007S | 6.04 | NM | | NM | |
| CRHE-IW0008S | 5.52 | NM | | NM | |
| CRHE-IW0009S | 5.51 | 3.35 | 2.16 | 2.11 | 3.40 |
| CRHE-IW0010S | 4.46 | NM | | NM | |
| CRHE-IW0011S | 6.28 | NM | | NM | |
| CRHE-IW0012S | 6.65 | NM | | NM | |
| CRHE-IW0013S | 6.37 | 4.30 | 2.07 | 2.87 | 3.50 |
| CRHE-IW0014D | 5.23 | 4.35 | 0.88 | 3.05 | 2.18 |
| CRHE-IW0014I | 6.72 | 4.50 | 2.22 | 3.20 | 3.52 |
| CRHE-IW0015I | 6.41 | 4.45 | 1.96 | NM | |
| CRHE-IW0016I | 5.72 | 3.80 | 1.92 | NM | |
| CRHE-IW0017I | 5.37 | 4.43 | 0.94 | NM | |
| CRHE-IW0018I | 4.57 | 3.67 | 0.90 | NM | |
| CRHE-IW0019I | 5.32 | 4.52 | 0.80 | NM | |
| CRHE-IW0020I | 5.42 | 4.79 | 0.63 | NM | |
| CRHE-IW0021I | 2.54 | 2.15 | 0.39 | NM | |
| CRHE-IW003M | 7.04 | NM | | NM | |
| CRHE-MW0022 | 4.60 | 3.81 | 0.79 | 2.51 | 2.09 |
| CRHE-MW0023 | 5.45 | 4.03 | 1.42 | 3.49 | 1.96 |
| CRHE-MW0024 | 4.00 | 3.19 | 0.81 | 2.06 | 1.94 |
| CRHE-MW0025 | 4.16 | 3.34 | 0.82 | 2.13 | 2.03 |
| CRHE-MW0026 | 4.36 | 3.58 | 0.78 | NM | |
| CRHE-MW0027 | 4.51 | 3.73 | 0.78 | 2.42 | 2.09 |
| CRHE-MW0028 | 5.58 | 4.84 | 0.74 | NM | |
| CRHE-MW0029 | 4.56 | 3.86 | 0.70 | 2.47 | 2.09 |
| CRHE-MW0030 | 5.26 | 4.70 | 0.56 | 2.30 | 2.96 |
| CRHE-MW0031 | 5.17 | 4.67 | 0.50 | 3.17 | 2.00 |
| CRHE-MW0032 | 5.78 | 5.12 | 0.66 | 3.69 | 2.09 |
| CRHE-MW0033 | 6.35 | 5.68 | 0.67 | NM | |
| CRHE-MW0034 | 5.40 | 4.92 | 0.48 | NM | |
| CRHE-MW0035 | 5.34 | 4.97 | 0.37 | NM | |
| CRHE-MW0036 | 4.92 | 4.62 | 0.30 | NM | |
| CRHE-MW0037 | 5.07 | 4.75 | 0.32 | NM | |
| CRHE-MW0038 | 3.23 | 2.96 | 0.27 | NM | |
| CRHE-MW0039 | 3.22 | 3.00 | 0.22 | NM | |
| CRHE-MW0040 | NS | not installed | | 2.32 | NS |

**Notes**:
1. ft indicates feet.
2. TOC indicates top of casing.
3. NM indicates not measured.
4. NS indicate not surveyed.
5. Elevations are reported in ft referenced to National American Vertical Datum (NAVD), 1988.

**Table 3-3. Monitoring Well Geochemical Parameters**
**Contractors Road Heavy Equipment Area SWMU 055**

| Well ID | Date | Temperature (°C) | pH (Standard Units) | Conductivity (µS/cm) | Turbidity (NTU) | ORP (mV) | Dissolved Oxygen (mg/L) | Color |
|---|---|---|---|---|---|---|---|---|
| CRHE-IW0014I | 3/21/2012 | 25.13 | 7.15 | 0.631 | 11.5 | -70.5 | 0.19 | clear |
| CRHE-IW0015I | 3/19/2012 | 23.92 | 6.9 | 0.715 | 4.9 | 87.2 | 0.54 | clear |
| CRHE-IW0017I | 3/20/2012 | 24.62 | 7.72 | 1.443 | 1.2 | -112.0 | 1.15 | clear |
| CRHE-IW0019I | 3/20/2012 | 23.97 | 7.35 | 1.275 | 13.2 | -91.5 | 2.50 | clear |
| CRHE-IW0020I | 3/19/2012 | 24.17 | 7.14 | 2.330 | 7.1 | -86.4 | 0.42 | clear |
| CRHE-IW0021I | 3/20/2012 | 25.05 | 7.59 | 1.649 | 26.1 | -126.1 | 0.71 | clear |
| CRHE-MW0022 | 3/21/2012 | 25.70 | 7.12 | 2.036 | 9.4 | -100.2 | 0.73 | clear |
| CRHE-MW0023 | 3/19/2012 | 25.55 | 7.63 | 1.536 | 3.4 | -42.1 | 0.58 | clear |
| CRHE-MW0024 | 3/21/2012 | 24.48 | 7.98 | 3.336 | 1.7 | -180.6 | 0.46 | clear |
| CRHE-MW0025 | 3/21/2012 | 22.54 | 7.18 | 0.336 | 15.0 | 6.3 | 0.66 | clear |
| CRHE-MW0026 | 3/21/2012 | 23.42 | 7.23 | 0.509 | 12.2 | -39.6 | 0.25 | clear |
| CRHE-MW0027 | 3/21/2012 | 24.11 | 7.22 | 0.602 | 14.2 | -69.5 | 0.20 | clear |
| CRHE-MW0028 | 3/20/2012 | 25.59 | 7.31 | 0.902 | 35.1 | -30.2 | 0.40 | clear |
| CRHE-MW0029 | 3/21/2012 | 24.47 | 7.58 | 1.369 | 18.4 | -165.2 | 0.30 | clear |
| CRHE-MW0030 | 3/19/2012 | 24.48 | 7.22 | 1.092 | 5.0 | 1.1 | 0.30 | clear |
| CRHE-MW0031 | 3/19/2012 | 23.65 | 7.24 | 1.295 | 24.5 | -122.8 | 0.37 | clear |
| CRHE-MW0032 | 3/19/2012 | 24.71 | 7.53 | 3.108 | 8.7 | -121.3 | 0.54 | clear |
| CRHE-MW0033 | 3/20/2012 | 26.21 | 7.39 | 2.357 | 12.2 | -172.9 | 0.75 | clear |
| CRHE-MW0034 | 3/20/2012 | 25.05 | 7.37 | 1.955 | 13.9 | -206.1 | 0.15 | clear |
| CRHE-MW0035 | 3/20/2012 | 23.8 | 7.55 | 1.595 | 16.8 | -210.1 | 0.62 | clear |
| CRHE-MW0036 | 3/20/2012 | 25.10 | 7.26 | 2.010 | 12.5 | -111.9 | 0.25 | clear |
| CRHE-MW0037 | 3/20/2012 | 25.10 | 7.75 | 0.361 | 12.1 | -143.5 | 0.73 | clear |
| CRHE-MW0038 | 3/19/2012 | 24.05 | 7.51 | 0.860 | 60.0 | -240.3 | 1.00 | clear |
| CRHE-MW0039 | 3/19/2012 | 25.23 | 7.25 | 1.604 | 12.5 | -175.6 | 0.19 | clear |

**Notes**:
1. °C indicates degrees Celsius.
2. µS/cm indicates microsiemens per centimeter.
3. NTU indicates Nephelometric Turbidity Units.
4. ORP indicates oxidation reduction potential.
5. mV indicates millivolts.
6. mg/L indicates milligrams per liter.




N

120 60 0 120

Feet

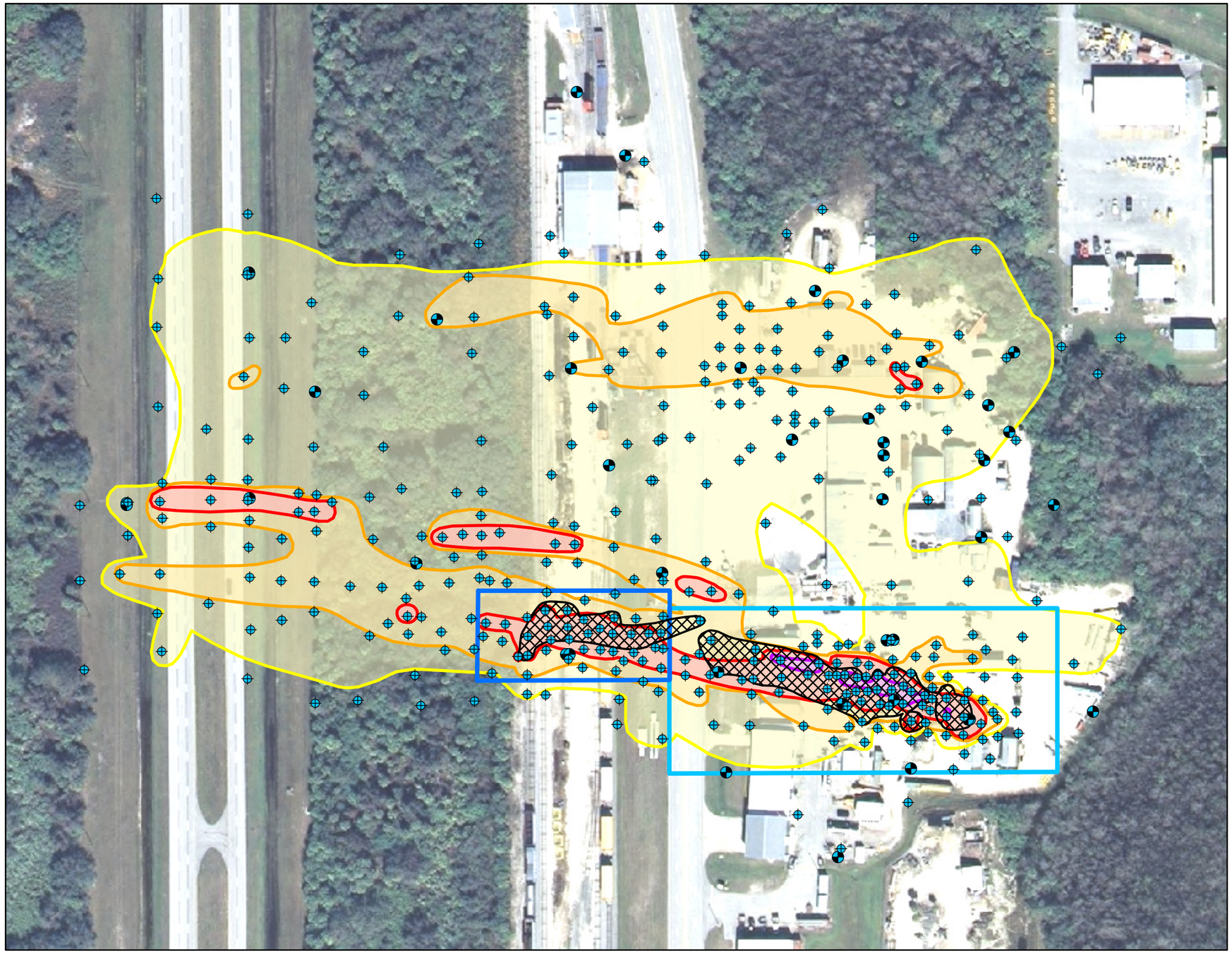
**Legend**

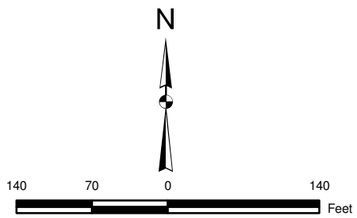
- Shallow Monitoring Well Location showing (Screen Interval)
- Intermediate Monitoring Well Location showing (Screen Interval)
- Deep Monitoring Well Location showing (Screen Interval)

Note:
1. Screen interval is presented in feet, below land surface (ft, BLS).

Path: (Titusville-01\Data\)T:\0GIS\FR1681_CRHE\MXDs\AUG2013\GW_network_AUG2013.mxd 21 August 2013 JRB

Figure 3-1
Monitoring Well Network






**Legend**

- DPT Location
- Monitoring Well Location
- Hot Spot 2
- Hot Spot 1
- Low Concentration Plume (Concentrations Greater than GCTL)
- High Concentration Plume (Concentrations Greater than NADC)
- TCE High Concentration Plume
- Hot Spot (Concentrations Greater than 10X NADC)
- Approximate 1% TCE Solubility

| Site Plumes | Site Area (acres) |
|---|---|
| Low Concentration Plume (Concentrations Greater than GCTL) | 14.90 |
| High Concentration Plume (Concentrations Greater than NADC) | 4.37 |
| TCE High Concentration Plume | 0.63 |
| Hot Spot (Concentrations Greater than 10X NADC) | 1.01 |
| Approximate 1% TCE Solubility (TCE Concentrations Greater than 11,000 µg/L) | 0.06 |

Notes:
1. GCTL indicates Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Level.
2. NADC indicates FDEP Natural Attenuation Default Concentration.

Path: (Titusville-01\Data\)P:\0GIS\FR1681_CRHE\MXDs\JAN2015\Greater_GCTL_NADC_10XNADC_JAN2015.mxd 23 Mar 2015 MAH

Figure 3-2
Overall Extent of Groundwater Isopleths at CRHE
3-11/3-12

# SECTION IV

# OVERVIEW OF ENGINEERING EVALUATIONS

## 4.1 SUPPLEMENTAL SITE CHARACTERIZATION

Supplemental site assessment activities conducted across the Site were presented during the June 2012 KSCRT Meeting (Appendix B). Groundwater impacts were identified between 8 and 50 ft BLS with the maximum concentrations at 36 to 40 ft BLS. Separate HCPs were identified in the northern and southern portions of the Site. A TCE SZ was identified in the southern HCP. Additional DPT sampling was recommended to address sample location spacing and data gaps Site-wide and in the SZ. Team consensus was reached during the June 2012 Team Meeting to proceed with DPT groundwater sampling to fill data gaps.

## 4.2 SITE CHARACTERIZATION OF HOT SPOT 1

Site characterization of HS1 was presented during the December 2013 KSCRT Meeting (Appendix C). Team consensus was reached that delineation was complete within HS1 for the following areas: (i) source zone (TCE greater than 11,000 µg/L); (ii) TCE and cDCE greater than 10xNADC; (iii) TCE greater than NADC; and (iv) TCE greater than GCTL. Team consensus was also reached that: (i) cDCE HCP and LCP plumes are co-mingled with adjacent HS areas and that delineation within HS1 is complete; and (ii) VC HCP and LCP plumes are co-mingled with adjacent HS areas and that delineation within HS1 is complete. Additional delineation was specified as ongoing for the LCP, HCP and HS2.

A summary of site conditions that will potentially affect the remedial technology selection and design was also presented and included the presence of buildings and site structures, the high level of activity at the Site, the downgradient edge of the 10xNADC plume extending under a building, and the presence of thick road base in some areas. A remedial technology screening summary was presented for the SZ and HS1. Engineering data gap sampling was proposed for four wells down the plume centerline and across the Site with analysis of dissolved gases, sulfate, sulfide, *Dehalococcoides*, *VC Reductase*, VOCs, and 1,4-dioxane. Team consensus was also reached to proceed with the Remedial Alternatives Evaluation for HS1.

## 4.3 REMEDIAL ALTERNATIVES EVALUATION FOR HOT SPOT 1

A remedial alternatives evaluation (Step 2 EE) for HS1 was presented during the February 2014 KSCRT Meeting (Appendix D). During this presentation, preliminary designs for remedial technologies used to treat either the source zone or the 10xNADC plume were presented. The technologies evaluated for source zone (TCE concentrations > 1% solubility) remediation included: (i) air sparge and soil vapor extraction (SVE); (ii) bioremediation using emulsified oil;

and (iii) injection of emulsified zero-valent iron (EZVI). The technologies evaluated for 10xNADC plume remediation included: (i) air sparge and soil vapor extraction; (ii) bioremediation using emulsified oil with groundwater recirculation and passive venting beneath the building present above the 10xNADC plume; and (iii) injection of EZVI within the source zone and bioremediation using emulsified oil within the 10xNADC plume with groundwater recirculation and passive venting beneath the building present above the 10xNADC plume. Team consensus was reached to proceed with a bioremediation design within the source zone area.

## 4.4 INTERIM MEASURES WORK PLAN FOR HOT SPOT 1

An interim measures work plan for HS1 was presented during the May 2014 KSCRT Meeting (Appendix E). During this presentation, a design for the bioremediation of the source zone area was presented. The design called for the injection of approximately 71 drums of emulsified vegetable oil (SRS®-SD was used for the design), diluted to a 1:80 ratio with anaerobic water, at 29 locations of varying depth intervals (14 to 50 ft BLS), as well as the installation of eight monitoring wells. Team consensus was reached on the initial design with minor revisions to the following: (i) modifying language regarding vendors so that any vendor can be used; (ii) clarifying that injection locations will be grouted; (iii) increasing monitoring well pad size and reinforcement; (iv) including specific monitoring wells for mounding monitoring during injection activities; (v) removing the Step 4B EE from cost estimates; and (vi) providing coordinates for DPT injection locations.

## 4.5 SITE CHARACTERIZATION OF HOT SPOT 2, HIGH CONCENTRATION PLUME, & LOW CONCENTRATION PLUME

Site-wide characterization (including HS2, HCP and LCP) was presented during the April 2015 KSCRT Meeting (Appendix F). Team consensus was reached that delineation was complete for the following areas: (i) TCE, cDCE, and VC within HS2; (ii) TCE, cDCE, and VC greater than NADC; and (iii) TCE, cDCE, and VC greater than GCTL.

A summary of site conditions that may affect remedial technology selection and design was also presented and included the presence of wetlands, railroads, a drainage ditch, roadways, buildings and site structures, the high level of activity at the Site, the downgradient edge of the 10xNADC plume extending under a building, and the presence of thick road base in some areas. A remedial technology screening summary was presented for HS2 and HCP. Team consensus was reached to proceed with a Step 2 EE of the retained remedial technologies.

The interim groundwater monitoring plan was also presented during the April 2015 KSCRT Meeting. Team consensus was reached to install two supplemental monitoring wells and sample select existing monitoring wells on an annual basis (Appendix O).

# SECTION V

# RECOMMENDATIONS

Remedial technologies to be evaluated during the Step 2 for HS2, HCP, and LCP include: (i) bioremediation (with the option for recirculation) and air sparging in HS2 and HCP; and (ii) monitored natural attenuation for LCP.

The interim groundwater monitoring plan, presented during the April 2015 KSCRT meeting, includes annual sampling of select Site monitoring wells.

# APPENDIX A

# APPLICABLE REMEDIATION TEAM MEETING MINUTES

| | | |
|---|---|---|
| 1206-M14 | Jill Johnson/ Geosyntec | Contractor's Road Heavy Equipment Area (SWMU 55)<br>**Goal**: Present Step 1A and proposed additional assessment<br>**Discussion**: Groundwater impacts were observed between 8 and 50 ft BLS with the maximum concentrations at 36 to 40 ft BLS. There are separate high concentration plumes identified on the northern and southern portions of the site. A TCE source zone was identified in the southern portion of the site. Additional DPT sampling is proposed to address sample location spacing concerns as well as data gaps. Path forward following additional sampling efforts will be to supplemental sampling results and Step 1B. Team consensus reached on proposed DPT locations as presented at the June 2012 team meeting.<br>**Results**: Decision item 1206-D31 |

| | | |
|---|---|---|
| 1312-M02 | Jill Johnson/ Geosyntec | Contractor's Road Heavy Equipment Area (SWMU 055)<br>**Goal:** Present Step 1 Engineering Evaluation<br>**Discussion:** Focus of presentation is Hot Spot 1 (HS1), which is approximately 3 acres in size. In June 2012, Step 1 EE for the entire site was presented to the Team. Additional sampling was recommended. Additional delineation is ongoing for the LCP, HCP and Hot Spot 2.<br>HS1 supplemental assessment activities included one MIP profile, 745 DPT groundwater samples from 94 locations, water level measurements, lithology borings, and monitoring well installation and sampling (deep well for vertical delineation).<br><br>The lithology at the site is generally sand with shell hash from approximately 15 to 45 or 50 ft BLS and a silty sand with clay at approximately 50 ft BLS.<br><br>The groundwater flow maps were revised and provided to the Team. Groundwater flow in the shallow zone (less than 15 ft BLS) is variable and influenced by the wetlands that surround the site to the north, west, and east. The groundwater flow in the intermediate zone (25 to 50 ft BLS) is generally to the west and southwest. The deep groundwater flow is towards the southwest, but only based on three monitoring wells. Groundwater flow velocity in the intermediate zone is approximately 69 ft/yr.<br><br>MIP results show that the main interval of groundwater impacts are from 35 to 45 ft BLS, which correlate with the DPT groundwater data.<br><br>In HS1 the source zone is defined as 11,000 ppb because this represents the area where DNAPL could be present. Impacts are generally from 8 to 50 ft BLS. The source zone contaminant mass is mainly 30 to 46 ft BLS. Monitoring well MW40 provides delineation vertically.<br><br>Mass estimates revised for the presentation to include hand calculations and EVS calculations showed that a large range of mass could be present at the site (total CVOC mass range of 27 to 223 lbs). Within HS1, the source zone is 0.4 acres and represents 4 to 12% of mass. |

Team consensus reached that delineation is complete within HS1 for the following: (i) the source zone (TCE greater than 11,000 ppb), (ii) TCE and cDCE greater than 10x NADC, (iii) TCE greater than NADC; and (iv) TCE greater than GCTL. Mike is uncomfortable with the delineation around the building, the utility corridor and area where the thicker road base is and sees this as a data gap.

Team consensus reached that the 1% solubility of TCE is the source zone (SZ).

Team consensus reached that in the SZ technologies to be evaluated include EZVI, bioremediation and air sparging/SVE and that in the CVOC 10X NADC area technologies to be evaluated include EZVI (1% solubility) with bioremediation in the remaining area within 10X NADC, bioremediation, and air sparge/SVE.

**Results**: Decision items 1312-D04 through D06

| | | |
|---|---|---|
| 1402-M06 | Rebecca Daprato/ Geosyntec | Contractor's Road Heavy Equipment Area (SWMU 55)<br>**Goal**: Present EE Step 2 and obtain team consensus on treatment area (Overall 10X NADC or Source Zone) and technology for Interim Measures.<br>**Discussion**: Impacts in Hot Spot 1 are generally from 8 to 50 ft BLS, with maximum concentrations of TCE of 160,000 µg/L (DPT0072 36 to 40 ft BLS), cDCE of 110,000 µg/L (DPT0200 26 to 30 ft BLS), and VC of 19,000 µg/L (DPT0200 31 to 35 ft BLS). The Step 1 EE defined the source zone as the area with TCE greater than 1% solubility (11,000 µg/L). Source zone contaminant mass is mainly 30 to 46 ft BLS, with 60% of the mass in this zone. The inferred source zone contour, as presented in this ADP creates a single, more conservative source zone which was used for evaluation of treatment alternatives in consideration of likely subsurface distribution outside of the identified locations. The 10xNADC plume encompasses the area with TCE, cDCE, and VC greater than 10xNADC. Based on the geochemical parameters, there is strong evidence that biologically mediated reductive dechlorination is occurring at the site. The results of the sampling for 1,4-dioxane indicate that 1,4-dioxane is not an issue for remedial decision making. However, this parameter will be included in the future monitoring program.<br><br>Supplemental DPT groundwater sampling will be performed in 2014 as part of HCP and LCP delineation. Samples will be collected from under the Heavy Equipment Office Building and from within the roadway (Contractor's Road). This data will be incorporated into design (IM design report or the implementation work plan).<br><br>The Hot Spot 1 corrective action objective is to reduce CVOC concentrations within the treatment area to less than NADCs. NASA may elect to continue IM to GCTLs and/or some alternative asymptotic level based upon performance. The CAO for the site was discussed and reducing concentrations to NADC may not be the goal for the treatment area (1% TCE solubility or 10XNADC), since there are concentrations outside the treatment area above NADC. The CAO will be revised in the Step 3. |

Alternative 1A Air Sparge and SVE source zone: Installation of 13 air sparge (AS) wells via hollow stem auger. AS wells screened from approximately 48 to 50 ft BLS with spacing between wells of approximately 20 feet, with an approximate 20 ft ROI. 25-hp AS system operating one of two zones at a time. The alternative assumed use of mobile air sparge trailer #3 (conservative 25 hp compressor), capable of 190 scfm and 31.0 psi. Electric is available onsite from transformer located north of Heavy Equipment Office Building. Installation 11 SVE chambers to capture vapors in treatment area. Purchase of an SVE system (10-hp) with GAC treatment of recovered vapors. This alternative includes 3 days of DPT groundwater sampling to evaluate system optimization or shut down. O&M will be conducted daily for first three days, weekly first month, monthly thereafter. Performance monitoring would consist of installation of 10 monitoring wells sampled quarterly for VOC analysis. Ambient air sampling program will be implemented, if AS/SVE is selected and implemented. A detailed description of the air sampling plan will be provided in the Step 3. Associated costs are minimal and are considered to be included in the O&M cost provided. The estimated time to achieve CAO is 2 to 3 years, with a total cost estimated at $465,000 to $561,000. Cost assumes the use of an existing mobile air sparge trailer.

Alternative 1B Air Sparge and SVE 10xNADC plume: Installation of 34 AS wells via hollow stem auger. AS wells screened from approximately 48 to 50 ft BLS. Five angle-drilled AS wells to be installed beneath Heavy Equipment Office Building. AS wells in the source zone and under the building were spaced at approximately 20 ft. In the 10XNADC ring, AS well spacing was approximately 30 feet. A 20 ft ROI is assumed. Use of mobile air sparge trailer #3 is assumed (conservative 25 hp compressor), capable of 190 scfm and 31.0 psi. Electric is available onsite from transformer located north of Heavy Equipment Office Building. Installation of 16 SVE chambers to capture vapors in treatment area. Purchase of an SVE system (10-hp) with GAC treatment of recovered vapors. Due to the utility corridor, hand augering to the water table will be required for well installation and hand digging for trenching. Included 5 days of DPT groundwater sampling to evaluate system optimization or shut down. O&M will be conducted

daily for first three days, weekly first month, monthly thereafter. Performance monitoring would consist of installation of 15 monitoring wells sampled quarterly for VOC analysis. The estimated time to achieve CAO is 2 to 3 years, with a total cost estimated at $699,000 to $821,000. Cost assumes the use of an existing mobile air sparge trailer and purchase of trailer-mounted SVE system.

Alternative 2A Bioremediation Source Zone: 29 DPT Injection points with electron donor injected from 20 to 50 ft BLS, with injection point spacing based on an 8 ft ROI. Injection of 33 drums of emulsified oil assumed, based on filling 0.5% pore volume with emulsified oil (conservative estimate based on possibility of DNAPL). Second injection (17 drums) of emulsified oil 24 months after initial event, based on filling 0.25% of pore volume with emulsified oil. Plan includes 3 days of DPT sampling to aid in design for second injection event. Performance monitoring consists of installing 10 wells to be sampled for VOCs quarterly, analyzing a subset of 5 wells for *Dhc, vcrA*, sulfate, sulfide, and TOC. The estimated time to achieve CAO is 3 to 5 years, with a total cost estimated at $437,000 to $557,000. The time to achieve the CAO was estimated using dechlorination rates from MLP/VAB Area biostimulation.

Alternative 2B Bioremediation 10XNADC plume: 107 DPT injection points with electron donor injected from 20 to 50 ft BLS, with spacing based on 8 ft ROI. There will be six angle-drilled injection points beneath the building. Intend to use solar-powered groundwater recirculation system to distribute amendment beneath the building. Passive vents will be installed to avoid methane accumulation beneath the building. Injection of 102 drums of emulsified oil is assumed. Includes 5 days of DPT sampling to aid in design for second injection event. Second emulsified oil injection 24 months after initial event; assumed to be 35 drums. In the second event, the source zone dosage is assumed to be 50% of the original dose into all original locations. In the 10XNADC area, a 50% dosage into half of the original locations is assumed. Performance monitoring consists of installation of 15 wells VOC sampling quarterly, analyzing a subset of 8 wells for *Dhc*, *vcrA*, sulfate, sulfide, and TOC, and sampling the injection and extraction

wells to aid in evaluation of mass removal under building. The estimated time to achieve CAO is 3 to 5 years, with a total cost estimated at $930,000 to $1,129,000.

Alternative 3A EZVI Source Zone: Treatment interval is 20 to 50 ft BLS. Treatment consists of 126 DPT injection points, into which approximately 20,500 gallons EZVI (5% by weight) is assumed to be injected from 20 to 50 ft BLS. The injection point spacing is based on estimated 3 ft ROI. A second EZVI injection event is assumed to be conducted 24 months after initial event, consisting of 50% the initial injection volume - 10,250 gallons. Treatment plan includes 3 days of DPT sampling to aid in design of second injection event. Performance monitoring consists of installing 10 wells to be sampled quarterly for VOCs. The estimated time to achieve CAO is 3 to 5 years, with a total cost estimated at $1,240,000 to $1,340,000. The 3 ft ROI was discussed as being overly conservative. At other sites, a 6 ft ROI was assumed. The cost was revisited using a 6-ft ROI, and a total cost reduction of approximately $90,000 could be obtained by increasing ROI to 6 ft. Cost for EZVI is driven by the amount of EZVI needed and that does not change, when the ROI is increased. Drilling costs and associated field time are reduced.

Alternative 3B EZVI and Bioremediation with Recirculation 10xNADC plume: EZVI to be conducted in the Source Zone – same as Alternative 3A. Bioremediation in the 10xNADC will be conducted the same as described in the 10xNADC area in Alternative 2B. Plan includes 5 days of DPT sampling to aid in the design of the second injection event. Second injection expected to be 24 months after initial event, in which the SZ receives 50% of the initial injection volume, and the 10xNADC area receives 50% of the volume into half of the original locations. Performance monitoring consists of installing 15 wells that will be sampled quarterly for VOC analysis, analyzing a subset of 3 wells for *Dhc, vcrA*, sulfate, sulfide, and TOC, and sampling of injection and extraction wells to evaluate mass removal under building. The estimated time to achieve CAO is 3 to 5 years, with a total cost estimated at $1,718,000 to $1,883,000.

All three technologies are capable of treating COCs. Why not air sparging?

- Trenching at an active facility with large pieces of equipment and personnel that work in the area.
- Heavy equipment will likely require specialty vault boxes and geotech evaluation for trenching.
- Likely mounding from AS and possible entrainment issue with SVE.
- Scale up/expansion issues when looking at plume as a whole – due to presence of road/railroad yard and woods/wetland.
- Engineering solutions can be developed, but there are risks.

Why Bioremediation?

- Passive implementation
- Ideal geochemistry
- Reduced OM&M (monitoring only)
- Amenable to scaling
- Thought to be more cost-effective than EZVI, based on assumptions about dechlorination rates

AS/SVE is less expensive per pound and total "Pay as You Go", but bioremediation offers:

- A more passive technology at a busy site
- Reduced impact to operations
- Reduced risk of damage to utilities or to the treatment system during operation
- Reduced risk of failure – AS/SVE mounding likely to cause entrainment issues for SVE with potential exposure to personnel

There was a discussion about the treatment interval of 20 to 50 ft for bioremediation and EZVI. The treatment interval was set at 20 to 50 ft to be able to directly compare to air sparging, which will treat the entire interval. The treatment interval would be approximately 15 ft to treat the 10XNADC impacts, so the cost for bioremediation and EZVI would be reduced, if the treatment interval was reduced. The reduction in cost would be most significant for EZVI because would reduce the purchase of EZVI by half (cost reduction of approximately $350,000). It was noted that bioremediation, EZVI and

EZVI/bioremediation have beneficial indirect effects beyond the zone of treatment.

Team consensus reached on alternative 2A bioremediation of the Source Zone (TCE 1% solubility).

Step 3 EE will look into the treatment interval for alternative 2A.

**Results**: Decision item 1402-D20

1405-M10 Rebecca Daprato/ Geosyntec

Contractors Road Heavy Equipment Area (SWMU 055)
**Goal**: Present Step 3 EE and obtain team consensus on the bioremediation IM work plan.
**Discussion**: The objectives of the IM are: (i) to evaluate if bioremediation is effective in treating TCE concentrations that are greater than 1% solubility (probable dense non-aqueous phase liquid); and (ii) obtain data to evaluate the implementation of bioremediation in a larger treatment area.

The treatment area is the source zone where TCE concentrations are greater than 11,000 µg/Land the vertical treatment interval includes the interval with CVOCs greater than 10X NADC (approximately 15 to 50 ft BLS).

The bioremediation IM includes the DPT injection of 71 drums of SRS®-SD diluted 1:80 with potable water (injection intervals vary by location; interval injection rationale and dosing provided in ADP and IMWP). Semi-annual performance and UIC monitoring will be conducted using eight monitoring wells and a robust DPT groundwater sampling event will be conducted one to two years post-injection.

The implementation work plan should include a site layout/staging plan to provide locations where substrate, equipment, and tank staging are planned to be placed.

Based upon current site sampling results (presence of ethene and ethane and presence of *Dhc* and *vcrA*), microcosm testing is not necessary, since the sampling results indicate that complete reductive dechlorination is occurring. Agree that bioaugmentation would be beneficial, but is not necessary. Propose that the decision to bioaugment be made based on the

baseline sampling results. Groundwater samples will be analyzed for *Dhc* and *vcrA* from two proposed monitoring wells and if the *Dhc* and *vcrA* concentration is less than $10^6$ gene copies per liter, bioaugmentation will be performed.

SRS®-SD does not normally contain sodium bicarbonate, but it will be added by the manufacturer during the manufacturing process. The sodium bicarbonate will provide additional buffering capacity to the aquifer. There was no additional cost for the addition of sodium bicarbonate to the SRS®-SD. Per the FDEP Acceptance Letter provided in Appendix D of the IMWP, UIC monitoring associated with the injection of SRS®-SD requires monitoring of sodium, total dissolved solids, and total recoverable petroleum hydrocarbons. Since the UIC monitoring includes sodium, there should be no secondary UIC issues. Also, by approximating the resulting concentration of sodium in the 305,000 gallons of pore volume, the concentration of sodium in the aquifer due to the addition to 8 g/L of sodium bicarbonate to the SRS®-SD is less than 0.03 g/L, and the KSC Upper Range of Background for sodium is 15 g/L (FDEP GCTL is 0.16 g/L).

The changes made between the Step 2 and the Step 3 EE included the following: (i) modification of the electron donor from EOS® to SRS®-SD; (ii) increasing the dosing of the electron donor from 0.5% to 0.7% of the pore volume;(iii) the method of calculating the pore volume of the treatment area (considering overlap and drift outside the treatment area); and (iv) an increase in number of DPT sampling days from three to five. The cost from the Step 2 EE and the Step 3 EE were compared on the cost per cubic yard treated. Based on this comparison it was determined that although the treatment volume increased from 3,390 $yd^3$ to 4,317 $yd^3$ the cost per cubic yard was similar.

If the injection technique proposed in the IMWP is utilized, do not anticipate daylighting issues in any existing monitoring wells (no daylighting issues occurred at LC34 Hot Spot 1 where monitoring wells [with secure caps] were within 2 feet of injection locations). If an alternative injection vendor/technique is ultimately utilized, the abandonment of the

existing monitoring wells within the treatment area should be considered in the IM Implementation Work Plan.

Team consensus reached on IMWP with the following revisions: (i) modify the language to clarify that any vendor can be utilized for the DPT injection work; (ii) clarify that injection boreholes will be abandoned by tremie grouting the boreholes after injection; (iii) increase monitoring well pad size to 2′x2′x6″ with reinforcement; (iv) add language to indicate that proposed monitoring wells MWA, MWC, MWF, MWH, and existing wells MW0024, MW0026, and IW0014I will be utilized for monitoring for mounding during injection activities; (v) remove the Step 4B EE and the costing; (vi) and provide coordinates for DPT injection locations.

**Results**: Decision item 1405-D24

| | | |
|---|---|---|
| 1504-M05 | Lane Dorman/ Geosyntec | Contractors Road Heavy Equipment Area (SWMU 055)<br>**Goal**: Present Step 1 EE for Hot Spot 2, High Concentration Plume (HCP), and Low Concentration Plume (LCP). Obtain team consensus on horizontal and vertical delineation for Hot Spot 2, HCP and LCP. Obtain team consensus on technologies retained for Step 2 evaluation. Obtain team consensus on the interim groundwater monitoring plan.<br><br>**Discussion**: A site-wide groundwater sampling event completed in March 2012. Twenty-four monitoring wells were sampled for VOCs. Detected concentrations for TCE ranged from 0.6 I to 1,000 µg/L in eight wells. Detected concentrations for cDCE ranged from 0.44 I to 9,700 µg/L in 19 wells. Detected concentrations for VC ranged from 13 to 7,600 µg/L in 17 wells.<br><br>Activities completed since Step 1 Hot Spot 1 include: 781 DPT groundwater samples from 97 locations, data gap sampling, implementation of MOT plan for sample collection along Kennedy Parkway and Contractors Road, and land clearing east of Kennedy Parkway for delineation of Hot Spot 2.<br><br>For figures greater than 56 ft BLS, the data presented is the result at the bottom of each location in order to show vertical delineation.<br><br>Added a call-out box in final presentation loaded to RIS to explain what samples were used to contour intervals 16 to 30 and 31 to 46 ft BLS for VC when sample spacing did not meet the EE suggested spacing. There were areas where we were able to sample in the past, but were not allowed to go back to collect additional samples due to utility concerns, etc. There were submerged areas we used mats to sample, but due to differing site conditions we were not able to use mats in all submerged areas. In the future, presentations on any site, team needs to convey such information to eliminate further comments such as these.<br><br>Team felt it would be helpful to provide lithology information for the mapped interval. Need to call them out better on the map or at least call out in presentation. Items get hidden in notes on the figures.<br><br>Team consensus reached on delineation of TCE, cDCE, and VC delineation in Hot Spot 2. |

Team consensus reached on delineation of TCE, cDCE, and VC in the HCP site wide.

Team consensus reached on delineation of TCE, cDCE, and VC in the LCP site wide.

Team consensus reached to retain bioremediation with recirculation, air sparging, and MNA for evaluation in Step 2 with possibility of scaling bioremediation, MNA, and air sparging to larger treatment area.

Step 2 would not be conducted until there is some performance data from the Hot Spot 1 treatment which has been funded this year.

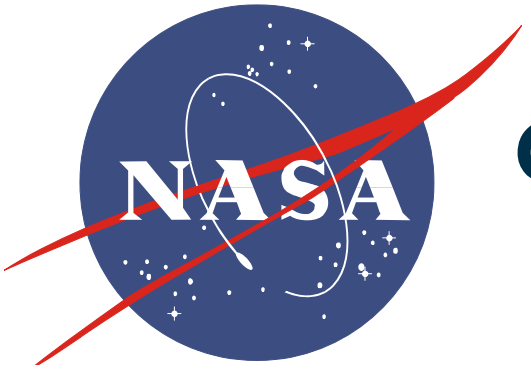
Team consensus reached on Interim groundwater monitoring plan as presented in the April 2015 ADP.

**Results**: Decision item 1502-D25 to D29

# APPENDIX B

# STEP 1 ENGINEERING EVALUATION ADP (electronic copy only)

Geosyntec consultants




# Contractor's Road Heavy Equipment (CRHE) Area SWMU 55

## Step 1A Engineering Evaluation

**June 2012**

# Presentation Outline

- Site overview and history/background
- Site conditions
- Summary of site assessment activities
- Path forward
- Test consensus on proposed sampling

Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus



engineers | scientists | innovators

Geosyntec consultants

# Site Overview

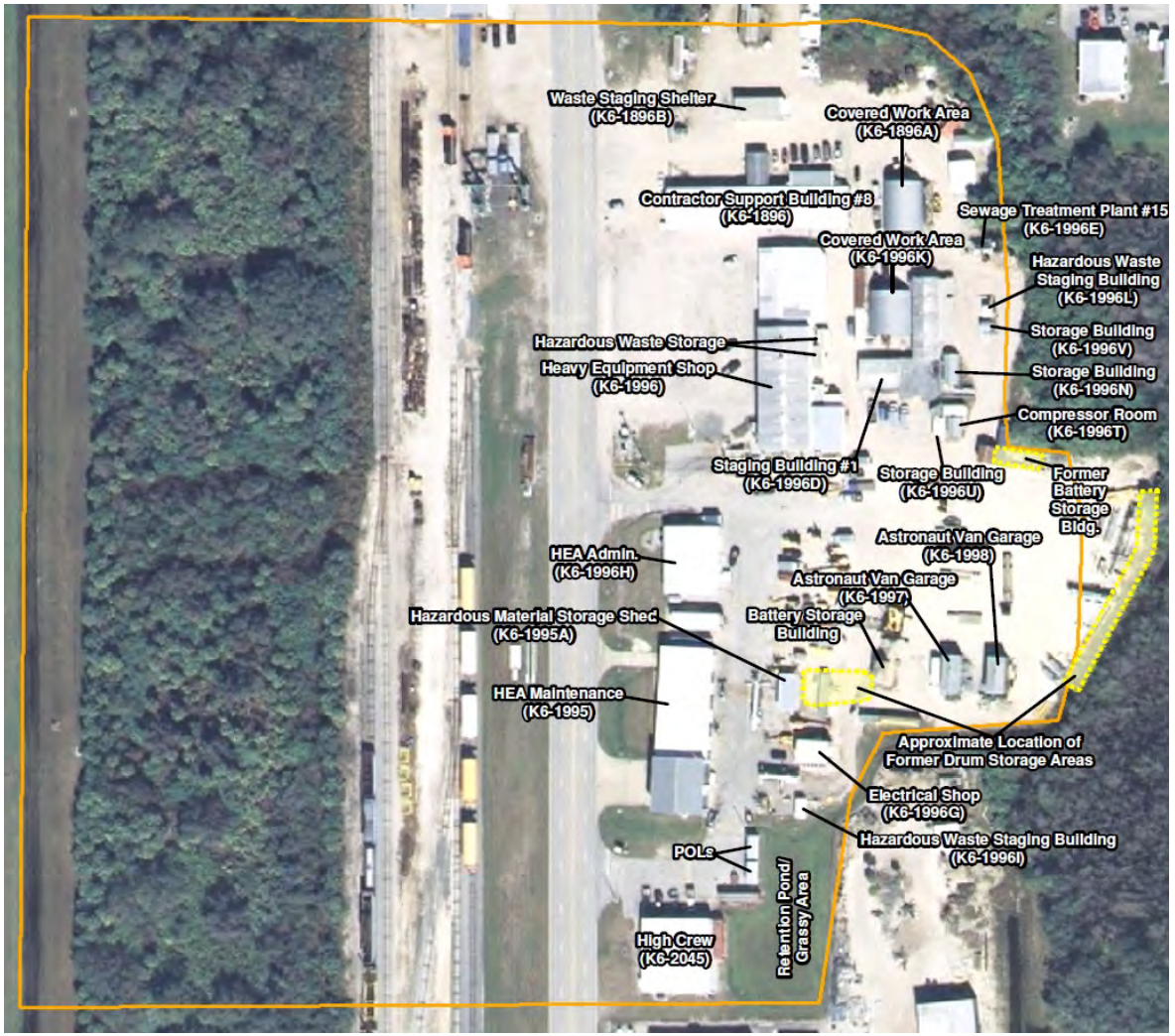
- Approximately 23 acres
- Six numbered buildings/support structures
- Site features:
  - *paved portions*
  - *majority of the site is gravel and dense woods*
  - *RR track parallel to Contractor's Road*
- Historical site use
  - *Hazardous Waste Storage/Staging*
  - *Printed Circuit Board Manufacturing*
  - *Domestic Wastewater Treatment*
  - *Heavy Equipment Maintenance/Storage (current use)*

Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

Geosyntec consultants

# Site Background (cont.)

- Objectives
- Site Overview/ Background
- Site Conditions
- Plume Delineation
- Test Consensus



Geosyntec consultants

# Site Background (cont.)

- 1994: Preliminary assessment (EG&G, Inc.)
  - *Identified CVOCs and metals in GW*
  - *Recommended additional assessment*
- 1997-1999: RFI (HSW, Inc.)
  - *Identified CVOCs and metals in GW*
  - *VC up to 370 µg/L in northern area (waterloo profiler)*
  - *TCE up to 41 µg/L (in IW-4I), down to 0.4 µg/L by end of RFI activities*
  - *Highest concentrations between about 15 and 45 ft BLS*

Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

# Site Background (cont.)

- 2000: Corrective Measures Study (CMS) (HSW, Inc.)
  - *Site clean up goals established for industrial setting*
  - *LUCIP for groundwater*
  - *No active corrective measures recommended*
  - *LTM program to monitor natural attenuation of CVOCs in groundwater*
  - *10 year estimated timeframe to reach cleanup goals*
- 2000 – 2005: Semi-annual GW sampling in 7 wells
- 2005 – 2009: Site incorporated into VAB LTM program

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# Site Background (cont.)

- Feb 2009: Geosyntec recommended additional gw assessment due to elevated cDCE and VC in IW18I and IW19I (2008 LTM Report)
- June to August 2009: Supplemental DPT investigation conducted to assess potential residual source area
  - *Focused on northern area*
  - *No TCE identified (cDCE up to 2,100 µg/L, VC up to 1,200 µg/L)*
- 2010: Removed from LTM program
- 2010-2012: Implementation of supplemental assessment activities
  - *Expanded activities toward south*
  - *Identified TCE source area with max concentration of 160,000 µg/L*

Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

# Supplemental Site Assessment

- 2 MIP profiles
- DPT groundwater samples
  - *1,132 from 173 locations*
  - *Generally sampled from 16 to 50 ft BLS at 4 ft intervals*
  - *Some sampling to 65 ft BLS for vertical delineation*
- Water level measurements (Nov-09 and Mar-12)
- Lithology borings (7 borings to 80 ft BLS)
- Monitoring well installation (supplemented 25 existing wells)
  - *4 shallow (<15 ft BLS)*
  - *11 intermediate (35 to 50 ft BLS)*
  - *2 deep wells (60 to 70 ft BLS)*
- Monitoring well sampling

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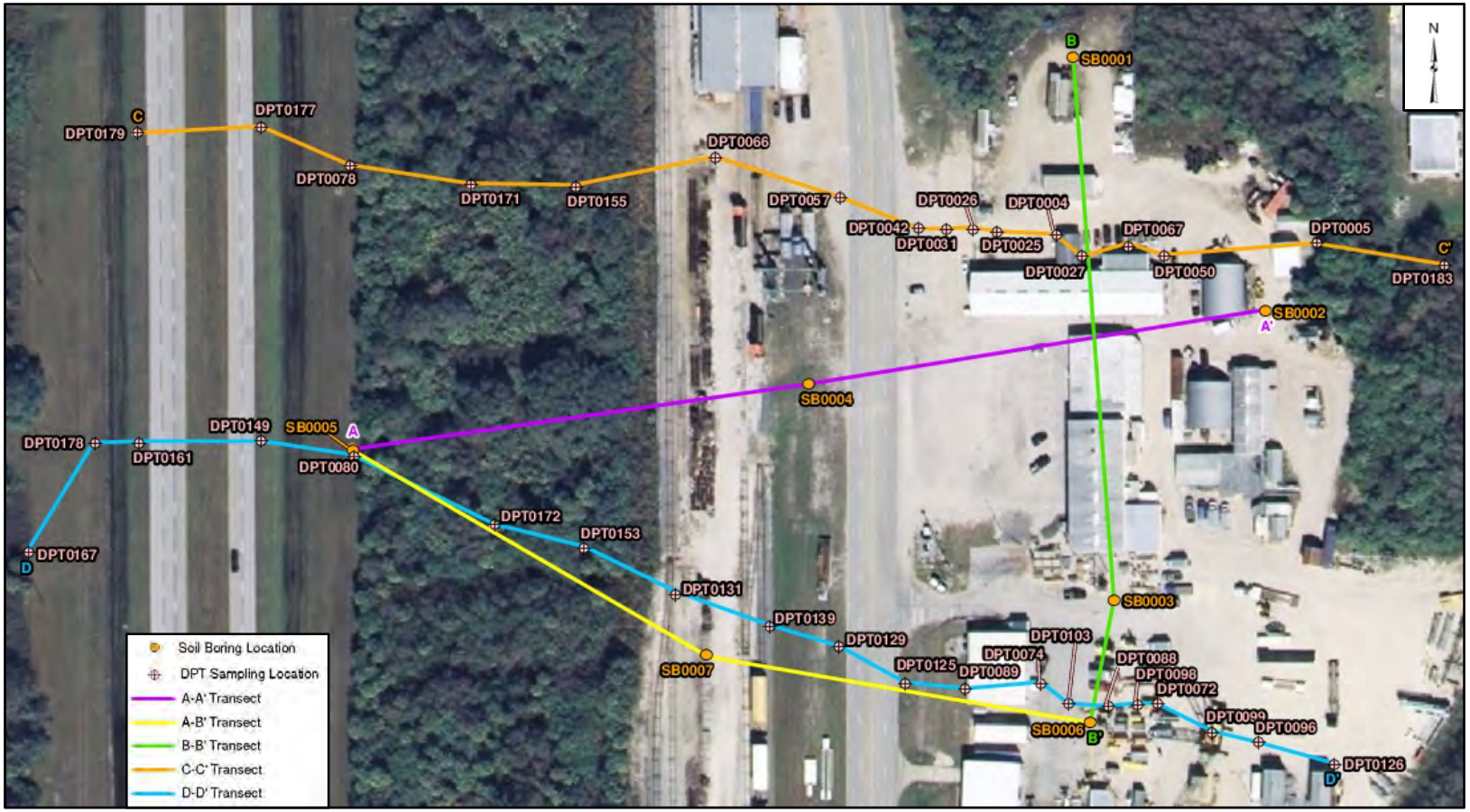
# Site Conditions

- Lithology
- Hydrogeologic site characteristics
- Groundwater flow

Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

# Cross Section Plan View

- Objectives
- Site Overview/ Background
- Site Conditions
- Plume Delineation
- Test Consensus



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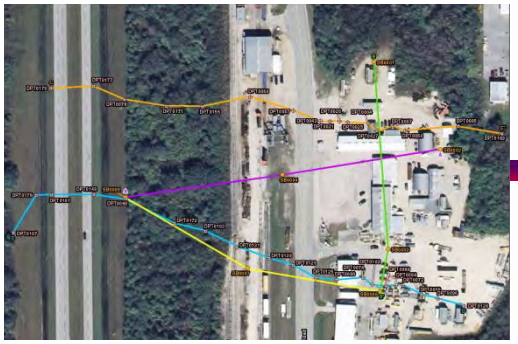
# Lithology A to A´



W to E in middle of site

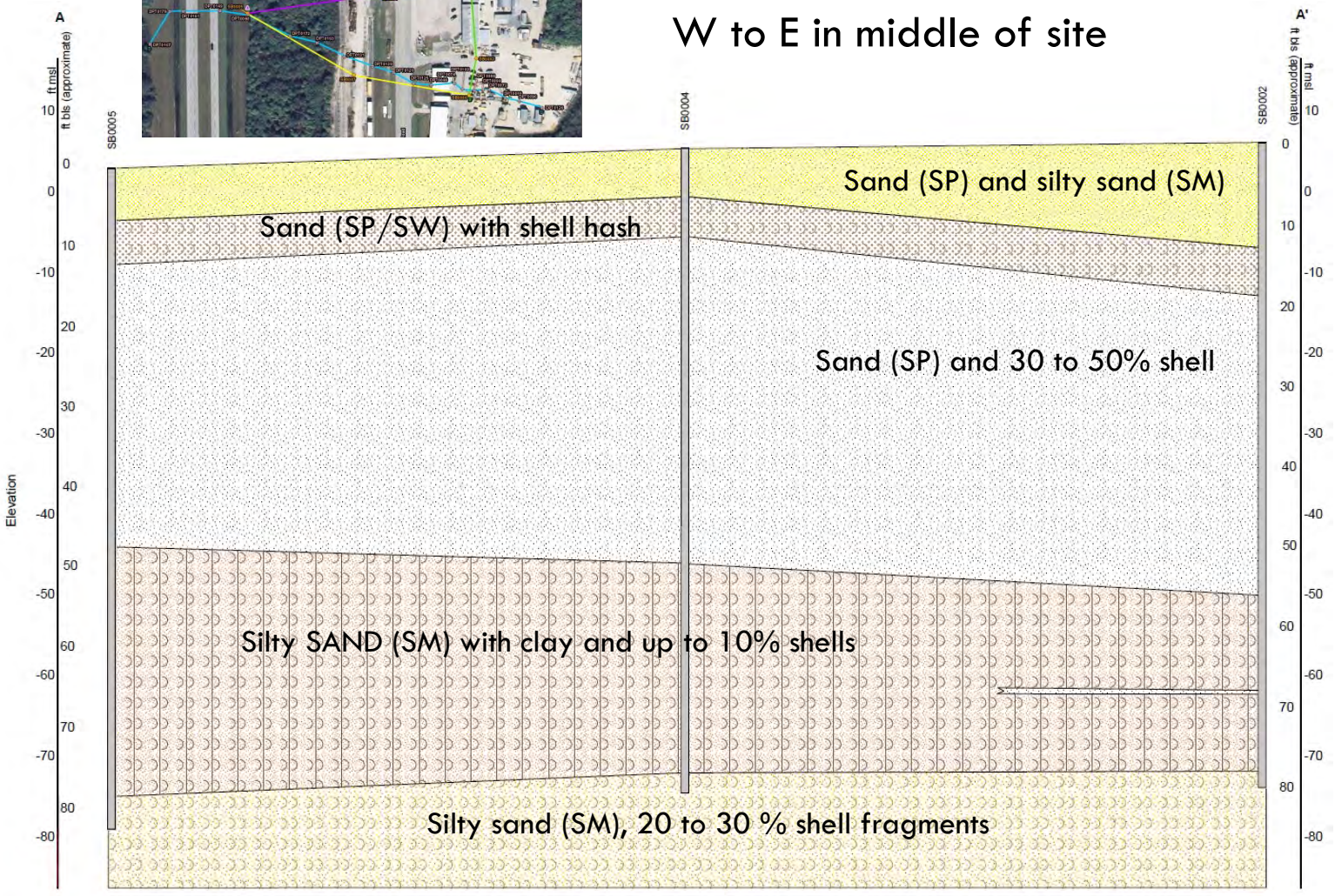



Figure 1

- Objectives
- Site Overview/ Background
- Site Conditions
- Plume Delineation
- Test Consensus

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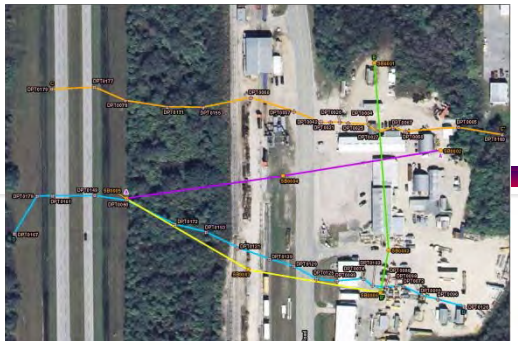
# Lithology A to B´



W to E to S, along plume centerline

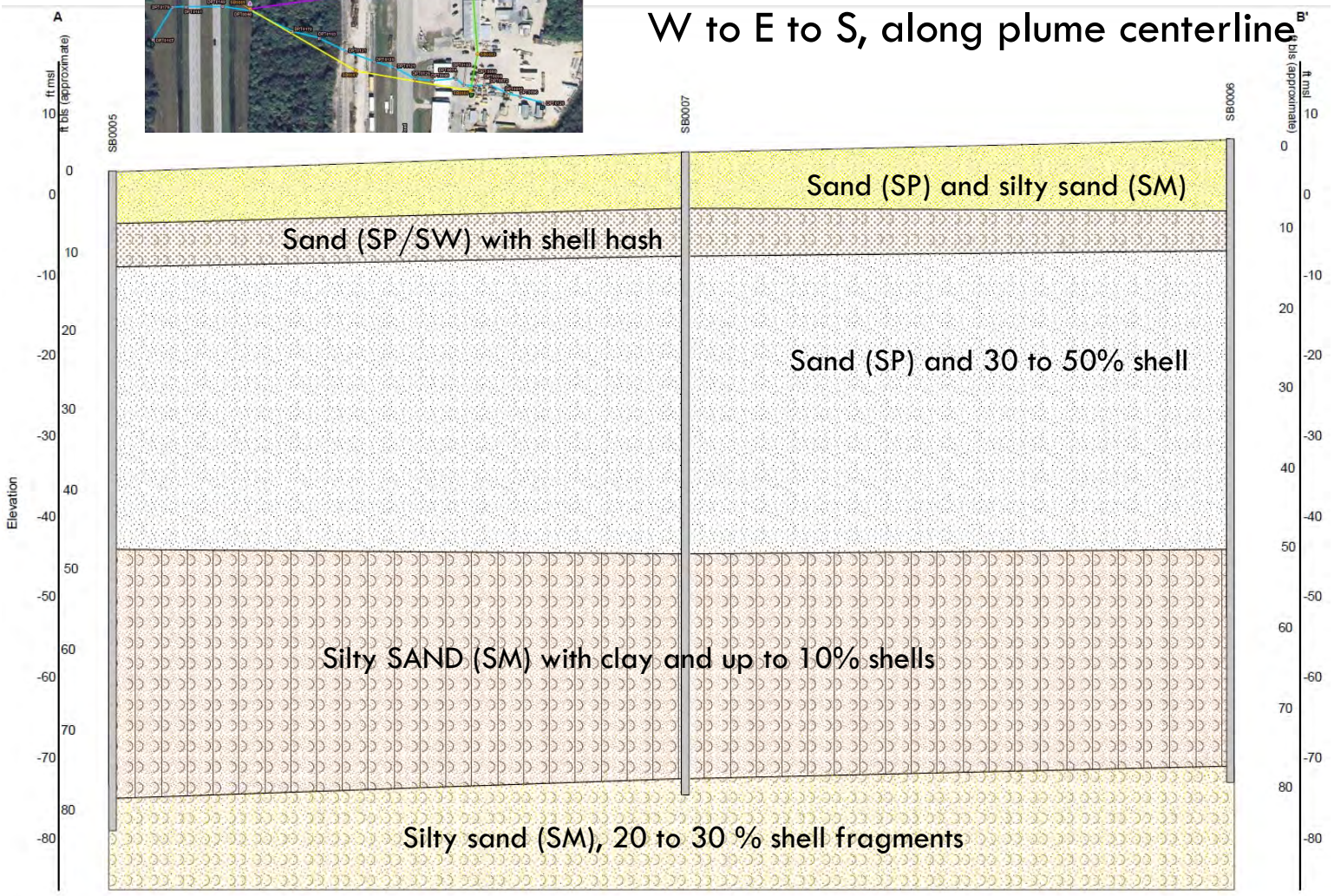



Figure 2


Objectives

Site Overview/ Background

Site Conditions

Plume Delineation

Test Consensus

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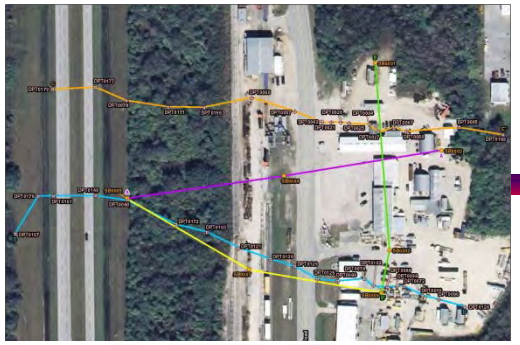
# Lithology B to B´



N to S

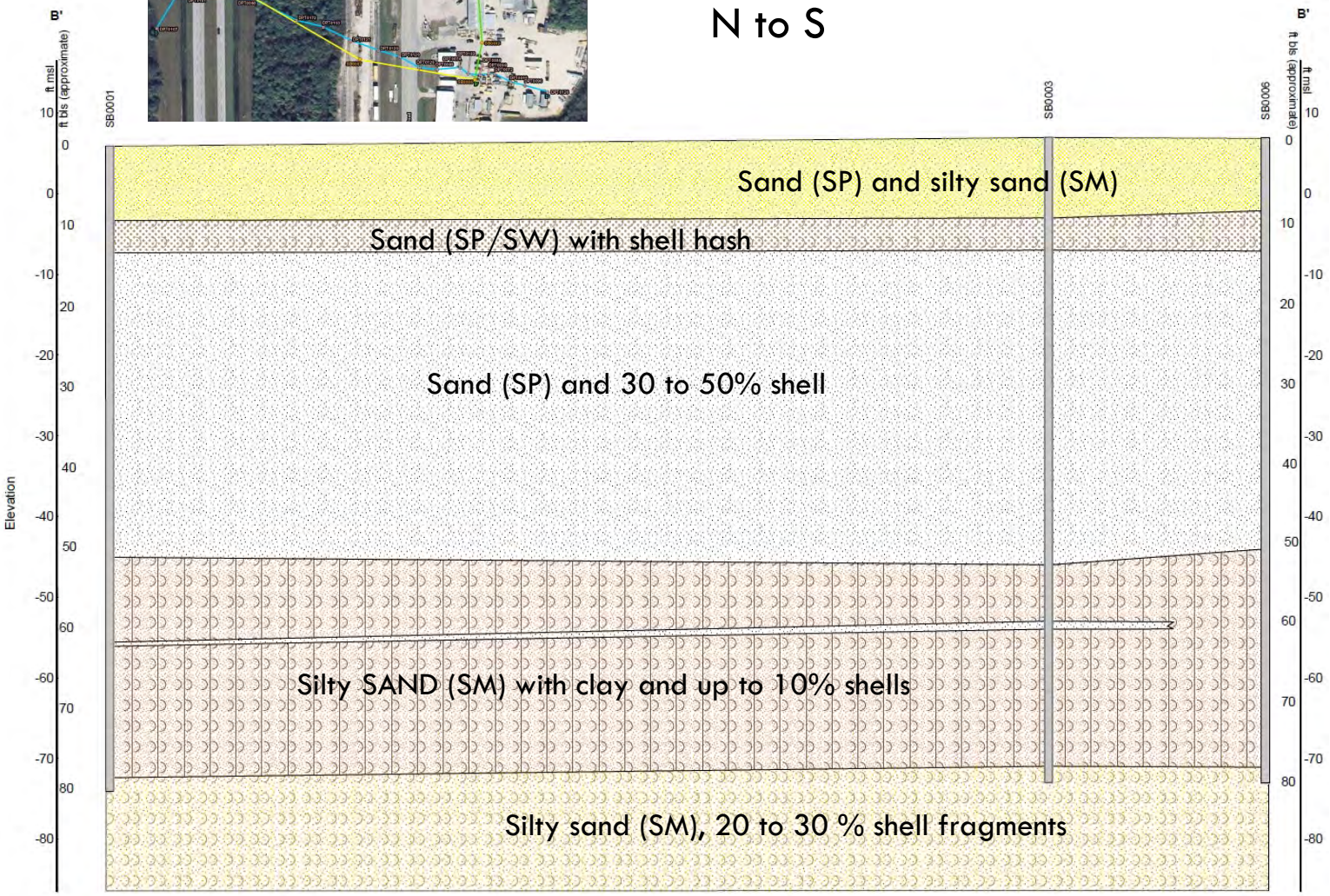



Figure 3


Objectives

Site Overview/ Background

Site Conditions

Plume Delineation

Test Consensus

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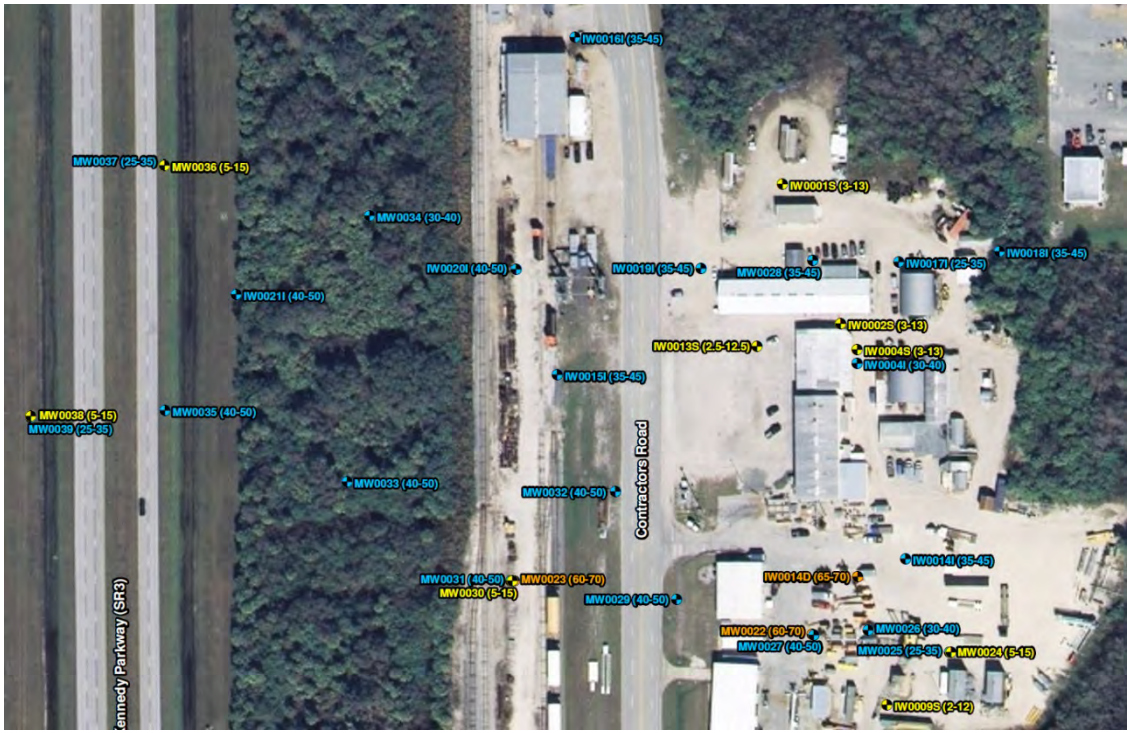
# Current Monitoring Well Network

- 17 shallow (<15 ft BLS) (yellow)
- 23 intermediate (25 to 50 ft BLS) (blue)
- 3 deep wells (>60 ft BLS) (orange)





Objectives

Site Overview/ Background

Site Conditions

Plume Delineation

Test Consensus

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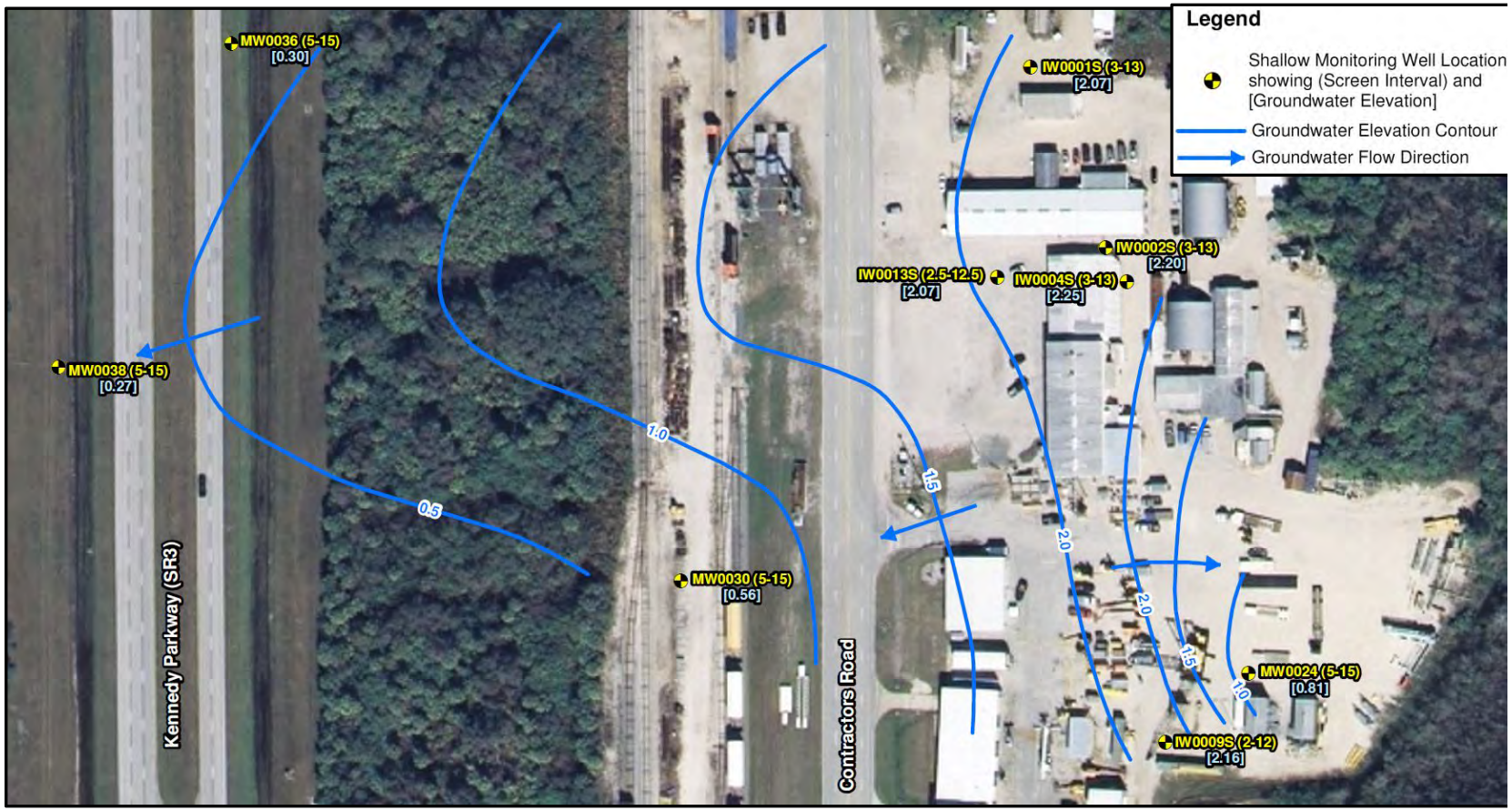
# Shallow Groundwater Flow




March 2012

Figure 4


Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

# Intermediate Groundwater Flow

Objectives

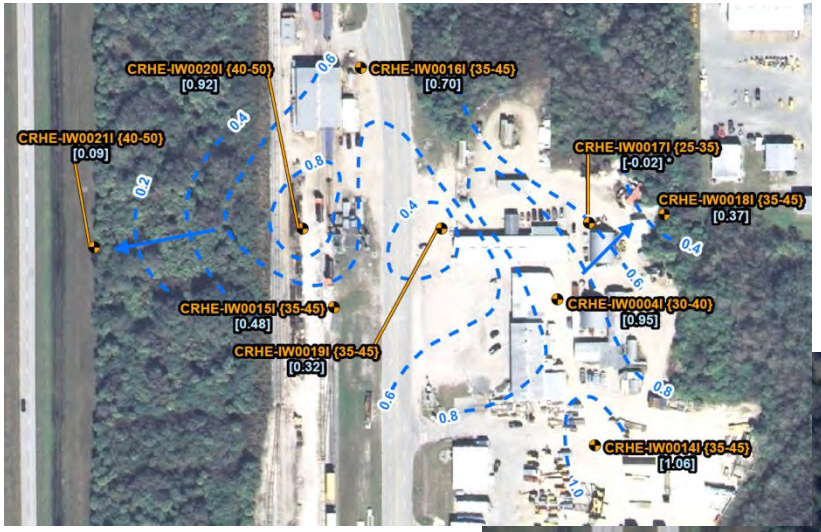
Site Overview/ Background

Site Conditions

Plume Delineation

Test Consensus

November 2009




Legend

- Intermediate Monitoring Well Location showing (Screen Interval) and [Groundwater Elevation]
- Inferred Groundwater Elevation Contour
- Groundwater Elevation Contour
- Groundwater Flow Direction

March 2012

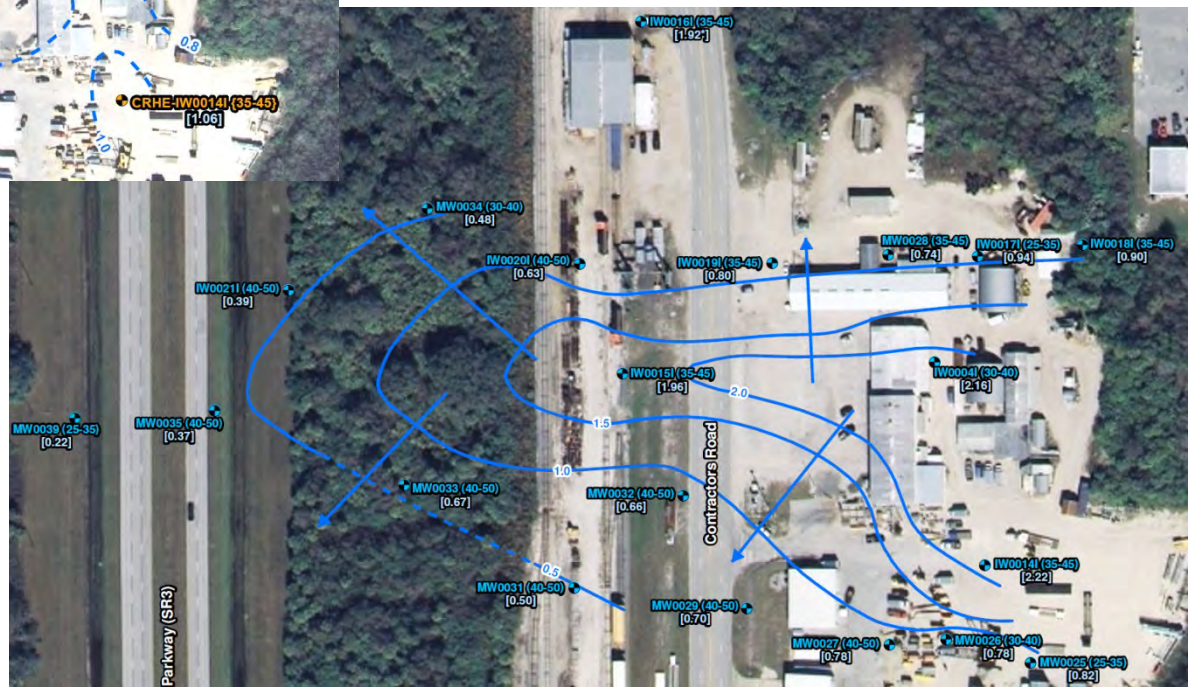



Figure 5

# Deep Groundwater Flow

March 2012

Figure 6


Objectives

Site Overview/ Background

Site Conditions

Plume Delineation

Test Consensus

# Hydrogeologic Site Conditions

- General groundwater flow direction
  - *Shallow: W to SW*
  - *Intermediate: NW and SW*
  - *Deep: SE (based on 3 wells in southern portion of site)*
- Depth to Groundwater 2 to 6 ft BLS
- K of 7.6 ft/d (2,758 ft/yr) from specific capacity tests on shallow and intermediate wells during RFI

| GW Zone | Approx. Depth (ft, BLS) | Average Gradient (ft/ft) | Est. GW Flow Velocity (ft/y) |
|---|---|---|---|
| Shallow | <15 | 0.002 | 28 ft/y |
| Intermediate | 15 to 55 | 0.005 | 69 ft/y |
| Deep | >60 | 0.002 | -- |

-- = not calculated, site-specific hydraulic data not available for this groundwater zone.
Assumed porosity of 0.20.

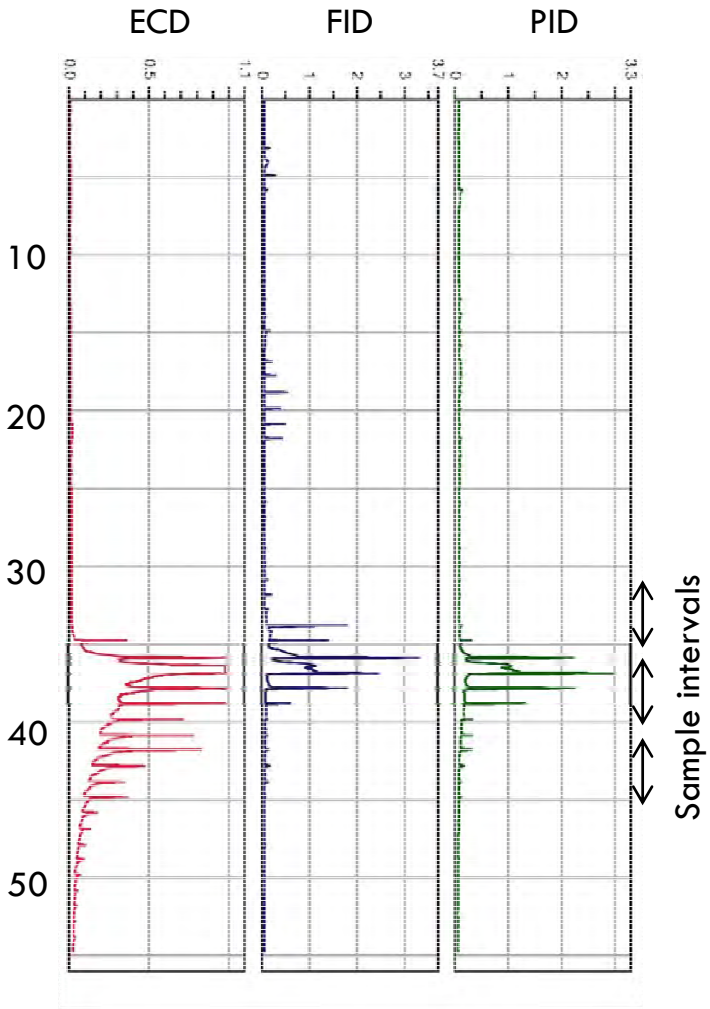
# Response to Comment

TT #1: The conversion for the K value from ft/d to ft/yr appears to be slightly miscalculated.

- *Data taken directly from RFI prepared by others.*
- *Discrepancy is rounding difference of less than 1%.*

# MIP Results






MIP001

| DPT072 | | | |
|---|---|---|---|
| Interval (ft, BLS) | TCE (µg/L) | cDCE (µg/L) | VC (µg/L) |
| 8 to 12 | 1.0 U | 1.0 U | 1.0 U |
| 16 to 20 | 1.0 U | 1.0 U | 1.0 U |
| 26 to 30 | 1.0 U | 1.0 U | 1.2 |
| 36 to 40 | **160,000** | **48,000** | **4,600** |
| 41 to 45 | **1,300** | **570** | **54** |
| 46 to 50 | **24.0** | 4.7 | 1.0 U |
| 56 to 60 | **210** | **100** | 4.0 J |
| 61 to 65 | **43.8** | 15.8 | 1.0 U |

| DPT100 | | | |
|---|---|---|---|
| Interval (ft, BLS) | TCE (µg/L) | cDCE (µg/L) | VC (µg/L) |
| 8 to 12 | 1.0 U | 1.0 U | 1.0 U |
| 12 to 16 | 1.0 U | 1.0 U | 1.0 U |
| 16 to 20 | 1.0 U | 1.0 U | 1.0 U |
| 21 to 25 | 1.0 U | 1.0 U | 1.0 U |
| 26 to 30 | 1.0 U | 1.0 U | 1.0 U |
| 31 to 35 | **21,000** | **31,000** | **7,400** |
| 36 to 40 | **32,000** | **59,000** | **17,000** |
| 41 to 45 | **210** | **380** | **72.0** |
| 46 to 50 | **19.5** | 28.0 | **5.4** |

Yellow highlighting indicates concentrations above NADCs.

# Response to Comment

Arcadis General #1: In SZ, spacing is ~35 to 50 ft. A MIP boring was advanced adjacent to DPT72 with good correlation between MIP response & DPT GW data; however, no additional MIPs were conducted in SZ.

- *2 days of MIP was planned but equipment malfunctioned.*
- *Objective of MIP was to identify mass distribution in SZ to confirm sample intervals.*
- *Objective met and proceeded with DPT sampling.*
- *Spacing between SZ DPT locations is 13 to ~50 ft.*
- *Additional sampling locations proposed.*

Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

# Response to Comment

TT #2: Please reference the yellow highlighting for the analytical results for DPT072 and DPT100 represent, possibly concentrations greater than NADC?

*Slide has been revised.*

Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

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# DPT and MW locations

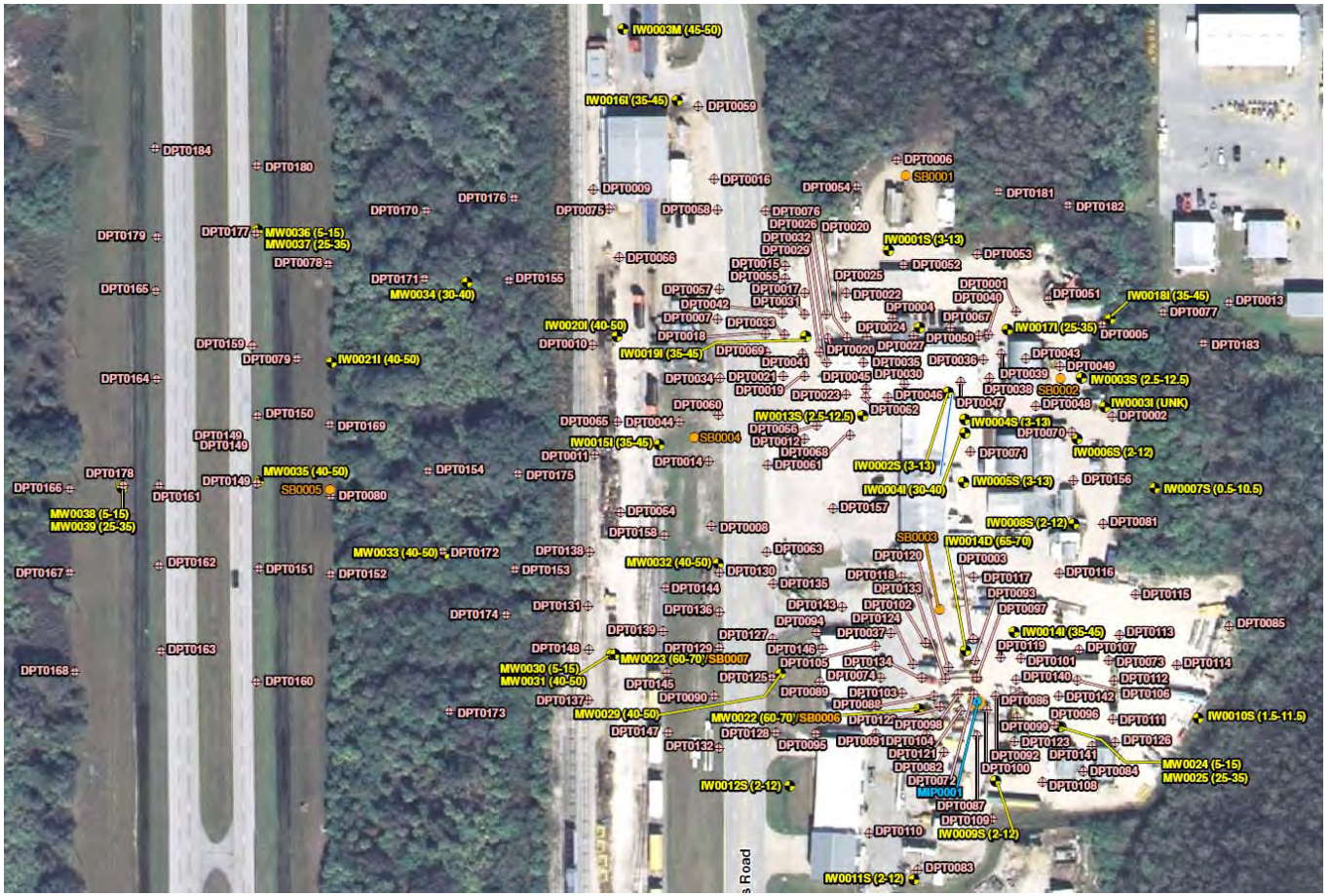


Figure 7

Spider diagrams included as Figures 8 and 9 (not included in presentation)


Objectives

Site Overview/ Background

Site Conditions

Plume Delineation

Test Consensus

# TCE 8 to 16 ft BLS

Contours that are based solely on non-detect values with elevated detection limits are shown with dashed lines and no shading.

Figure 10

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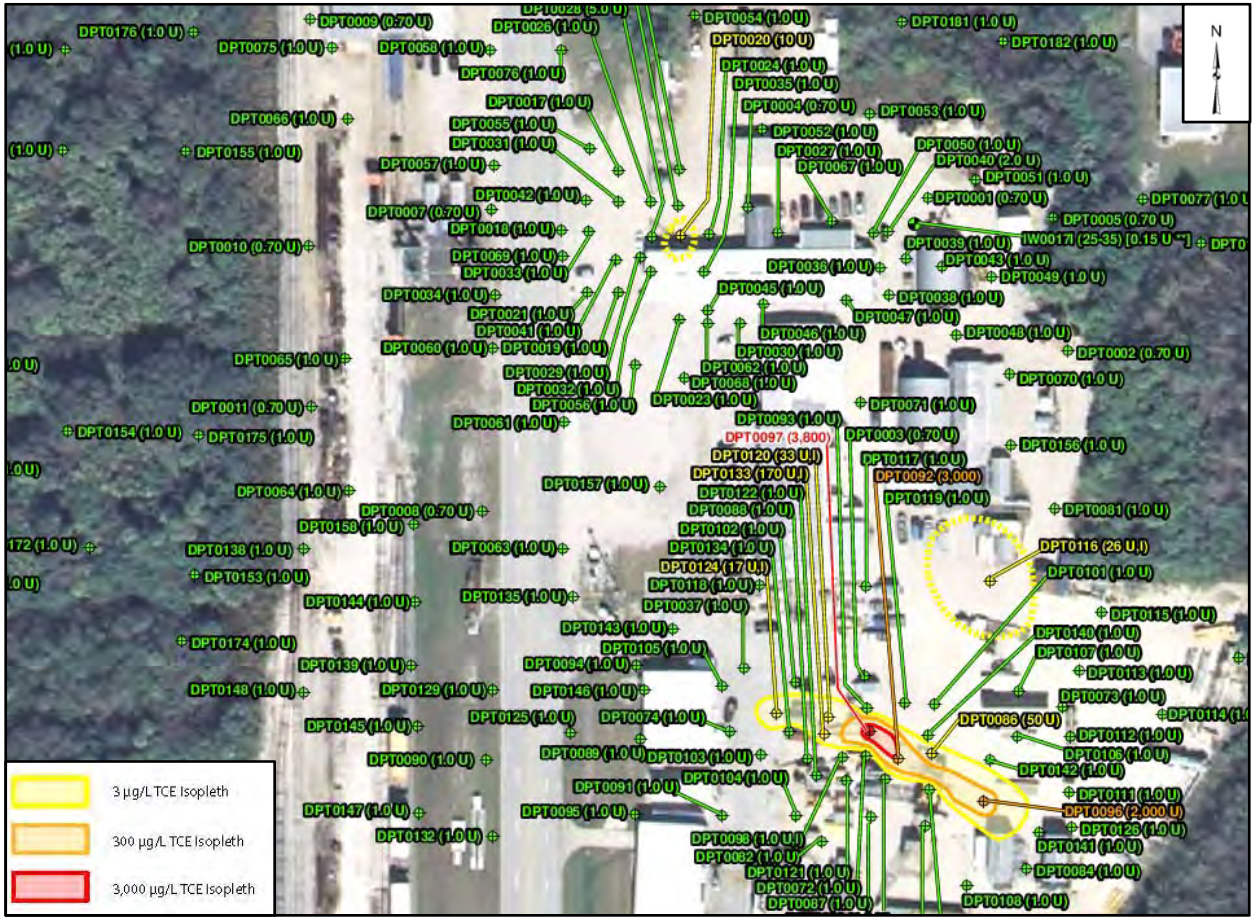
# TCE 16 to 31 ft BLS




Contours that are based solely on non-detect values with elevated detection limits are shown with dashed lines and no shading.

Figure 11


Objectives

Site Overview/ Background

Site Conditions

Plume Delineation

Test Consensus

# Response to Comment

TT #3: SE plume with HS area is defined by one detection and multiple elevated DLs. Will data set suit for future remedial decision making? HCP footprint potentially overestimated.

- *TCE HCP is defined by 2 detections (3,000 µg/L at DPT92, 3,800 µg/L at DPT97) and elevated DL in 3rd loc (2,000 U at DPT96).*
- *cDCE and VC confirm that overall HCP is well-defined (i.e., cDCE of 22,000 µg/L at DPT92, 34,000 µg/L at DPT96, and 52,000 µg/L at DPT97, and VC of 2,600 µg/L at DPT92, 7,700 µg/L at DPT96, and 1,500 µg/L at DPT97).*
- *These locs are surrounded by NDs.*
- *HCP based on true NADC exceedances and focus of proposed remedial action will not be driven by elevated DLs.*

Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

# Response to Comment

Arcadis #1: TCE plumes are conservatively interpreted based on elevated DLs at locs such as DPT116/DPT20...consideration should be given to collecting confirmation samples to simplify CSM and refine affected distribution of COCs.

- *Elevated DL for TCE surrounded by DPT locations at less than 25 ft spacing with results of 1 U.*
- *Relatively low concentrations in this area (primarily of VC) so this will not affect any proposed remedial strategy.*

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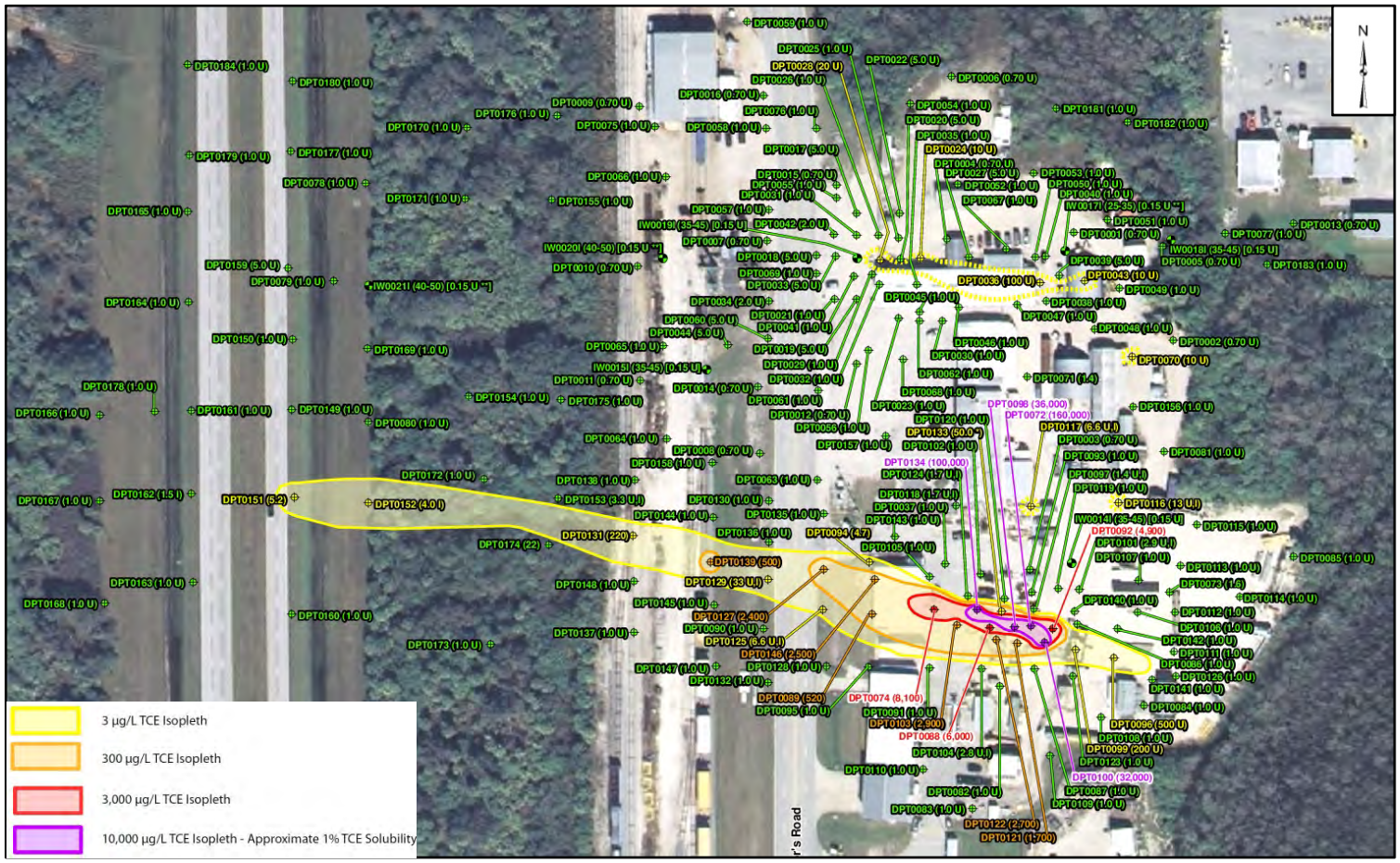
# TCE 31 to 46 ft BLS




Contours that are based solely on non-detect values with elevated detection limits are shown with dashed lines and no shading.

Figure 12


Objectives

Site Overview/ Background

Site Conditions

Plume Delineation

Test Consensus

# TCE >46 ft BLS

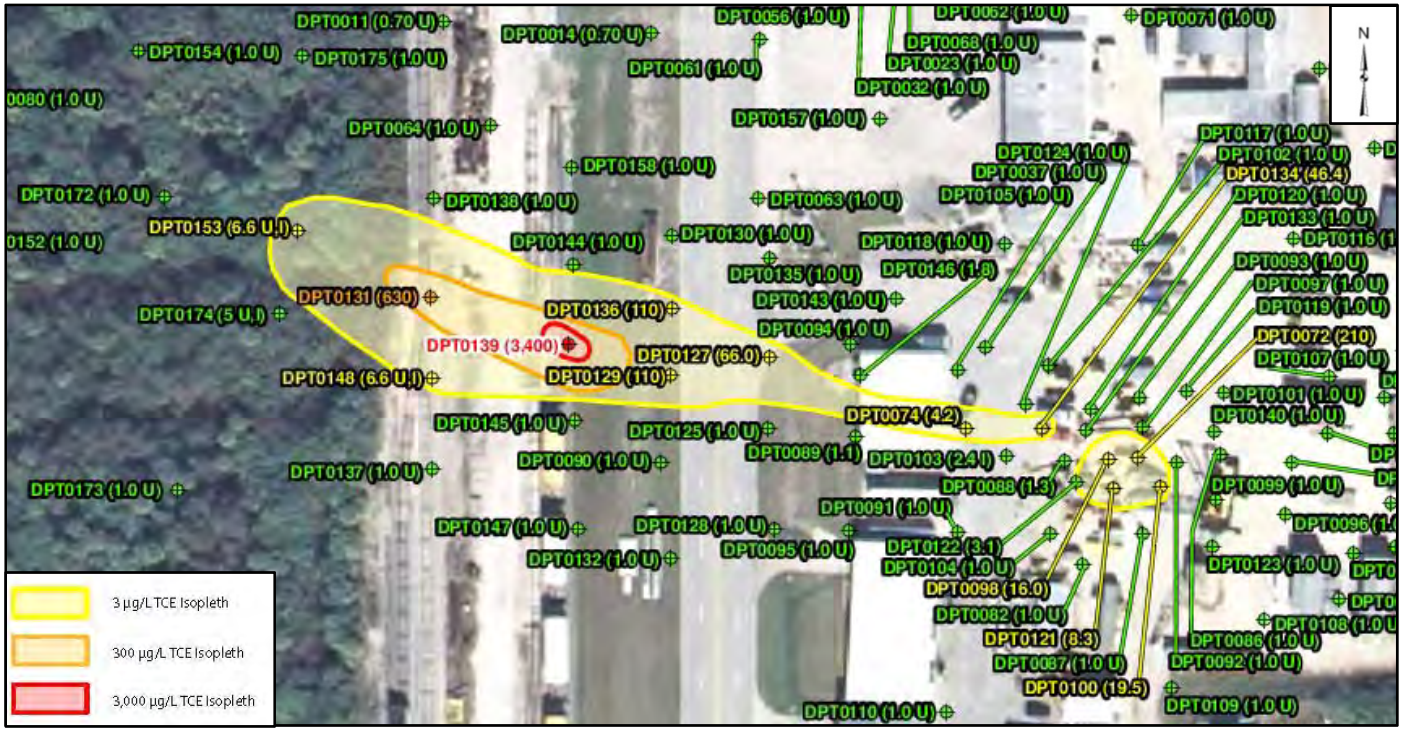



Figure 13

# Response to Comment

Arcadis #2: The contouring should be re-evaluated based upon FDEP Rounding Memorandum…

*Isopleths on TCE>46, VC 16-30, 31-46, and >46 ft BLS have been revised.*

Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

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# Response to Comment

Arcadis General #2: Near DPT139, closest borings to W and E are ~100 ft and 65 ft. Does CSM assume that contamination is from SZ or was there a separate release that may have occurred adjacent to the RR?

- *Current CSM - impacts are remnants from identified SZ.*
- *Unlikely that separate release would result in dissolved plume with geometry that so closely mimics that of centerline of main plume.*
- *Increased drainage around RR, wooded areas, and from paved surfaces that could potentially cause plume to appear divided.*
- *Additional DPT locations proposed on 25 ft spacing to confirm data set.*

Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

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# cDCE 8 to 16 ft BLS

Figure 14


Objectives

Site Overview/ Background

Site Conditions

Plume Delineation

Test Consensus

# cDCE 16 to 30 ft BLS

Figure 15

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# cDCE 31 to 46 ft BLS

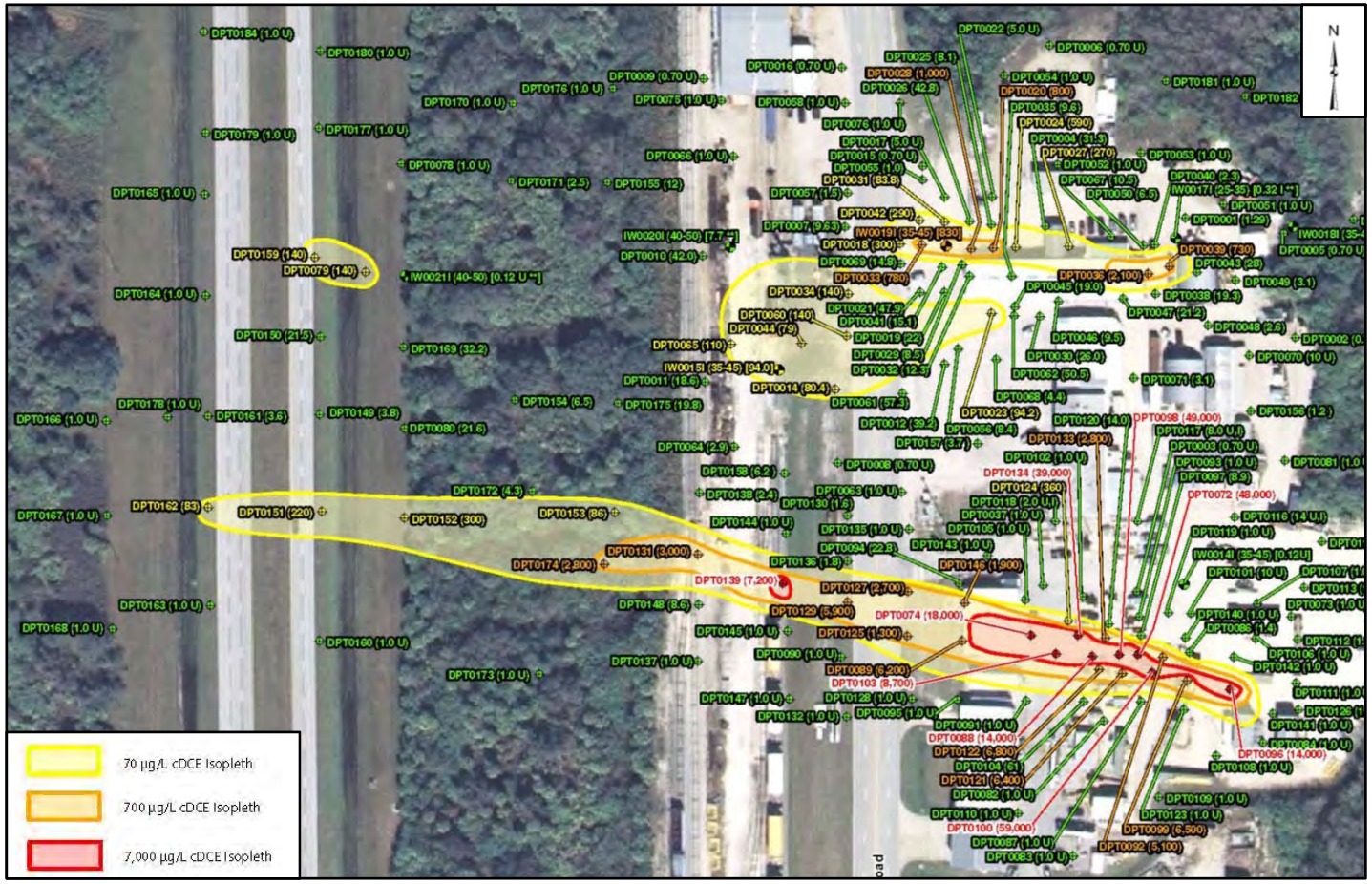


Figure 16


Objectives

Site Overview/ Background

Site Conditions

Plume Delineation

Test Consensus

# Response to Comment

TT Comments #4, 5, 8: Further delineation around DPT174 to W and SW may be necessary.

- *Area typically wet and/or submerged.*
- *Accessible areas were sampled on grid pattern.*
- *Given GW flow direction and shape of dissolved plume, DPT dataset provides adequate data at this time since this area will not likely be remediated in near future.*
- *Additional sampling locations are proposed.*

Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

Geosyntec consultants

# cDCE >46 ft BLS

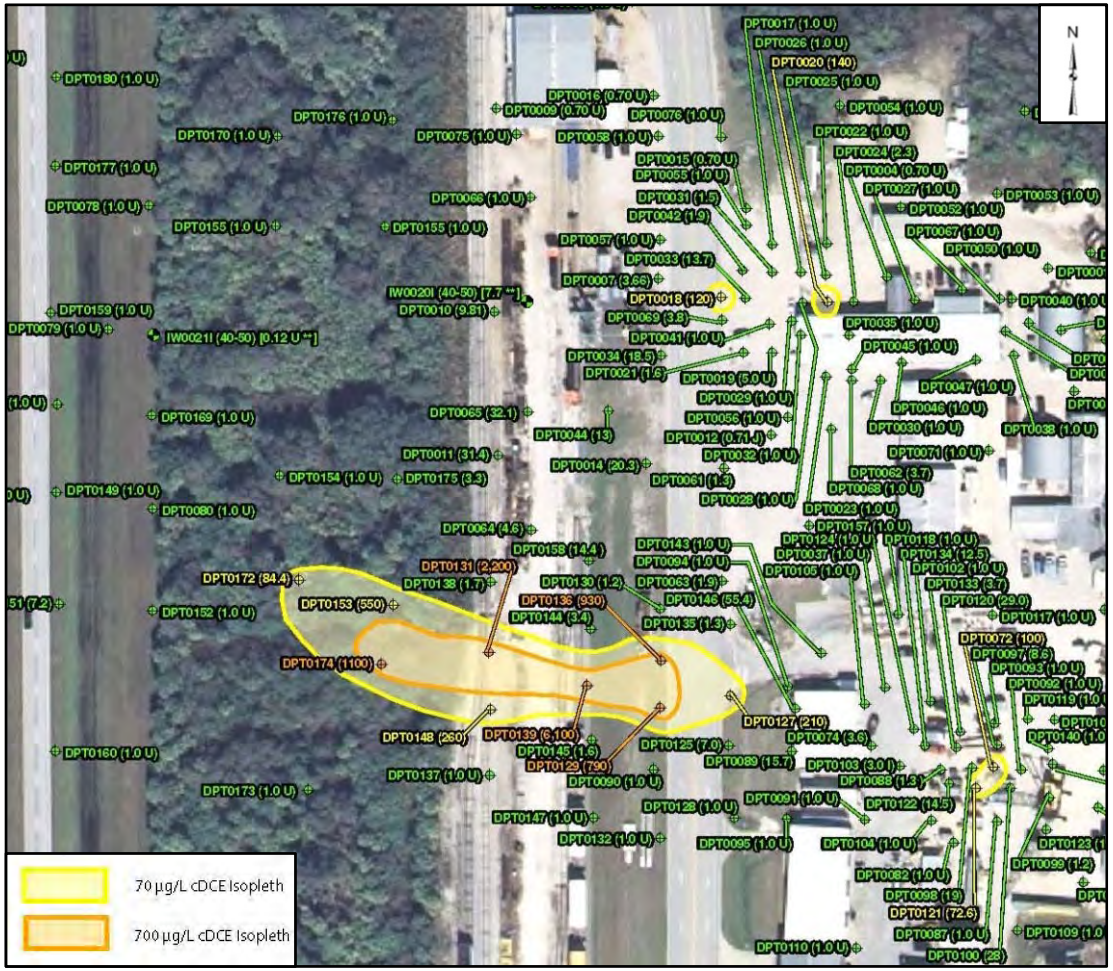


Figure 17

Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

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# VC 8 to 16 ft BLS

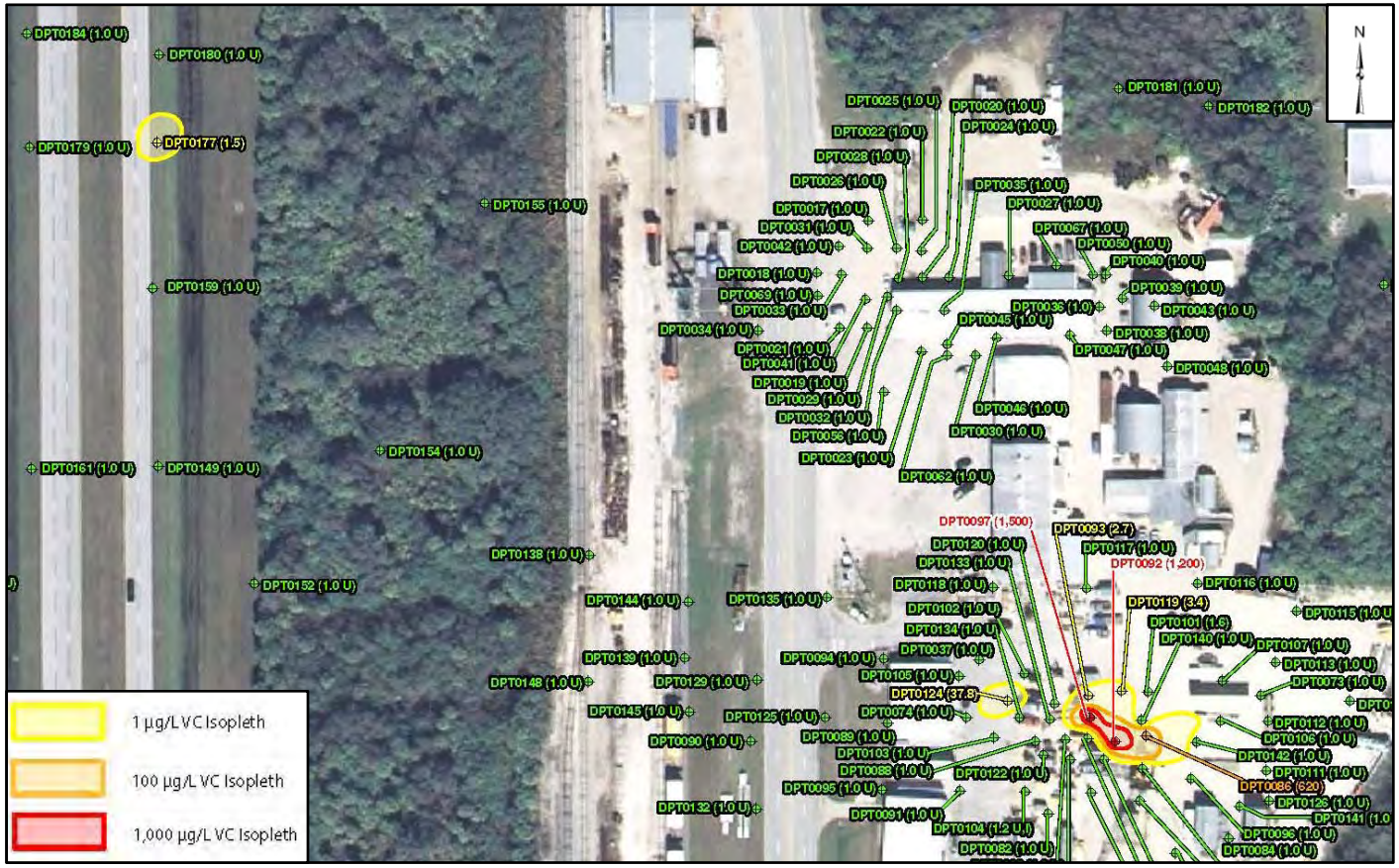


Figure 18

Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

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# VC 16 to 30 ft BLS

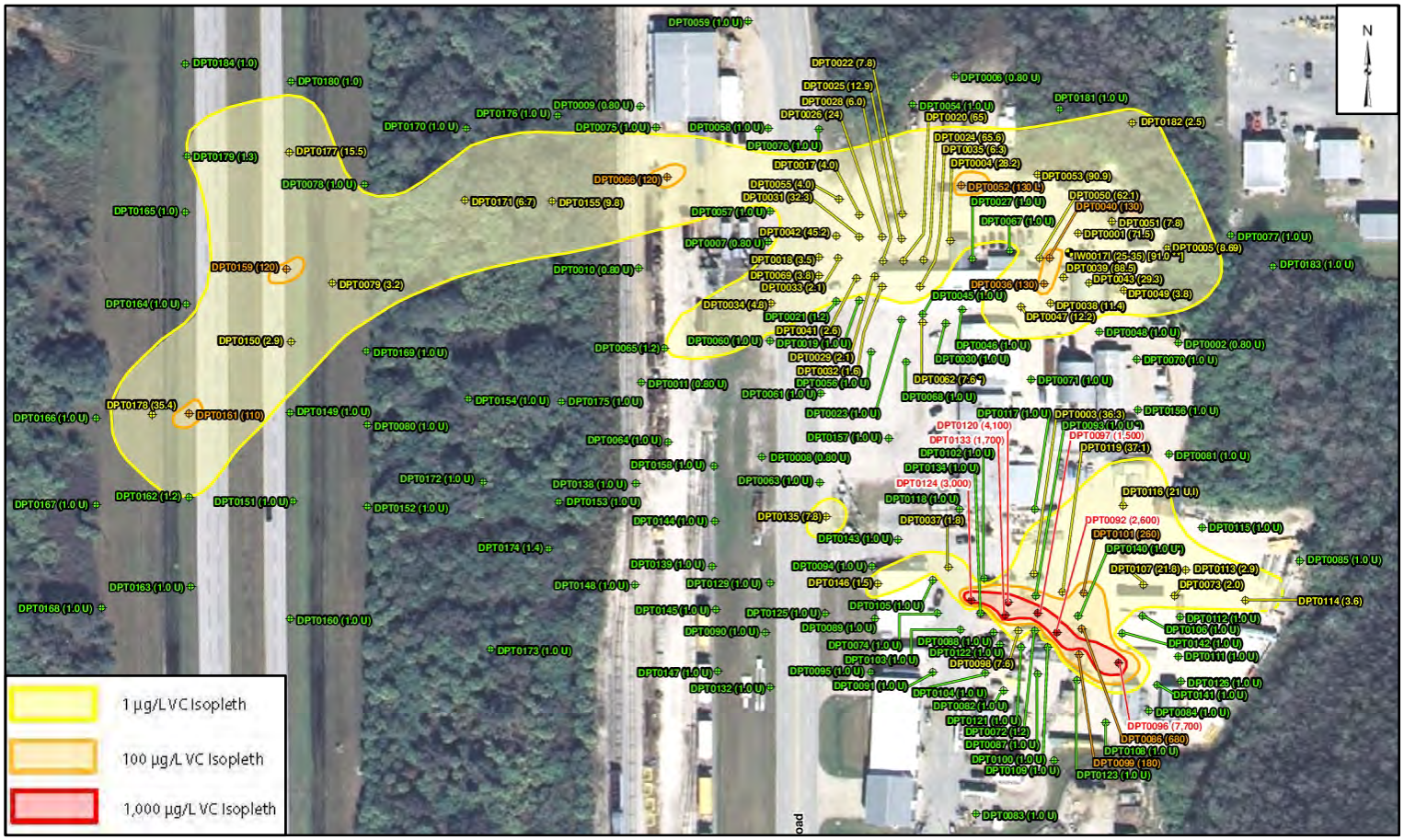


Figure 19

# Response to Comment

TT #6: Recommend further delineation of NADC exceedances at DPT159, DPT66, and DPT52, detected in N portion of site to attain recommended criteria of 50 ft spacing for HCP (Fig 19).

- *Concentrations not significantly above NADCs (120 to 130 µg/L).*
- *Not parent compound (VC only).*
- *Additional locations are proposed.*

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# VC 31 to 46 ft BLS

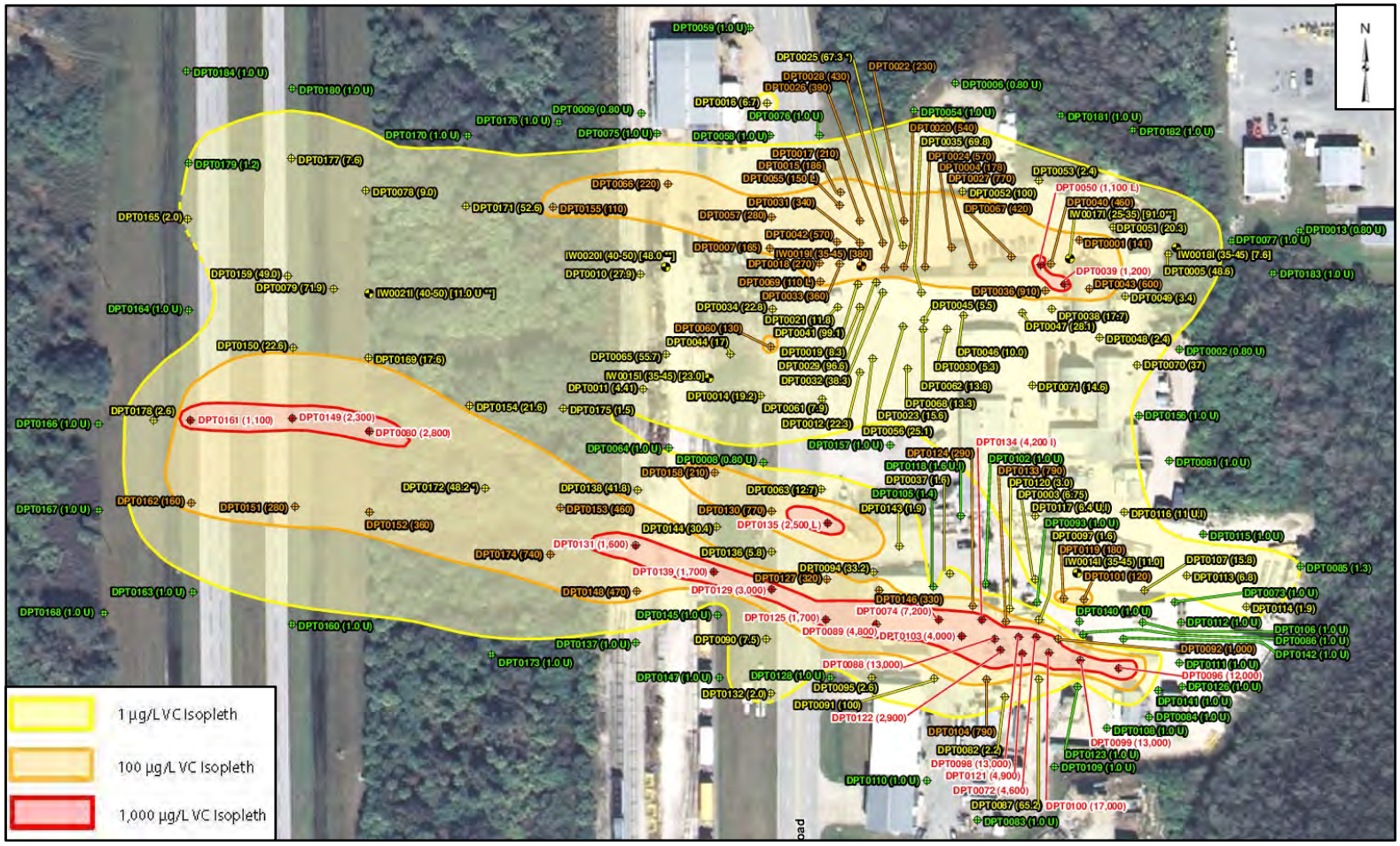


Figure 20


Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

# Response to Comment

TT #7: Recommend tighter boundary data points around DPT80/149/161 HCP (Fig 20).

*Additional sampling locations are proposed.*

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# Response to Comment

Arcadis #4: VC HS extends from TCE SZ toward DPT131…Another HS begins downgradient at DPT80. How does this separate HS fit into CSM…?

- *Current CSM assumes that downgradient HS associated with main SZ, not separate release.*
- *Unlikely that separate release would result in dissolved plume with geometry similar to centerline of main plume.*
- *Limited access for DPTs in the area.*
- *Additional sampling proposed in this area to refine the dataset if/when typically saturated area is accessible.*
- *No plans to clear cut the area.*

Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

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# VC >46 ft BLS

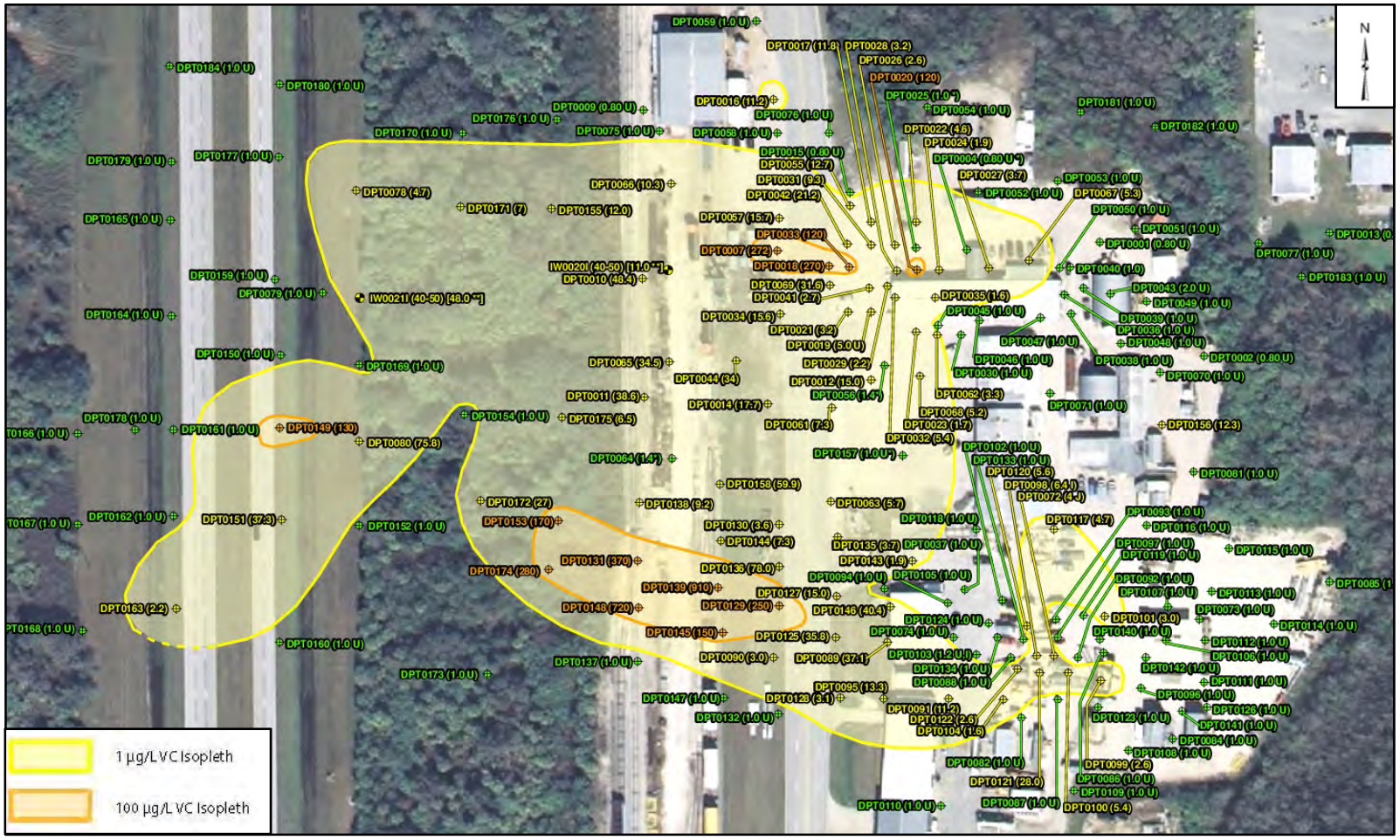


Figure 21

- Objectives
- Site Overview/ Background
- Site Conditions
- Plume Delineation
- Test Consensus

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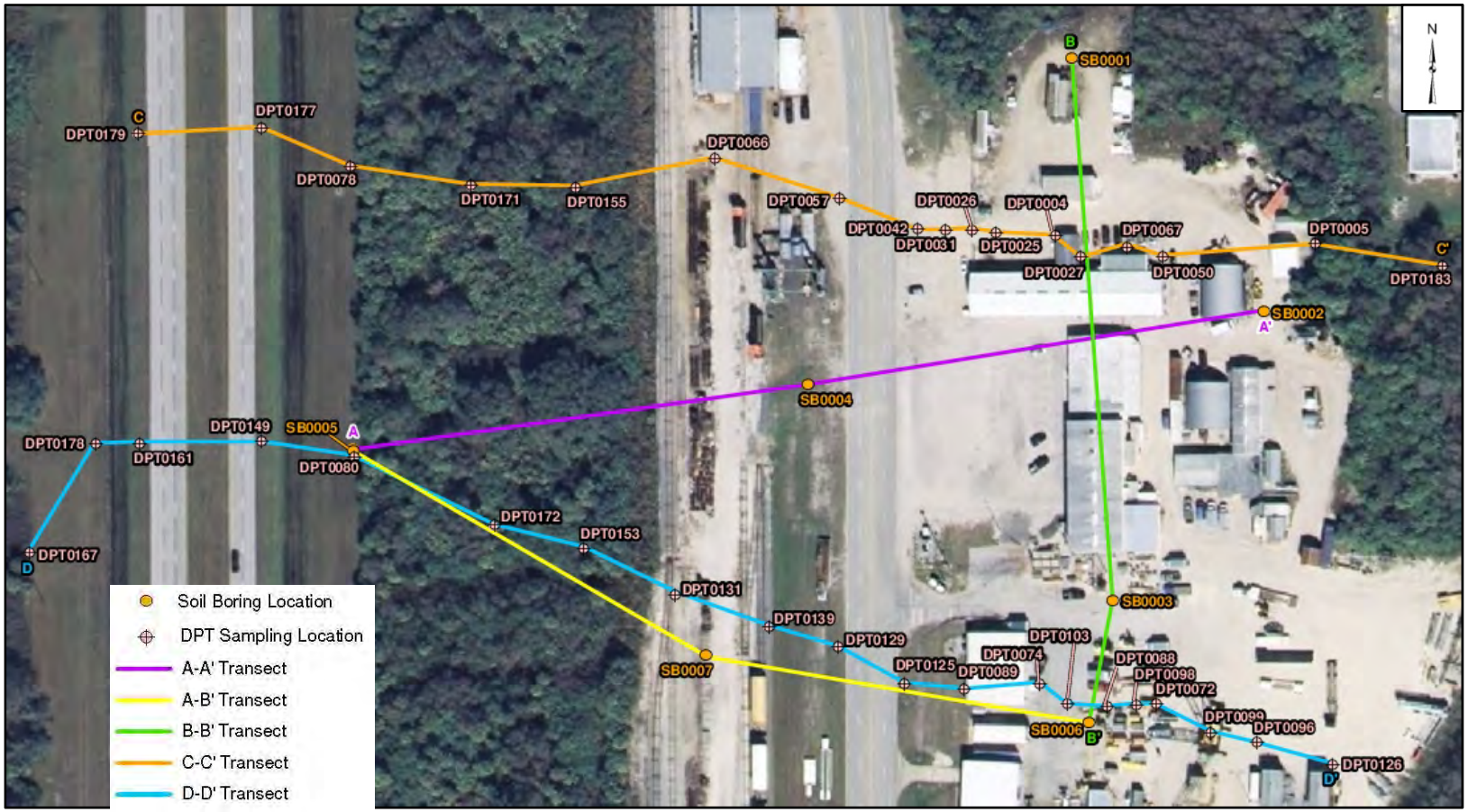
# Cross Section Plan View





Objectives

Site Overview/ Background

Site Conditions

Plume Delineation

Test Consensus

# CVOC Cross Section

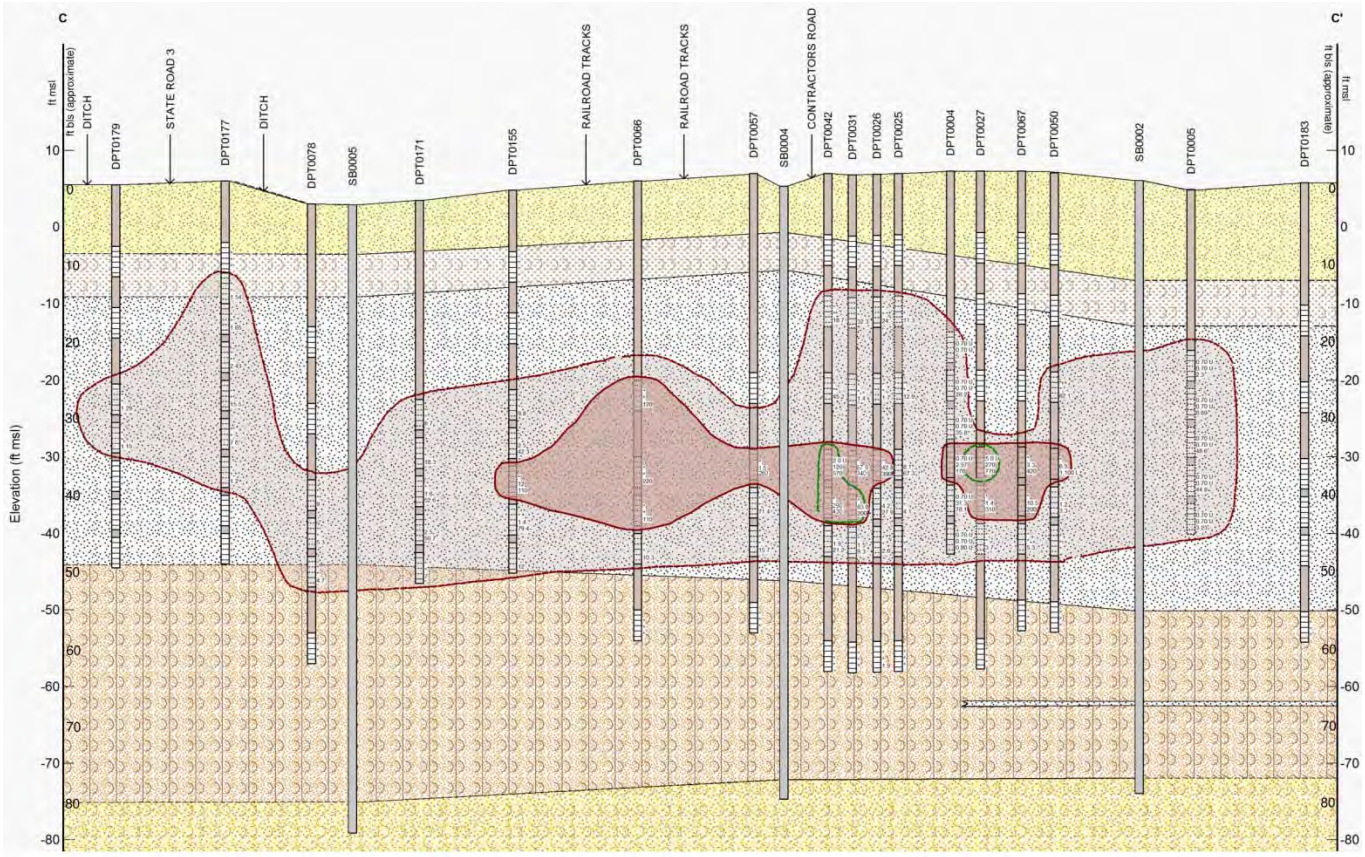



Figure 22

# CVOC Cross Section

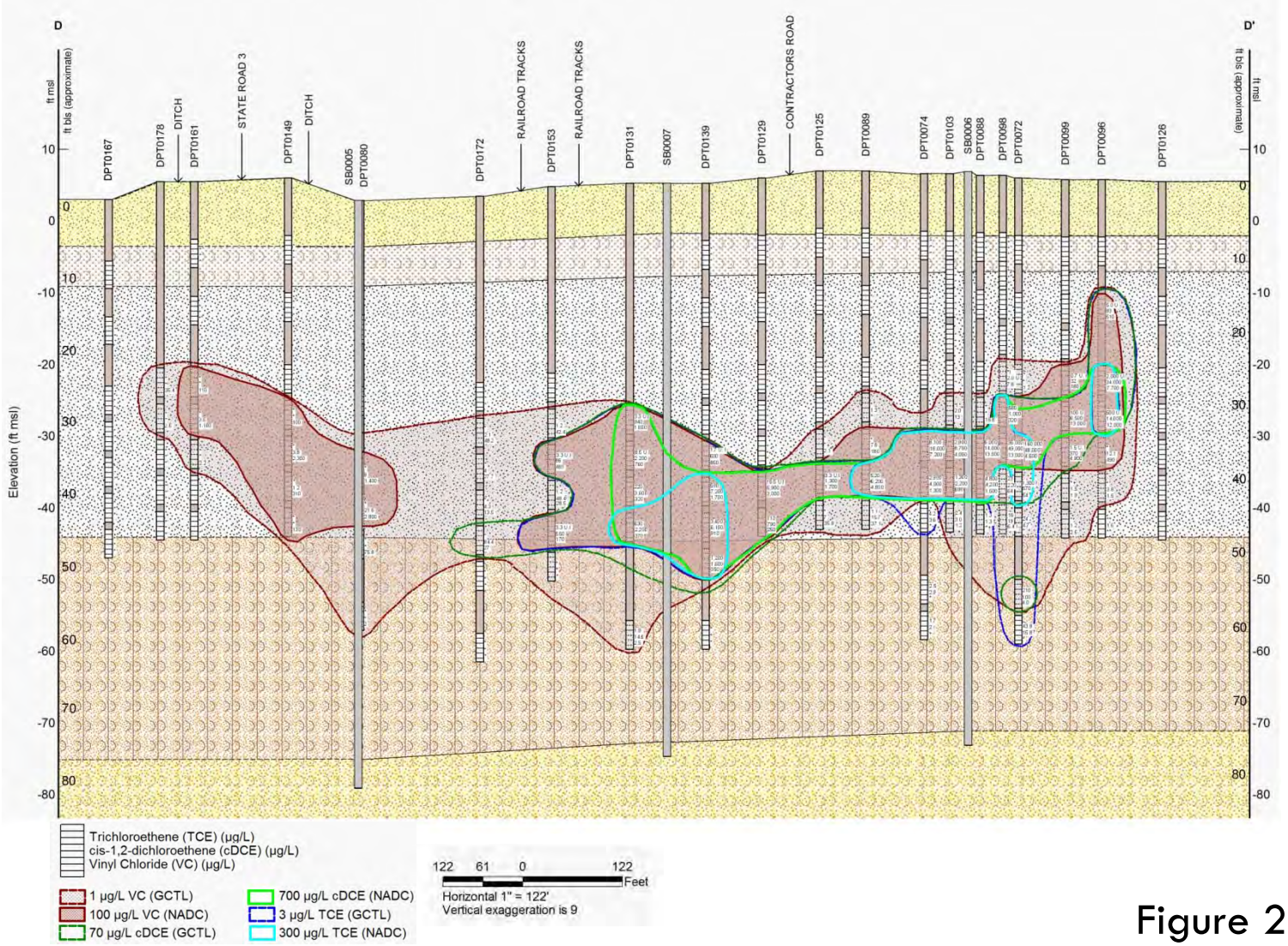



Figure 23

# EVS Files

Objectives

Site Overview/ Background

Site Conditions

Plume Delineation

Test Consensus

Present EVS 4DIM files

# Response to Comment

Arcadis #3: TCE in DPT72 at 43.8 µg/L at 61 to 65 ft BLS. Is TCE delineated to GCTLs at depth in this area?...

- *TCE at 56-60 and 61-65 ft in DPT72 likely associated with dragdown from 160,000 µg/L at 36-40 ft BLS.*
- *After sampling at this loc, driller replaced decon water more frequently to mitigate potential dragdown issues.*
- *Additional sampling proposed for confirmation sampling at 46-50 ft, 56-60 ft, and 61-65 ft BLS adjacent to DPT72.*
- *Vertical delineation well will be considered as part of performance network when/if active remediation proceeds in this area.*

Geosyntec consultants

# Response to Comment

Arcadis #5 and TT #9: VC>GCTLs in deepest samples...

- DPTs to 65 ft BLS across site at regular lateral intervals.
- Clean bottom samples at 78% of completed sample locs.
- VC>GCTL (59.9 to 720 µg/L) at indicated locs but these DPTs were terminated at 50 ft BLS, as planned.
- One of these locs, TCE>GCTL in deepest sample (DPT129). TCE vertically delineated at DPT139 (65 ft away).
- VC in DPT131 (2.5 µg/L) exceeds GCTL - single digit VC concentration.
- DPTs 136, 139, 64, 144, & 145 in immediate vicinity-clean bottoms at 60 to 65 ft BLS.
- Additional vertical delineation samples proposed, primarily in SZ, at locs where VC in deepest sample is above GCTL.

Objectives
Site Overview/ Background
Site Conditions
Plume Delineation
Test Consensus

# Mass Evaluation

| Depth (ft BLS) | Dissolved Mass (lbs) | Sorbed Mass (lbs) | Total Mass (lbs) |
|---|---|---|---|
| **LCP** | | | |
| 8-16 | 0.2 | 5.6 | 6 |
| 16-31 | 4.5 | 6.4 | 11 |
| 31-46 | 53.5 | 17.2 | 71 |
| >46 | 7.2 | 59.6 | 67 |
| Total | | | **154** |
| **HCP** | | | |
| 8-16 | 0.2 | 3.3 | 3 |
| 16-31 | 3.1 | 3.4 | 6 |
| 31-46 | 46.2 | 49.7 | 96 |
| >46 | 7.0 | 16.6 | 24 |
| Total | | | **129** |
| **Hot Spots** | | | |
| 8-16 | 0.0003 | 0.0046 | 0.0049 |
| 16-31 | 1.3 | 2.1 | 3.4 |
| 31-46 | 36 | 41 | 77 |
| >46 | 0.1 | 0.2 | 0.3 |
| Total | | | **81** |
| **TCE Source Zone** | | | |
| 8-16 | 0 | 0 | 0 |
| 16-31 | 0 | 0 | 0 |
| 31-46 | 4.7 | 10.9 | 15.7 |
| >46 | 0 | 0 | 0 |
| Total | | | **16** |

# Response to Comment

Arcadis #6: mass was only estimated for plume area >10x NADCs. It would be beneficial to have mass estimates for the SZ, HSs, HCP, and LCP for future use.

*Mass estimates were updated to include estimates for SZ, HSs, HCP, and LCP.*

Geosyntec consultants

# Supplemental Assessment Summary

- Groundwater impacts observed between 8 and 50 ft BLS
- Max concentrations at 36 to 40 ft BLS
- Separate high concentration plumes (HCPs) identified on north and south portions of site
- TCE source zone identified in south portion of site
- Maximum concentrations (µg/L)

| | *North* | *South* |
|---|---|---|
| | *TCE = ND* | *TCE = 160,000 (DPT72)* |
| | *cDCE = 2,100 (DPT36)* | *cDCE = 59,000 (DPT100)* |
| | *VC = 1,200 (DPT39)* | *VC = 17,000 (DPT100)* |

Geosyntec consultants

# Overall Plumes 8 to 50 ft BLS

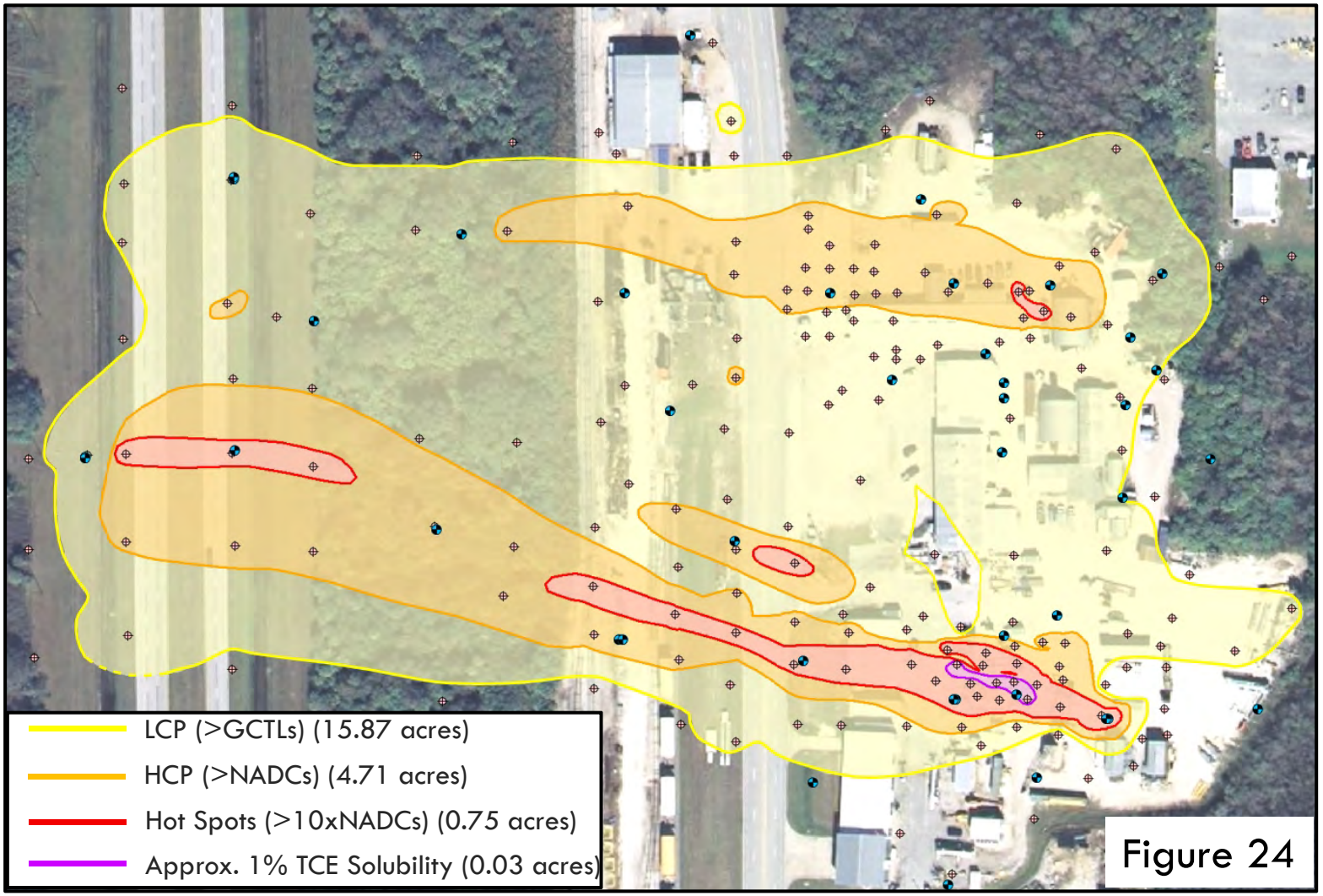


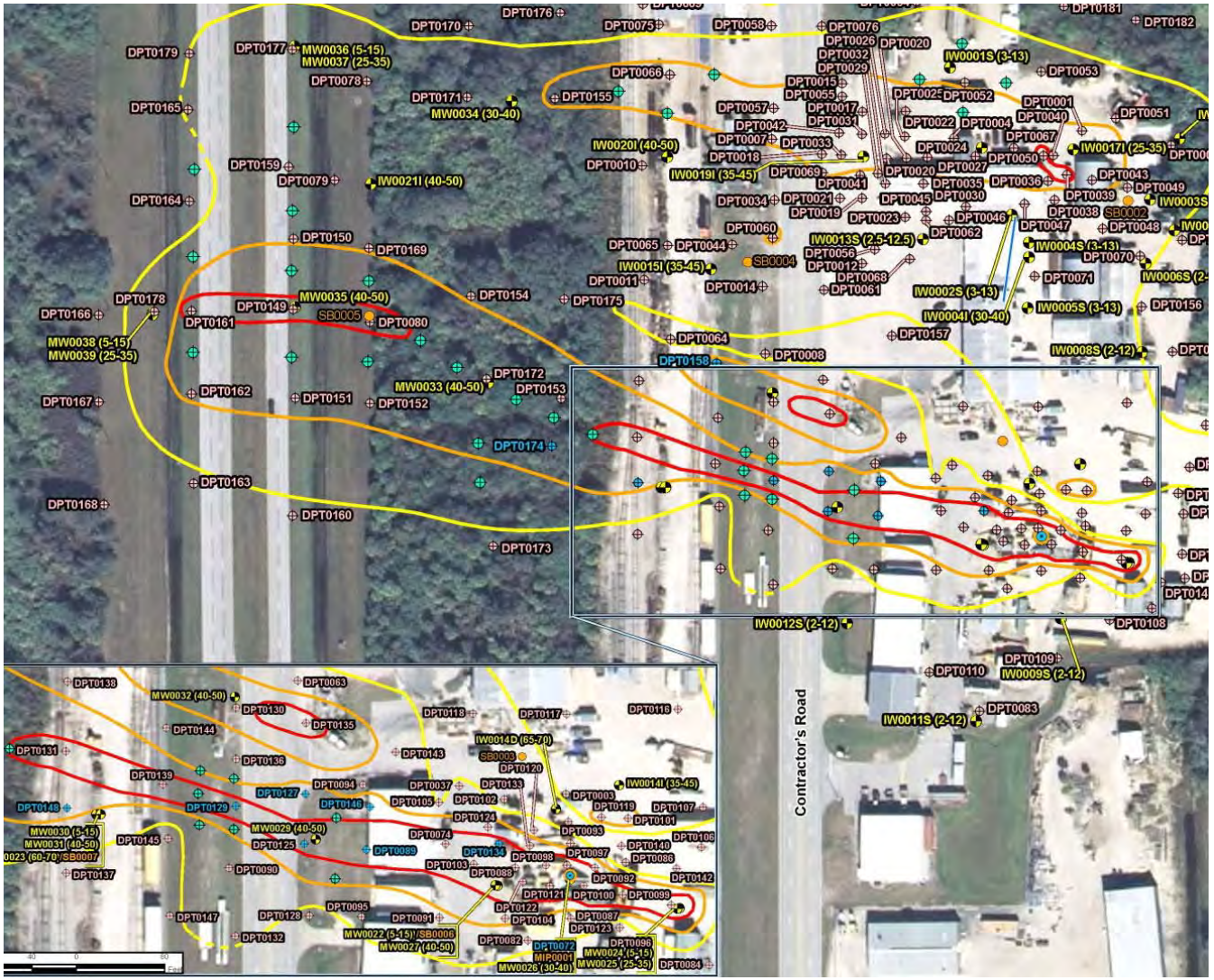

Figure 24

- Objectives
- Site Overview/ Background
- Site Conditions
- Plume Delineation
- Test Consensus

Geosyntec consultants

# Test Consensus on Proposed DPT Locations

- Objectives
- Site Overview/ Background
- Site Conditions
- Plume Delineation
- Test Consensus



# Path Forward

- Complete additional sampling
- Present Step 1B and include data gap results
  - *Plume maps*
  - *EVS*
  - *Mass estimates*
- Proceed with Step 2

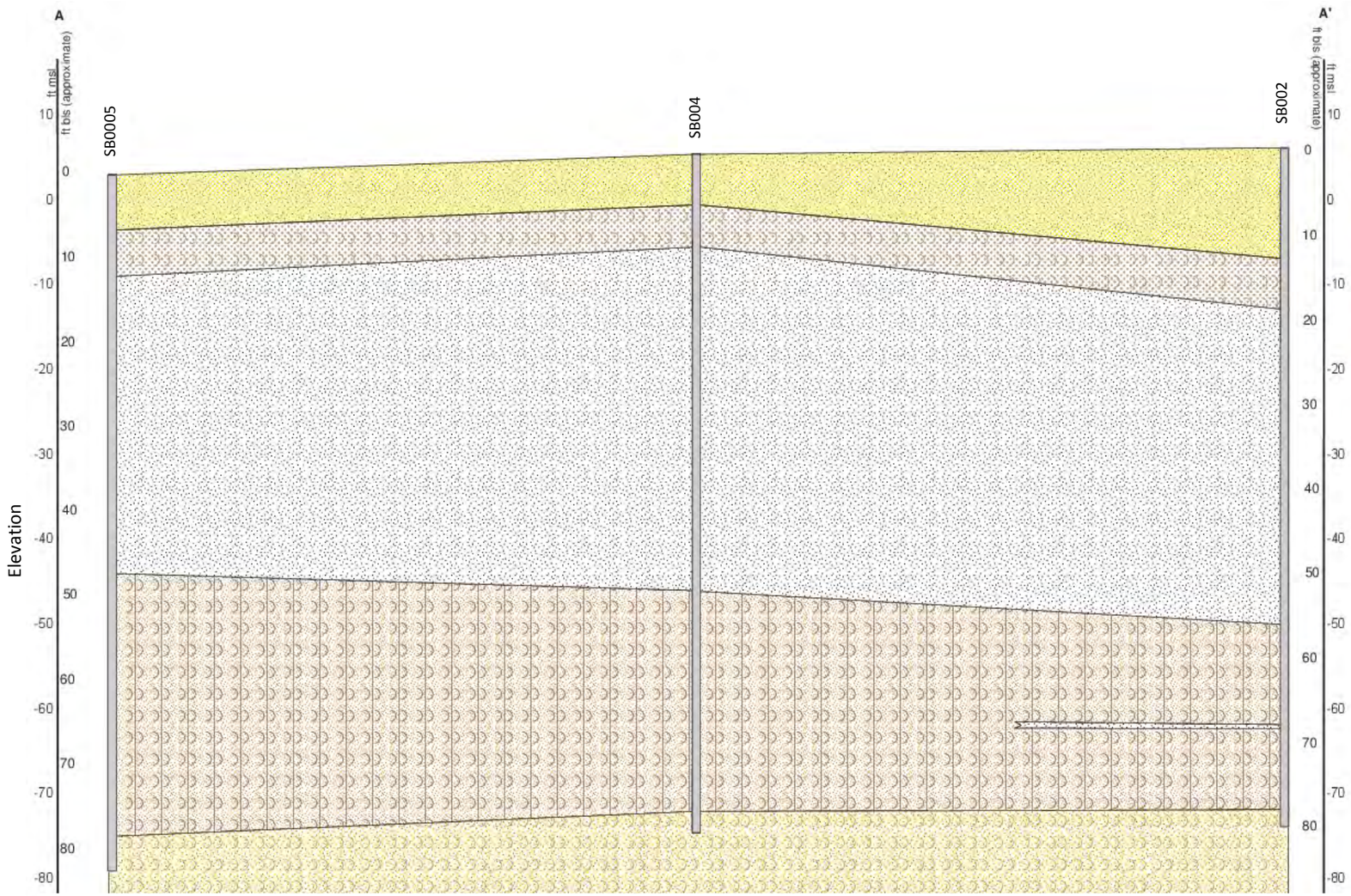
6770 South Washington Ave.

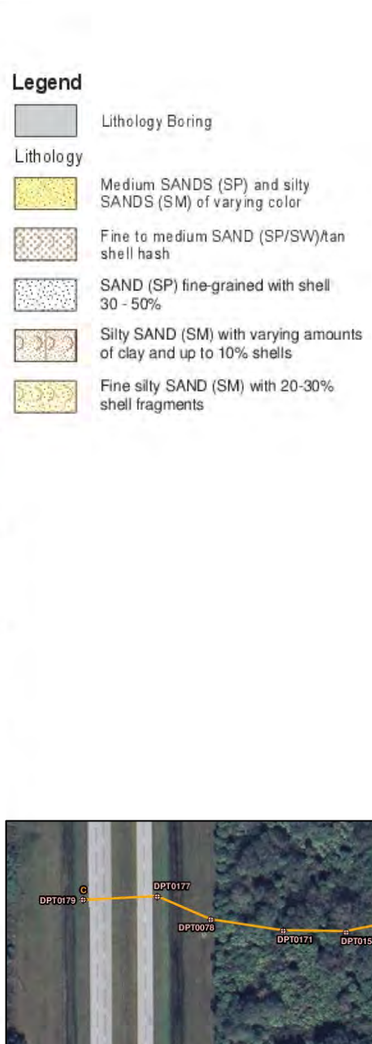
Titusville, FL 32780

321.269.5880

**www.geosyntec.com**

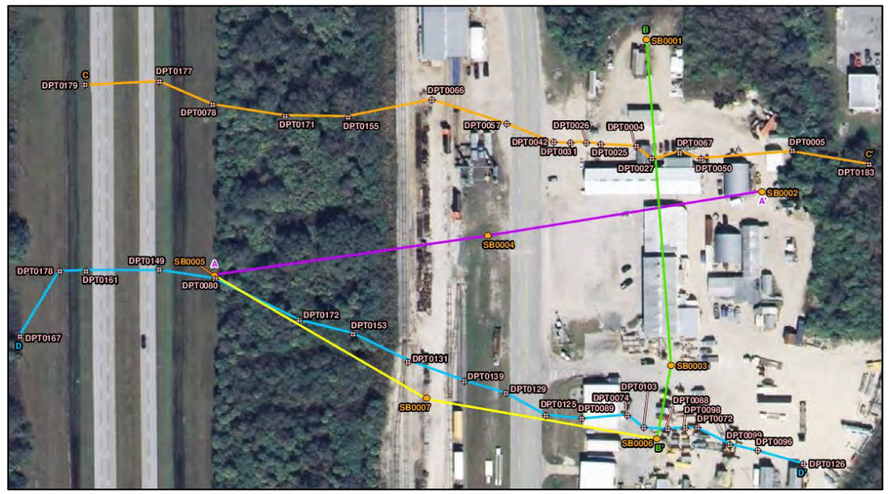
Geosyntec consultants




Notes:
1. ft indicate feet.
2. msl indicates mean sea level
3. bls indicates below land surface

78 39 0 78 Feet
Horizontal 1" = 78'
Vertical exaggeration is 6




**Legend**

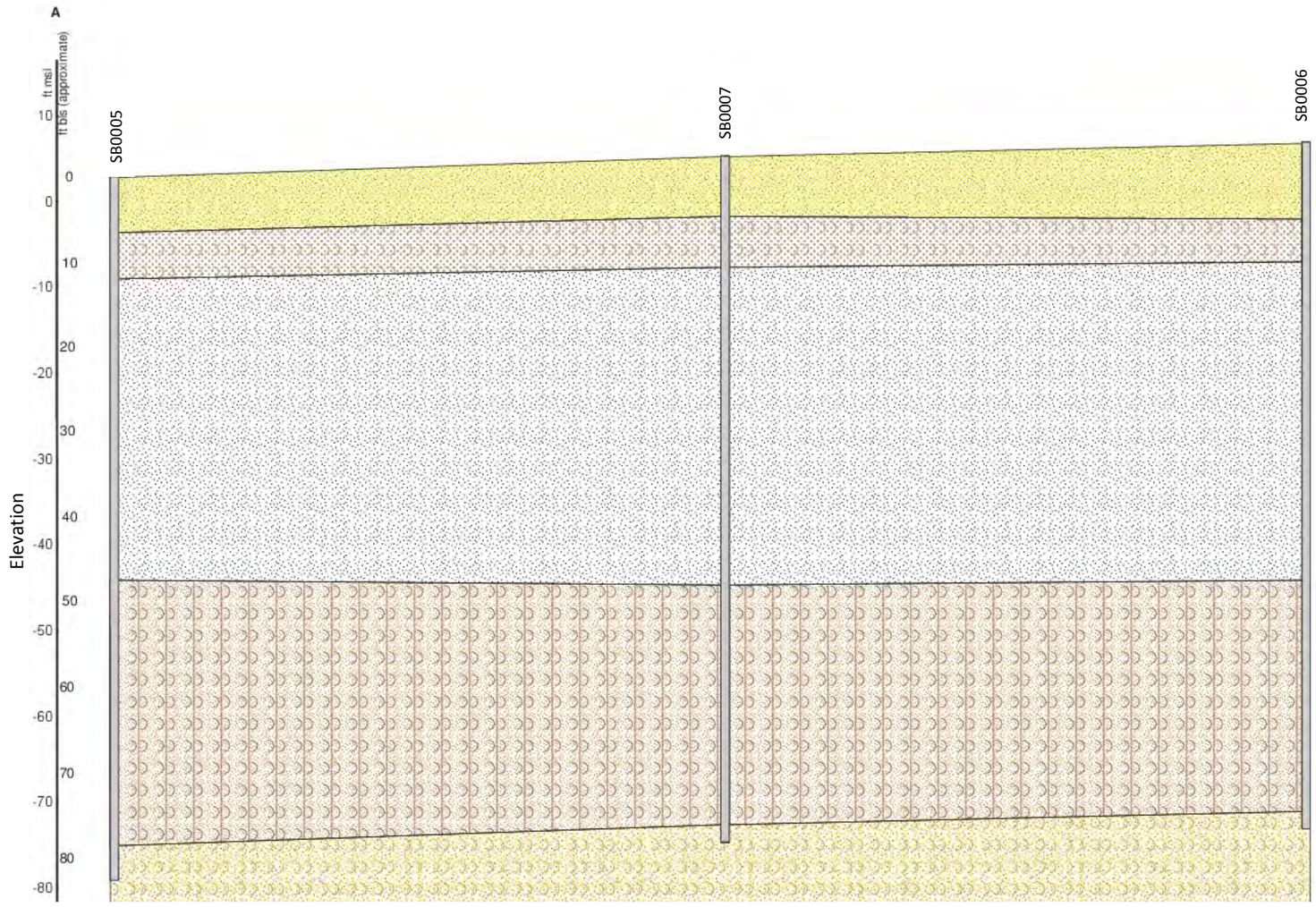
- Soil Boring Location
- DPT Sampling Location
- A-A' Transect
- A-B' Transect
- B-B' Transect
- C-C' Transect
- D-D' Transect

N

120 60 0 120 Feet

Notes: Prefix for all sampling location is "CRHE-"

Figure 1
Lithologic Cross Section A to A'




Notes:
1. ft indicate feet
2. msl indicates mean sea level
3. bls indicates below land surface

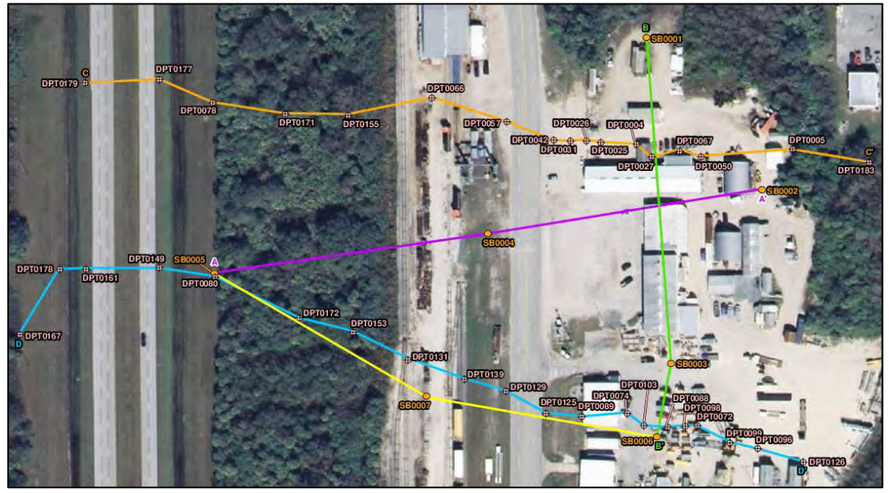
70 35 0 70 Feet
Horizontal 1" = 70'
Vertical exaggeration is 5.5

**Legend**

Lithology Boring

Lithology

- Medium SANDS (SP) and silty SANDS (SM) of varying color
- Fine to medium SAND (SP/SW)/tan shell hash
- SAND (SP) fine-grained with shell 30 - 50%
- Silty SAND (SM) with varying amounts of clay and up to 10% shells
- Fine silty SAND (SM) with 20-30% shell fragments




**Legend**

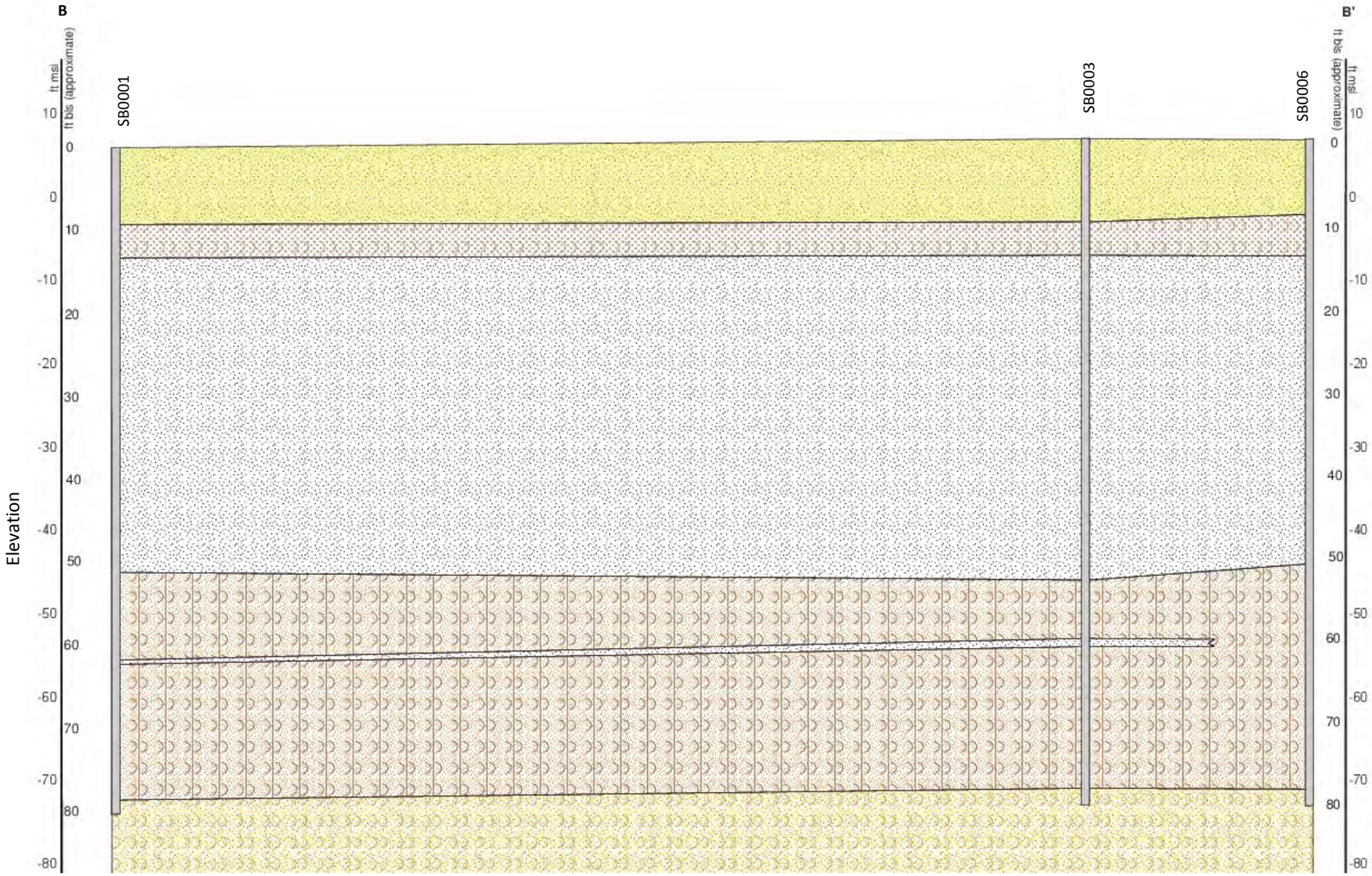
- Soil Boring Location
- DPT Sampling Location
- A-A' Transect
- A-B' Transect
- B-B' Transect
- C-C' Transect
- D-D' Transect

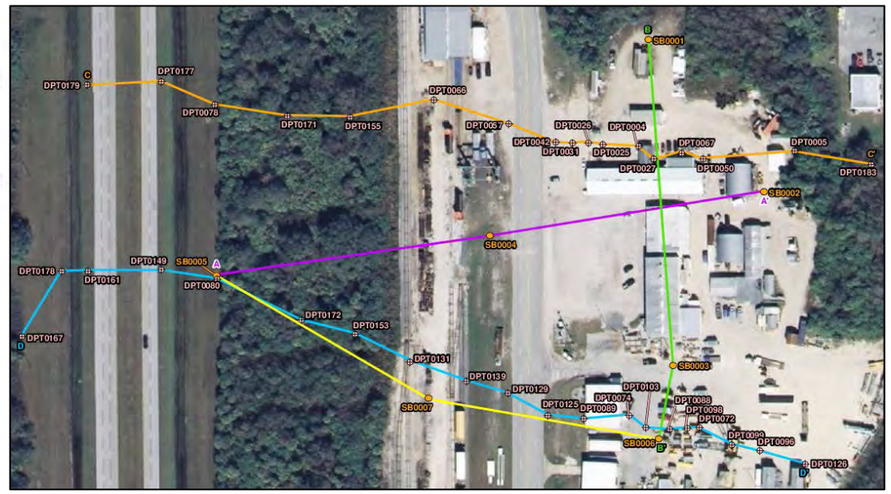
N

120 60 0 120 Feet

Notes: Prefix for all sampling location is "CRHE-"

Figure 2
Lithologic Cross Section A to B'



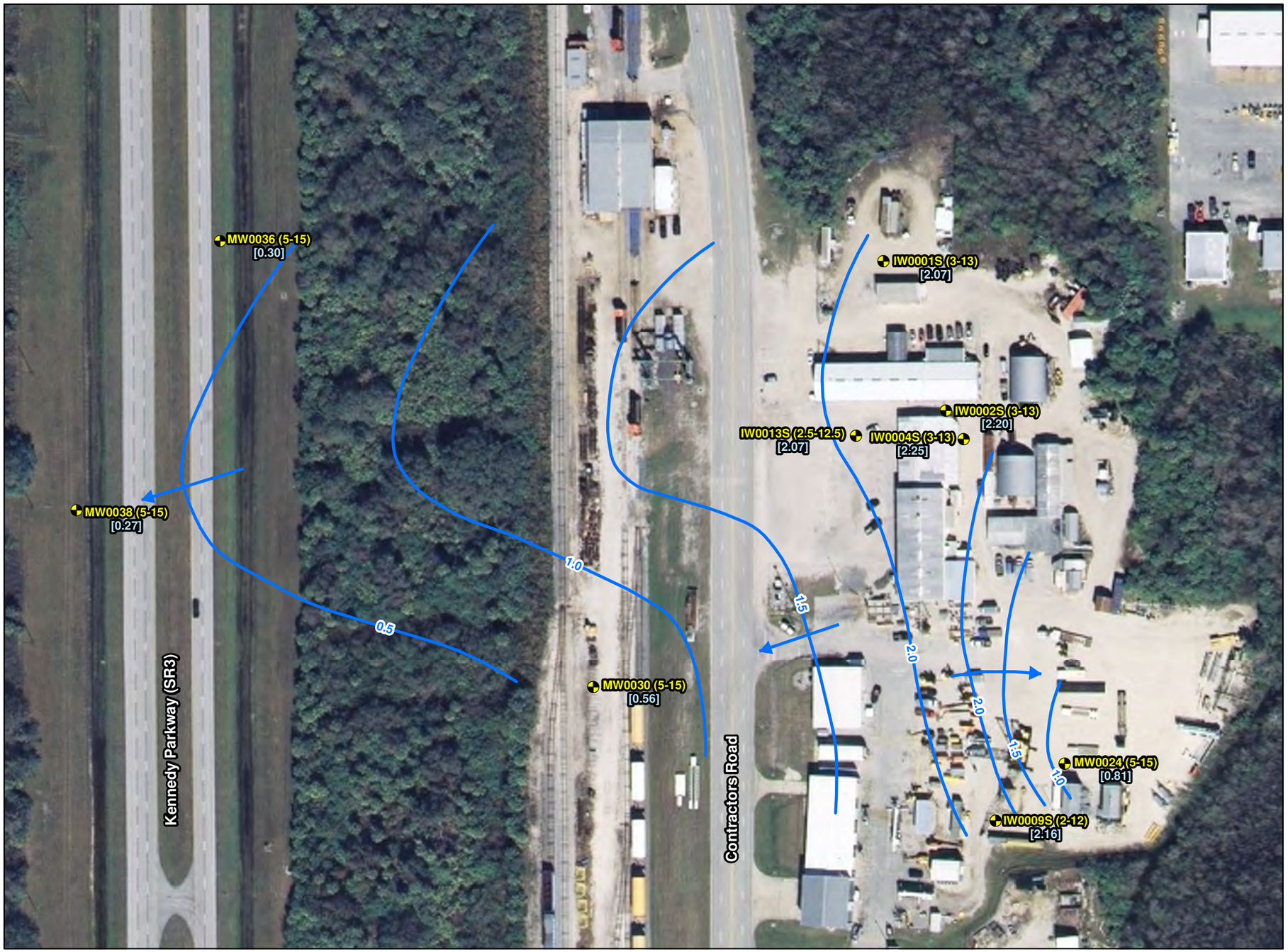



Notes:
1. ft indicate feet
2. msl indicates mean sea level
3. bls indicates below land surface

57 28 0 57 Feet
Horizontal 1" = 57'
Vertical exaggeration is 4.5

Notes: Prefix for all sampling location is "CRHE-"

Figure 3
Lithologic Cross Section B to B'




N

120 60 0 120

Feet

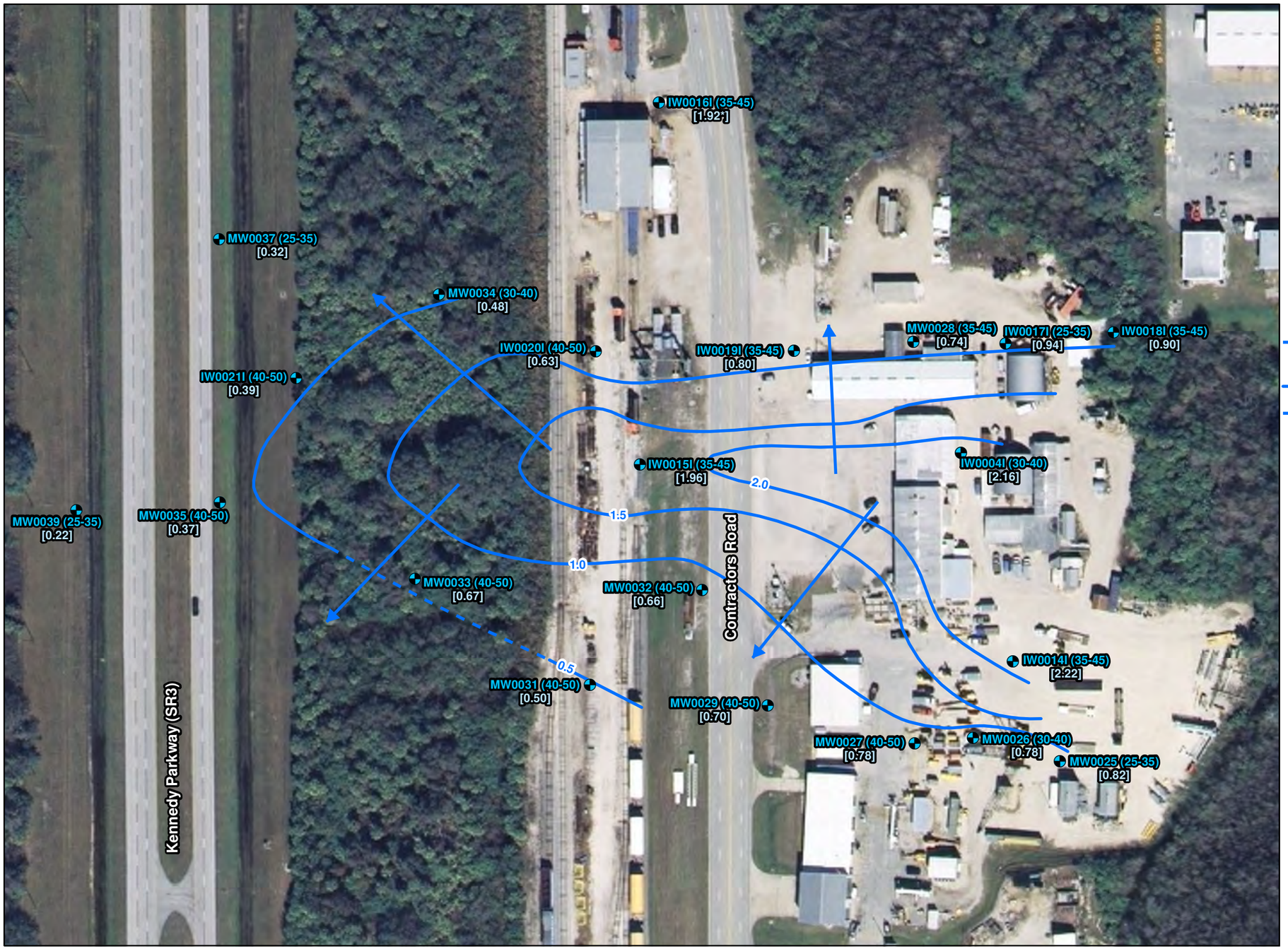
## Legend

- Shallow Monitoring Well Location showing (Screen Interval) and [Groundwater Elevation]
- Groundwater Elevation Contour
- Groundwater Flow Direction

Notes:
1. Screen interval is presented in feet, below land surface (ft, BLS).
2. Elevation is referenced to the North American Datum of 1988.

Titusville-01\data\0GIS\FR1681\MXDs\MRACH2012\GW_Elev_Shallow.mxd 21 MARCH 2012 JRB

Figure 4
Shallow Groundwater Elevation Contours - March 2012




## Legend

- Intermediate Monitoring Well Location showing (Screen Interval) and [Groundwater Elevation]
- Inferred Groundwater Elevation Contour
- Groundwater Elevation Contour
- Groundwater Flow Direction

Notes:
1. Screen interval is presented in feet, below land surface (ft, BLS).
2. Elevation is referenced to the North American Datum of 1988.
3. * indicates value is not used to generate contour.

Titusville-01\data\0GIS\FR1681\MXDs\MARCH2012\GW_Elev_Intermediate.mxd 27 MARCH 2012 MAH

Figure 5
Intermediate Groundwater Elevation Contours - March 2012

N

120 60 0 120

Feet

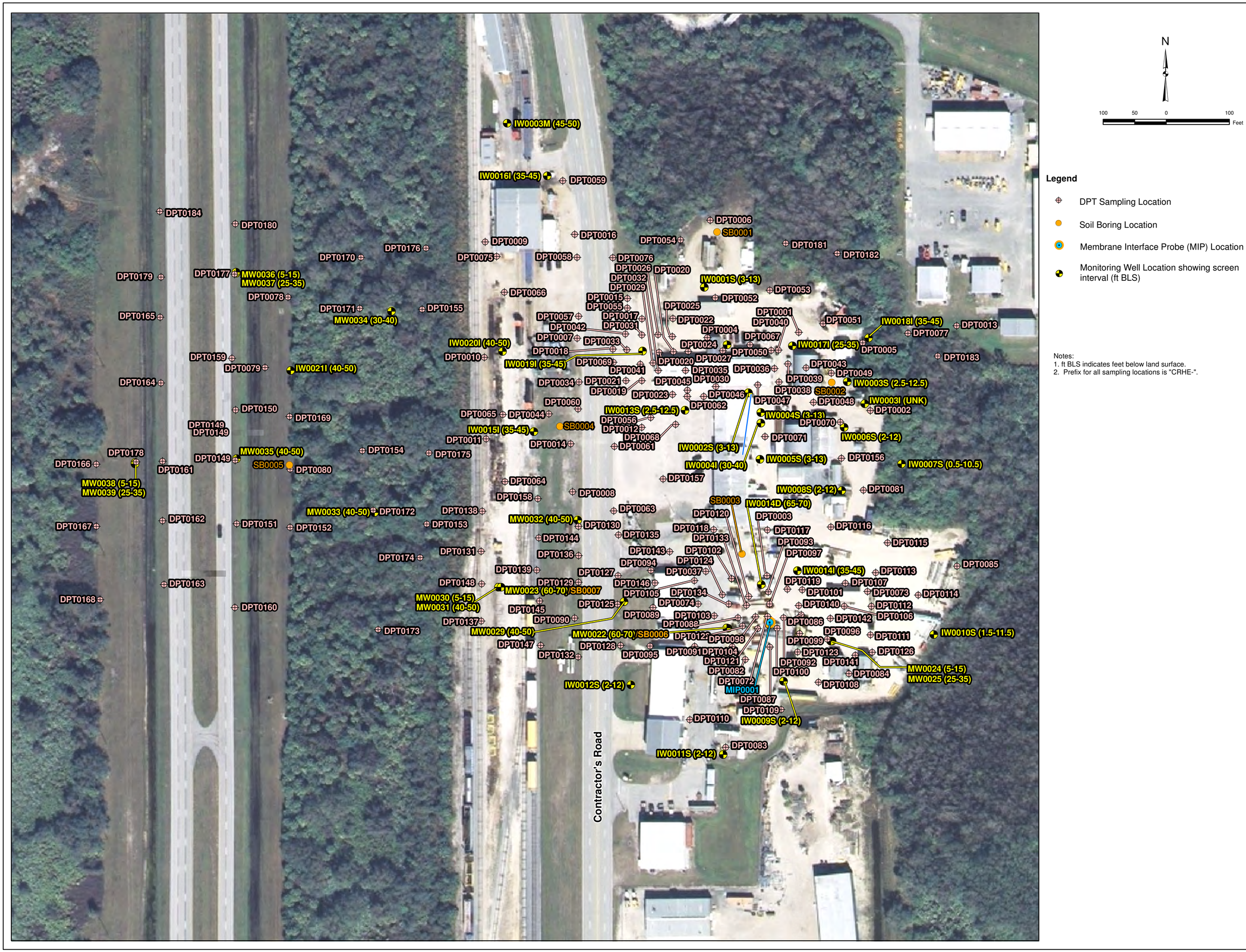
**Legend**

- Deep Monitoring Well Location showing (Screen Interval) and [Groundwater Elevation]
- Groundwater Elevation Contour
- Groundwater Flow Direction

Notes:
1. Screen interval is presented in feet, below land surface (ft, BLS).
2. Elevation is referenced to the North American Datum of 1988.

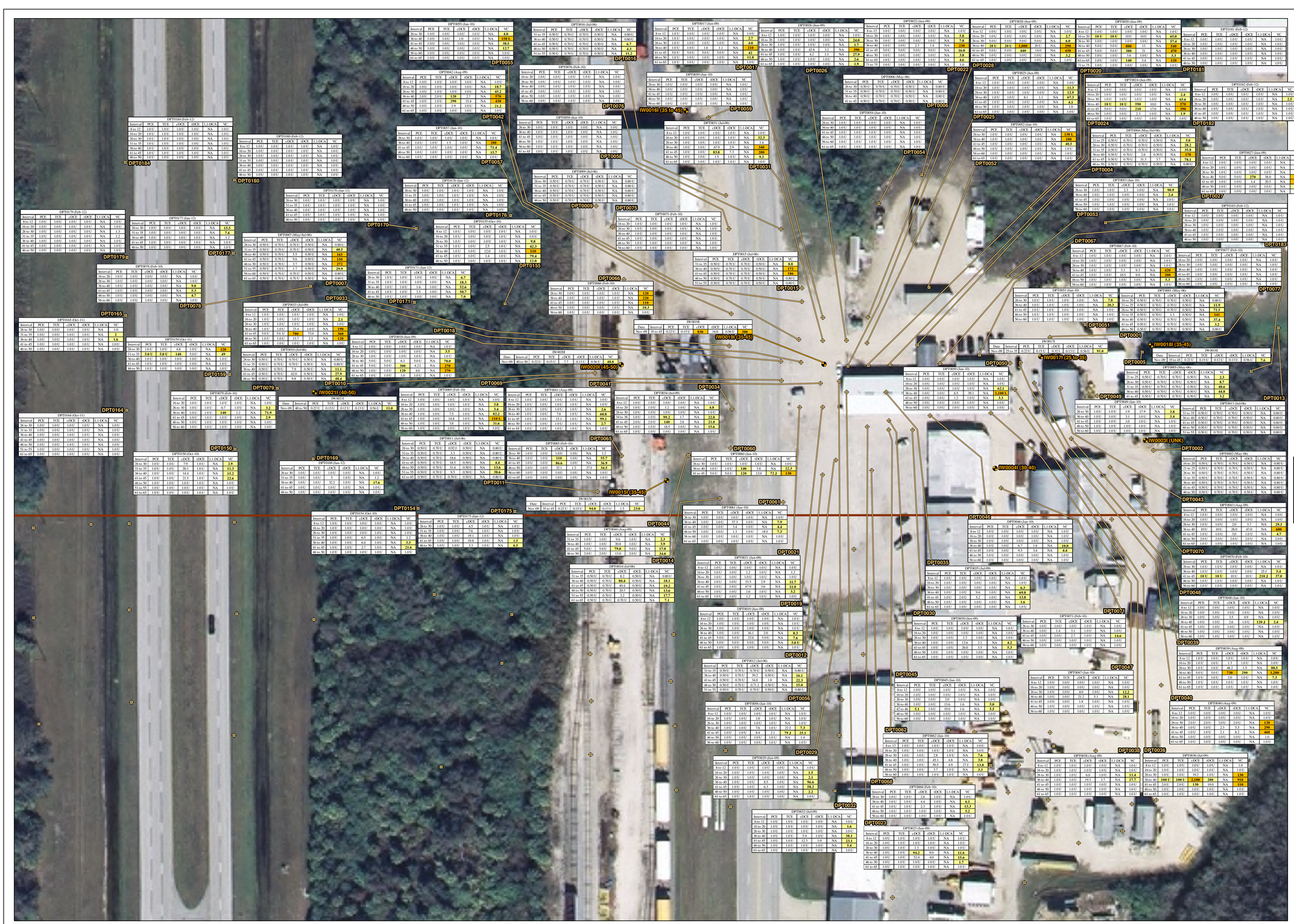
Titusville-01\data\0GIS\FR1681\MXDs\MRACH2012\GW_Elev_Deep.mxd 22 MARCH 2012 JRB

Figure 6
Deep Groundwater Elevation Contours - March 2012




Titusville-01\Data\GIS\FR1681_CRHE\MXDs\FEB2012\Sampling_locs_FEB2012.mxd 28 MARCH 2012 MAH

Figure 7
CRHE Environmental Sampling Locations




| Parameter | Abbreviation | GCTL | NADC |
|---|---|---|---|
| Tetrachloroethene | PCE | 3 | 300 |
| Trichloroethene | TCE | 3 | 300 |
| cis-1,2-Dichloroethene | cDCE | 70 | 700 |
| trans-1,2-Dichloroethene | tDCE | 100 | 1,000 |
| 1,1-Dichloroethane | 1,1-DCA | 70 | 700 |
| Vinyl Chloride | VC | 1 | 100 |

Notes:
1. Screen interval is presented in feet below land surface (ft BLS).
2. Results are presented in micrograms per liter (µg/L).
3. I indicates result is between the method detection limit and the practical quantitation limit.
4. J indicates estimated value.
5. U indicates value was not detected above the method detection limit.
6. L indicates value exceeds the calibration range.
7. Yellow shaded, bold text indicates exceedance of Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Level (GCTL).
8. Orange shaded, bold text indicates exceedance of FDEP Natural Attenuation Default Concentration (NADC).



Figure 8
CRHE Area Summary Groundwater Sampling Results - Northern Portion of Site

## Legend

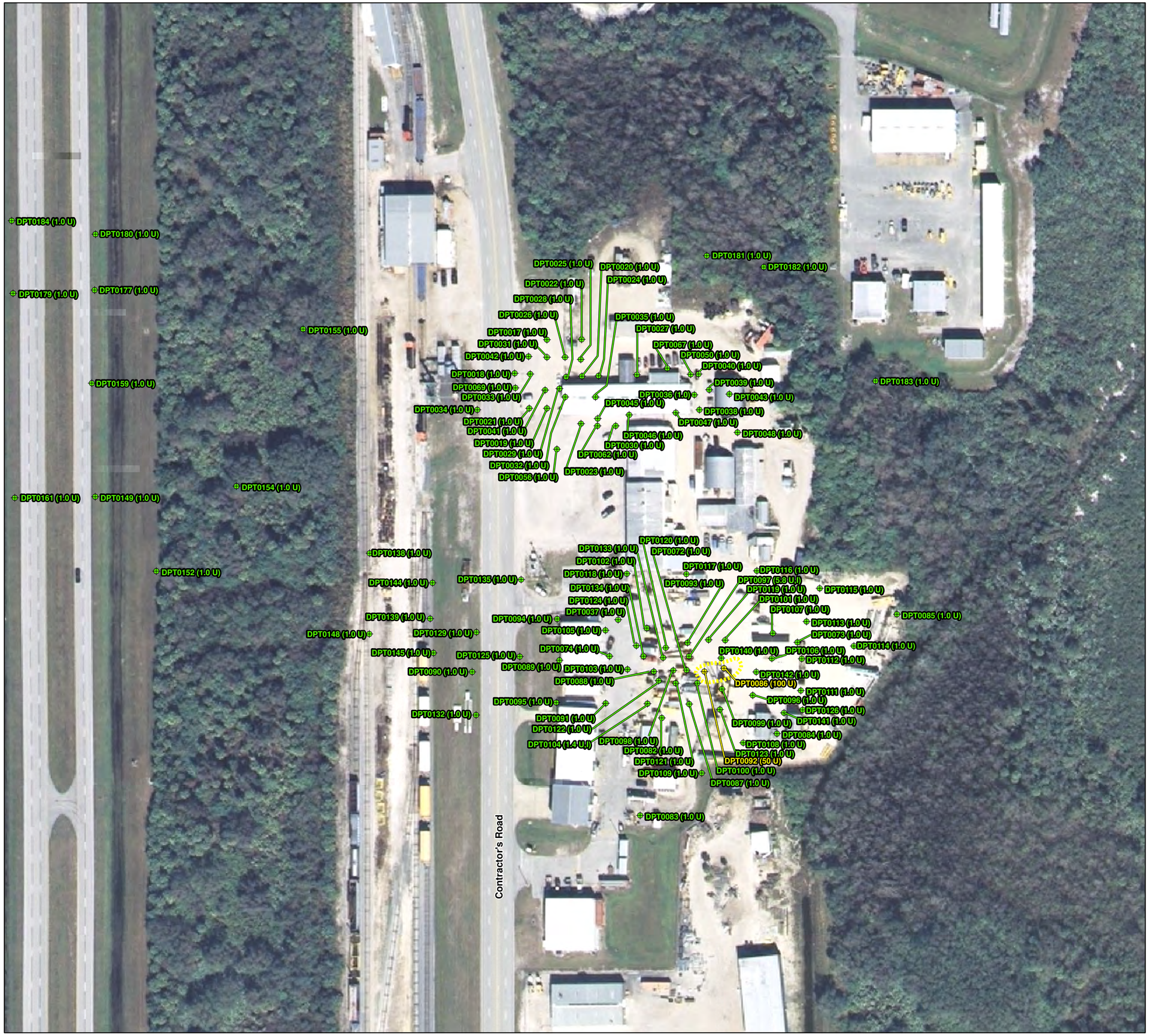
- DPT Sampling Location
- Intermediate Monitoring Well Location showing screen interval (ft BLS)
- North/South Boundary Line (data for locations north of this line can be found on Figure 8).

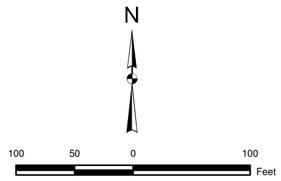
| Parameter | Abbreviation | GCTL | NADC |
|---|---|---|---|
| Tetrachloroethene | PCE | 3 | 300 |
| Trichloroethene | TCE | 3 | 300 |
| cis-1,2-Dichloroethene | cDCE | 70 | 700 |
| trans-1,2-Dichloroethene | tDCE | 100 | 1,000 |
| 1,1-Dichloroethane | 1,1-DCA | 70 | 700 |
| Vinyl Chloride | VC | 1 | 100 |

Notes:
1. Screen interval is presented in feet below land surface (ft BLS).
2. Results are presented in micrograms per liter (µg/L).
3. Indicates results between the method detection limit and the practical quantitation limit.
4. J indicates estimated value.
5. U indicates value was not detected above the method detection limit.
6. L indicates value exceeds the calibration range.
7. Yellow shaded, bold text indicates exceedance of Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Level (GCTL).
8. Orange shaded, bold text indicates exceedance of FDEP Natural Attenuation Default Concentration (NADC).

Figure 9
CRHE Area Summary Groundwater Sampling Results - Southern Portion of Site

Y:\cadfiles\GIS\FIGURES_CRHE\MXDs\FIGS01XFIGS01X_SPT_South_spatial.mxd 19 MAY 2012 JRB




**Legend**

**DPT Sampling Location showing (highest TCE Concentration)**

- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)
- 3 µg/L TCE Isopleth

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. TCE indicates trichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. GCTL indidcates Groundwater Cleanup Target Level.
7. NADC indicates Natural Attenuation Default Concentration.
8. Prefix for all sampling locations is "CRHE-".
9. Contours that are based solely on non-detects with elevated detection limits are shown with dashed lines and no shading.

Titusville-01\Data\GIS\FR1681_CRHE\MXDs\FEB2012\TCE_8_to16_ftbls_FEB2012.mxd 24 MAY 2012 MAH

Figure 10
CRHE Area Summary of TCE Results in Groundwater 8 to 16 ft BLS

N

100 50 0 100
Feet

**Legend**

**DPT Sampling Location showing (highest TCE Concentration)**

- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)
- TCE concentration greater than 3,000 µg/L (10X NADC)

**Monitoring Well Location showing (screen interval ft BLS) and [TCE Concentration]**

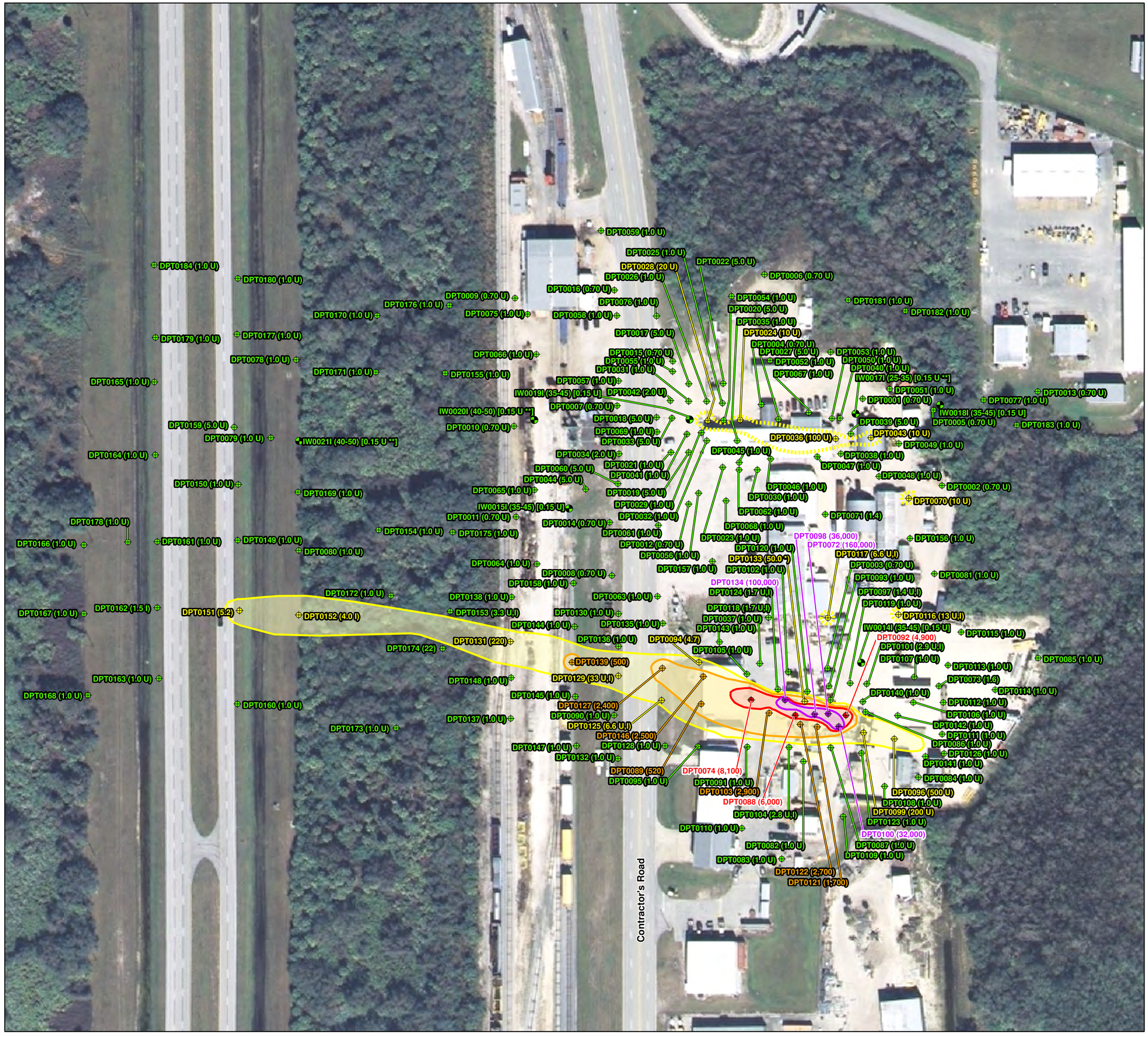
- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)

- 3 µg/L TCE Isopleth
- 300 µg/L TCE Isopleth
- 3,000 µg/L TCE Isopleth

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. TCE indicates trichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. GCTL indicates Groundwater Cleanup Target Level.
7. NADC indicates Natural Attenuation Default Concentration.
8. Prefix for all sampling locations is "CRHE-".
9. ** indicates well screens fall within on within more than one mapping interval.
10. Contours that are based solely on non-detects with elevated detection limits are shown with dashed lines and no shading.

Titusville-01:Data:0GIS\FR1681_CRHE\MXDs\FEB2012\TCE_16_to30_ftbls_FEB2012.mxd 05 APRIL 2012 JRB

Figure 11
CRHE Area Summary of TCE Results in Groundwater 16 to 30 ft BLS






**Legend**

**DPT Sampling Location showing (highest TCE Concentration)**

- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)
- TCE concentration greater than 3,000 µg/L (10X NADC)
- TCE concentration greater than 10,000 µg/L

**Monitoring Well Location showing (screen interval ft BLS) and [TCE Concentration]**

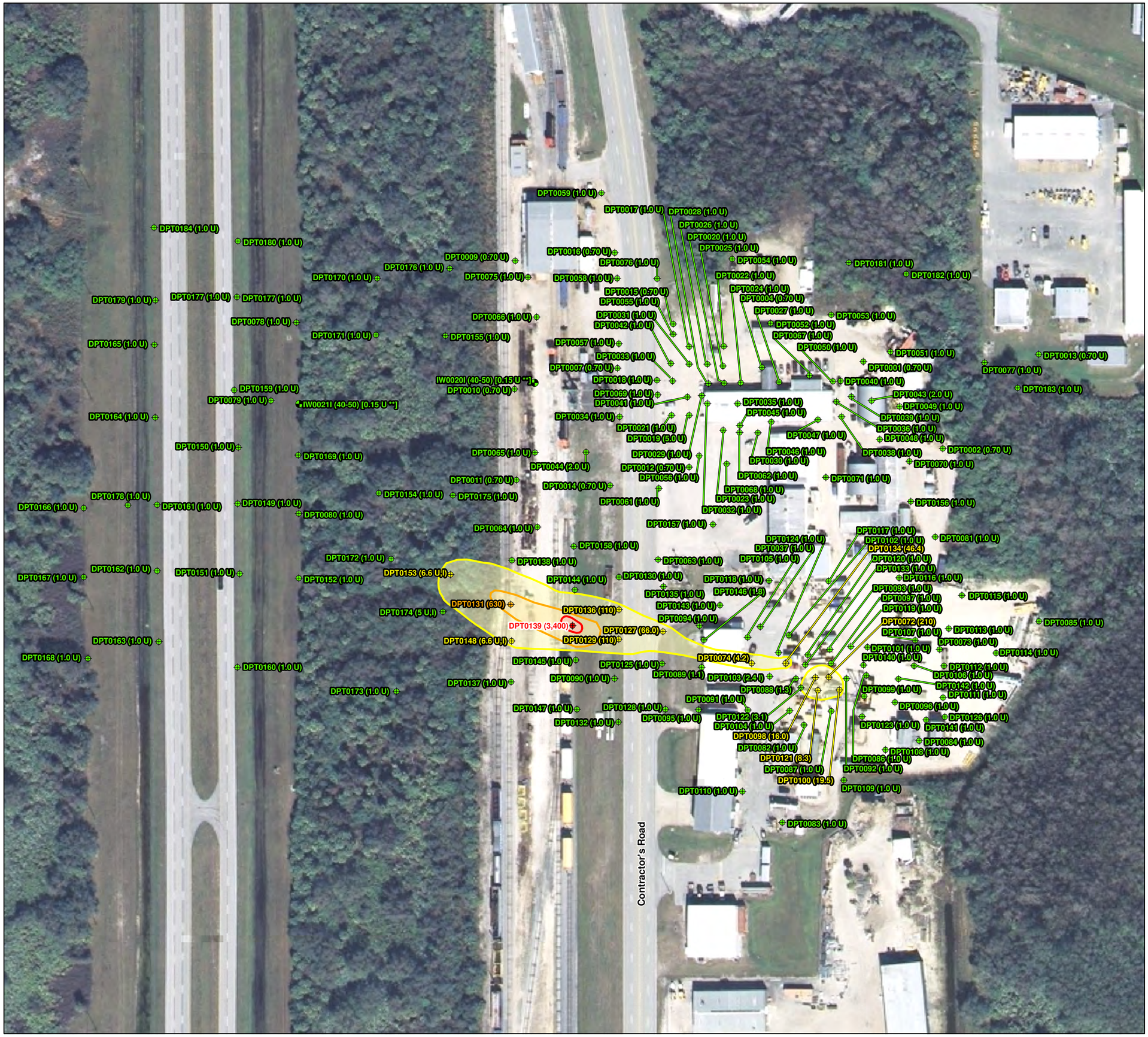
- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)

- 3 µg/L TCE Isopleth
- 300 µg/L TCE Isopleth
- 3,000 µg/L TCE Isopleth
- 10,000 µg/L TCE Isopleth - Approximate 1% TCE Solubility

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. TCE indicates trichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. * indicates data not used to generate contours.
7. ** indicates well screens fall within on within more than one mapping interval.
8. GCTL indicates Groundwater Cleanup Target Level.
9. NADC indicates Natural Attenuation Default Concentration.
10. Prefix for all sampling locations is "CRHE-".
11. Only monitoring wells that were sampled in November 2009 are shown on this map.
12. Contours that are based solely on non-detects with elevated detection limits are shown with dashed lines and no shading.

Titusville-01\Data\GIS\FR1681_CRHE\MXDs\FEB2012\TCE_31_to46_ftbls_FEB2012.mxd 23 MAY 2012 MAH

Figure 12
CRHE Area Summary of TCE Results in Groundwater 31 to 46 ft BLS




N

100 50 0 100

Feet

**Legend**

**DPT Sampling Location showing (highest TCE Concentration)**

- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)
- TCE concentration greater than 3,000 µg/L (10X NADC)

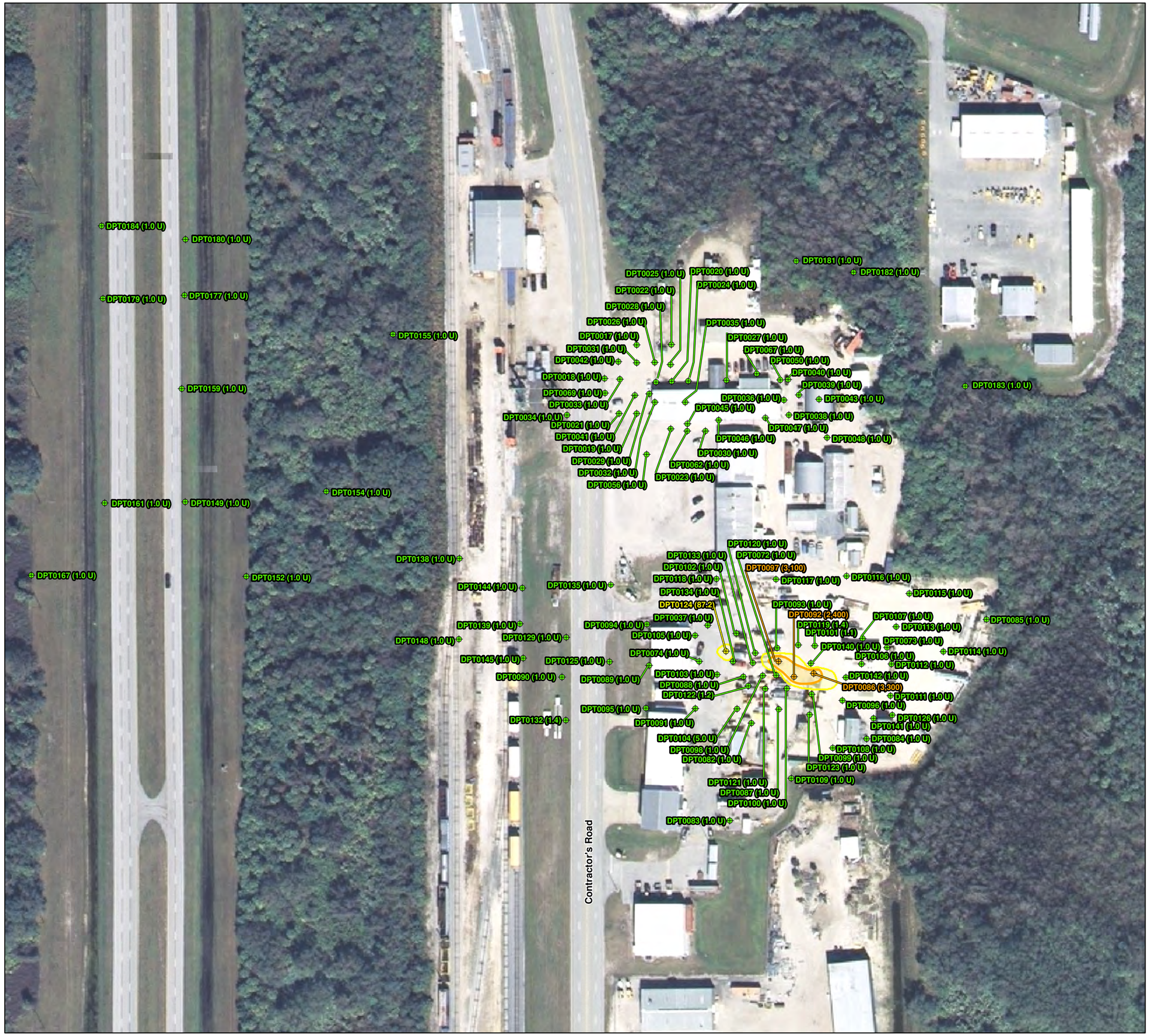
**Monitoring Well Location showing (screen interval (ft BLS) and [TCE Concentration])**

- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)
- 3 µg/L TCE Isopleth
- 300 µg/L TCE Isopleth
- 3,000 µg/L TCE Isopleth

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. TCE indicates trichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. ** indicates well screens fall within on within more than one mapping interval.
7. GCTL indicates Groundwater Cleanup Target Level.
8. NADC indicates Natural Attenuation Default Concentration.
9. Prefix for all sampling locations is "CRHE-".
10. Only monitoring wells that were sampled in November 2009 are shown on this map.

T:\tusville-01\Data\0GIS\FR1681_CRHE\MXDs\FEB2012\TCE_greater_than_46_ftbls_FEB2012.mxd 13 JUNE 2012 JRB

Figure 13
CRHE Area Summary of TCE Results in Groundwater greater than 46 ft BLS




**Legend**

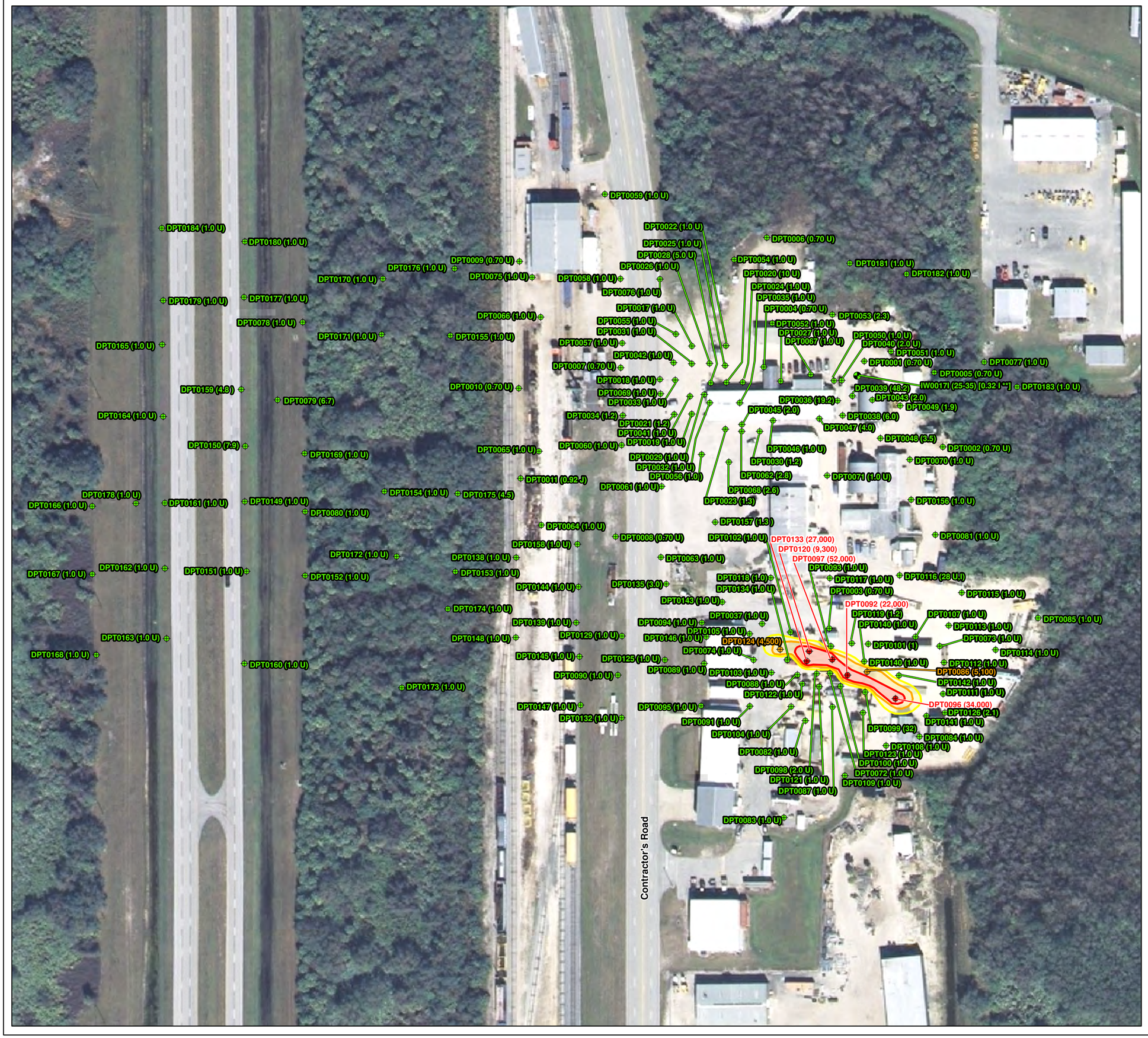
**DPT Sampling Location showing (highest cDCE Concentration)**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)
- 70 µg/L cDCE Isopleth
- 700 µg/L cDCE Isopleth

Notes:
1. Results are presented in micrograms per liter (µg/L).
2. ft BLS indicates feet below land surface.
3. U indicates value was not detected above the method detection limit.
4. cDCE indicates cis-1,2-dichloroethene.
5. GCTL indicates Groundwater Cleanup Target Level.
6. NADC indicates Natural Attenuation Default Concentration.
7. Prefix for all sampling locations is "CRHE-".

Titusville-01\Data\GIS\FR1681_CRHE\MXDs\FEB2012\cDCE_8_to16_ftbls_FEB2012.mxd 29 FEBRUAR 2012 MLN

Figure 14
CRHE Area Summary of cDCE Results in Groundwater 8 to 16 ft BLS




**Legend**

**DPT Sampling Location showing (highest cDCE concentration)**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)
- cDCE concentration greater than 7,000 µg/L (10X NADC)

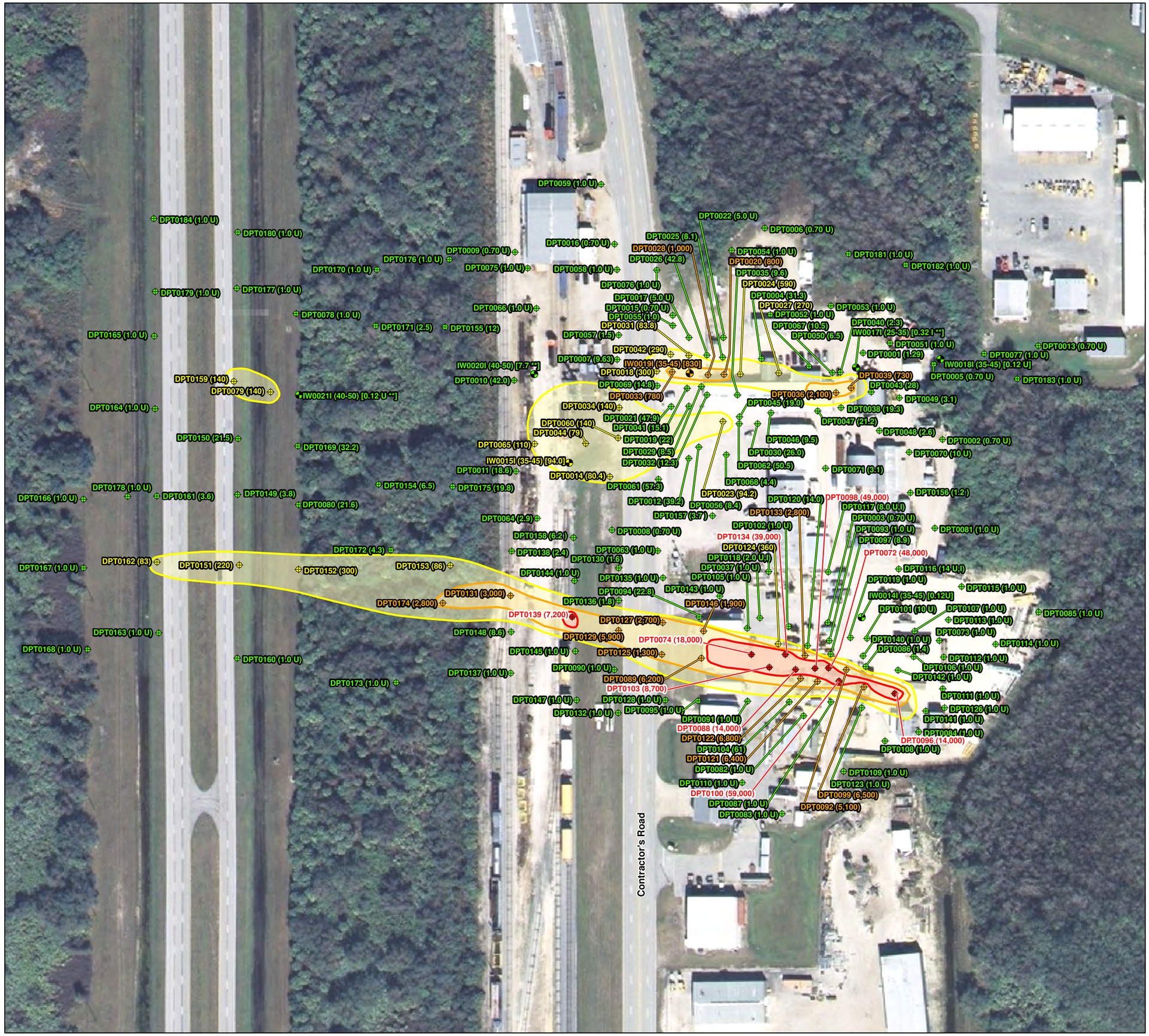
**Monitoring Well Location showing (screen interval ft BLS) and [cDCE Concentration]**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)
- 70 µg/L cDCE Isopleth
- 700 µg/L cDCE Isopleth
- 7,000 µg/L cDCE Isopleth

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. U indicates value was not detected above the method detection limit.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. J indicates estimated value.
6. cDCE indicates cis-1,2-dichloroethene.
7. GCTL indicates Groundwater Cleanup Target Level.
8. NADC indicates Natural Attenuation Default Concentration.
9. Prefix for all sampling locations is "CRHE-".
10. ** indicates well screens fall within on within more than one mapping interval.

Titusville-01\Data\GIS\FR1681_CRHE\MXDs\FEB2012\cDCE_16_to30_ftbls_FEB2012.mxd 02 MARCH 2012 MAH

Figure 15
CRHE Area Summary of cDCE Results in Groundwater 16 to 30 ft BLS




N

100 50 0 100

Feet

**Legend**

**DPT Sampling Location showing (highest cDCE Concentration)**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)
- cDCE concentration greater than 7,000 µg/L (10X NADC)

**Monitoring Well Location showing (screen interval ft BLS) and [cDCE Concentration]**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)

- 70 µg/L cDCE Isopleth
- 700 µg/L cDCE Isopleth
- 7,000 µg/L cDCE Isopleth

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. cDCE indicates cis-1,2-dichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. ** indicates well screens fall within on within more than one mapping interval.
7. GCTL indicates Groundwater Cleanup Target Level.
8. NADC indicates Natural Attenuation Default Concentration.
9. Prefix for all sampling locations is "CRHE-".
10. Only monitoring wells that were sampled in November 2009 are shown on this map.

Titusville-01\Data\0GIS\FR1681_CRHE\MXDs\FEB2012\cDCE_31_to46_ftbls_FEB2012.mxd 23 MAY 2012 MAH

Figure 16
CRHE Area Summary of cDCE Results in Groundwater 31 to 46 ft BLS

N

100 50 0 100
Feet

**Legend**

**DPT Sampling Location showing (highest cDCE Concentration)**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)

**Monitoring Well Location showing (screen interval ft BLS) and [cDCE Concentration]**

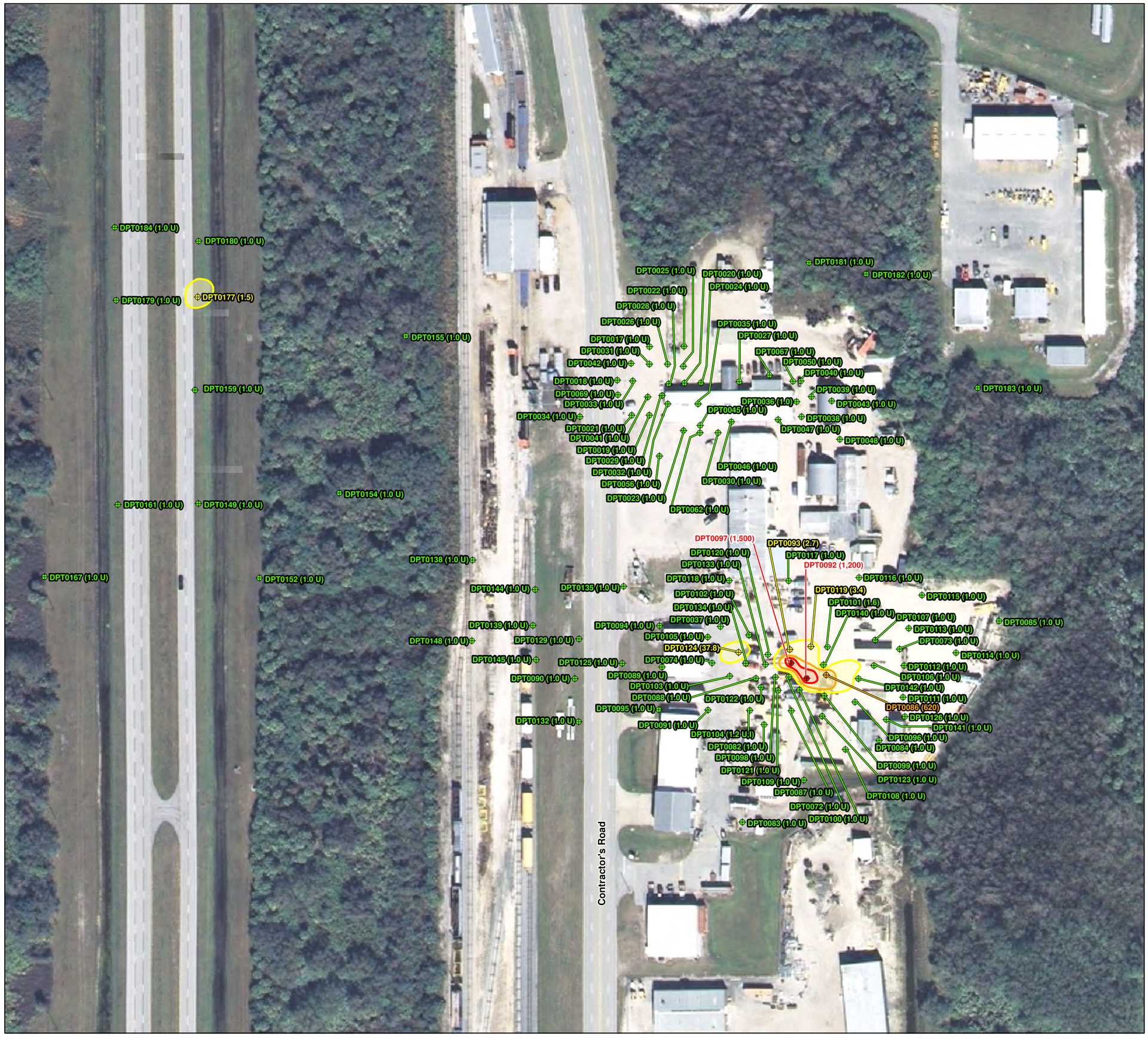
- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)
- 70 µg/L cDCE Isopleth
- 700 µg/L cDCE Isopleth

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. cDCE indicates cis-1,2-dichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. J indicates estimated value.
6. U indicates value was not detected above the method detection limit.
7. ** indicates well screens fall within on within more than one mapping interval.
8. GCTL indicates Groundwater Cleanup Target Level.
9. NADC indicates Natural Attenuation Default Concentration.
10. Prefix for all sampling locations is "CRHE-".
11. Only monitoring wells that were sampled in November 2009 are shown on this map.

Contractor's Road

Titusville-01\Data\GIS\FR1681_CRHE\MXDs\FEB2012\cDCE_greater_than_46_ftbls_FEB2012.mxd 02 MARCH 2012 MAH

Figure 17
CRHE Area Summary of cDCE Results in Groundwater greater than 46 ft BLS




**Legend**

**DPT Sampling Location showing (highest VC Concentration)**

- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)
- VC concentration greater than 1,000 µg/L (10X NADC)
- 1 µg/L VC Isopleth
- 100 µg/L VC Isopleth
- 1,000 µg/L VC Isopleth

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. VC indicates vinyl chloride.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. GCTL indicates Groundwater Cleanup Target Level.
7. NADC indicates Natural Attenuation Default Concentration.
8. Prefix for all sampling locations is "CRHE-".

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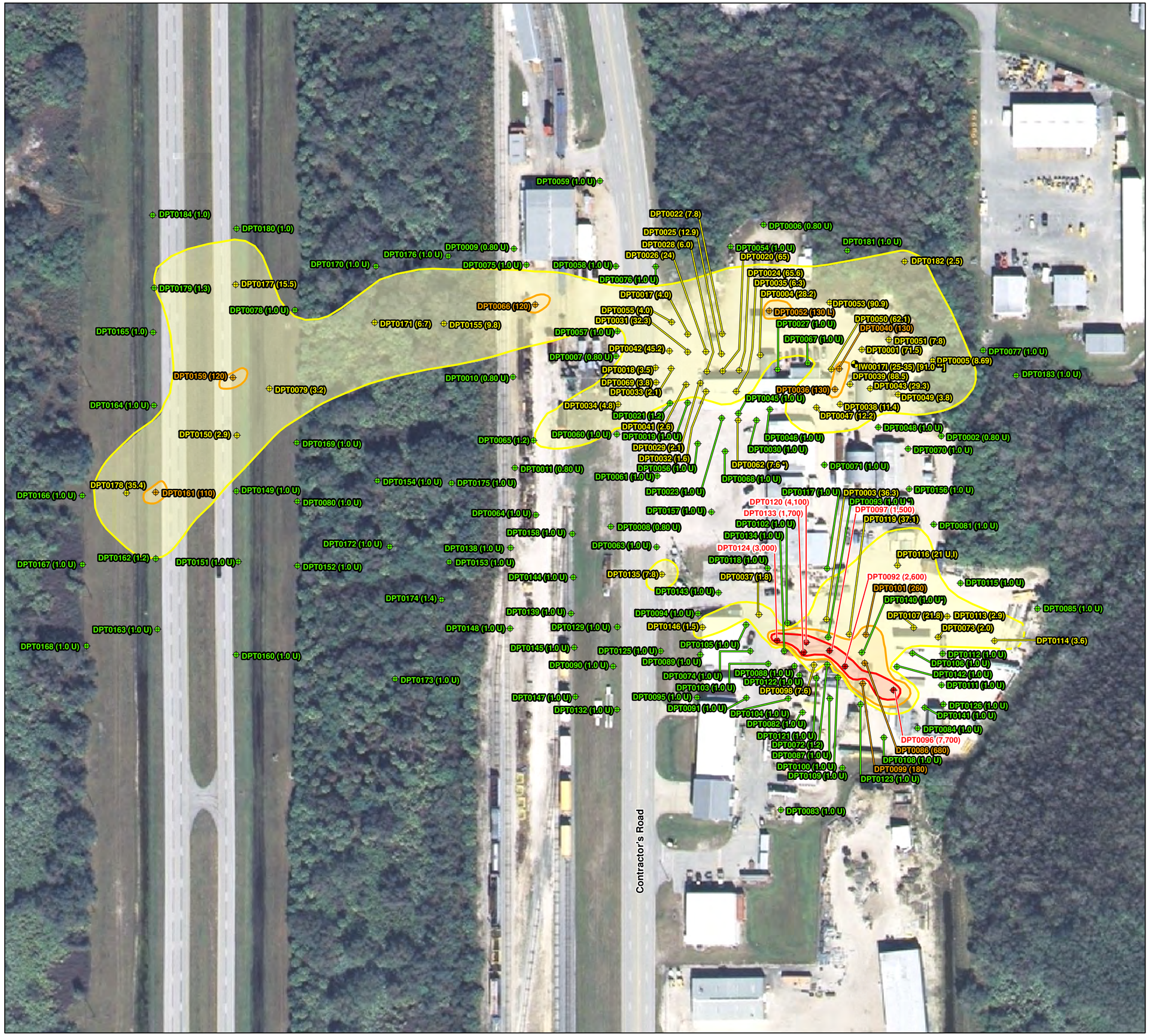
Figure 18
CRHE Area Summary of VC Results in Groundwater 8 to 16 ft BLS




N

100 50 0 100

Feet

**Legend**

**DPT Sampling Location showing (highest VC Concentration)**

- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)
- VC concentration greater than 1,000 µg/L (10X NADC)

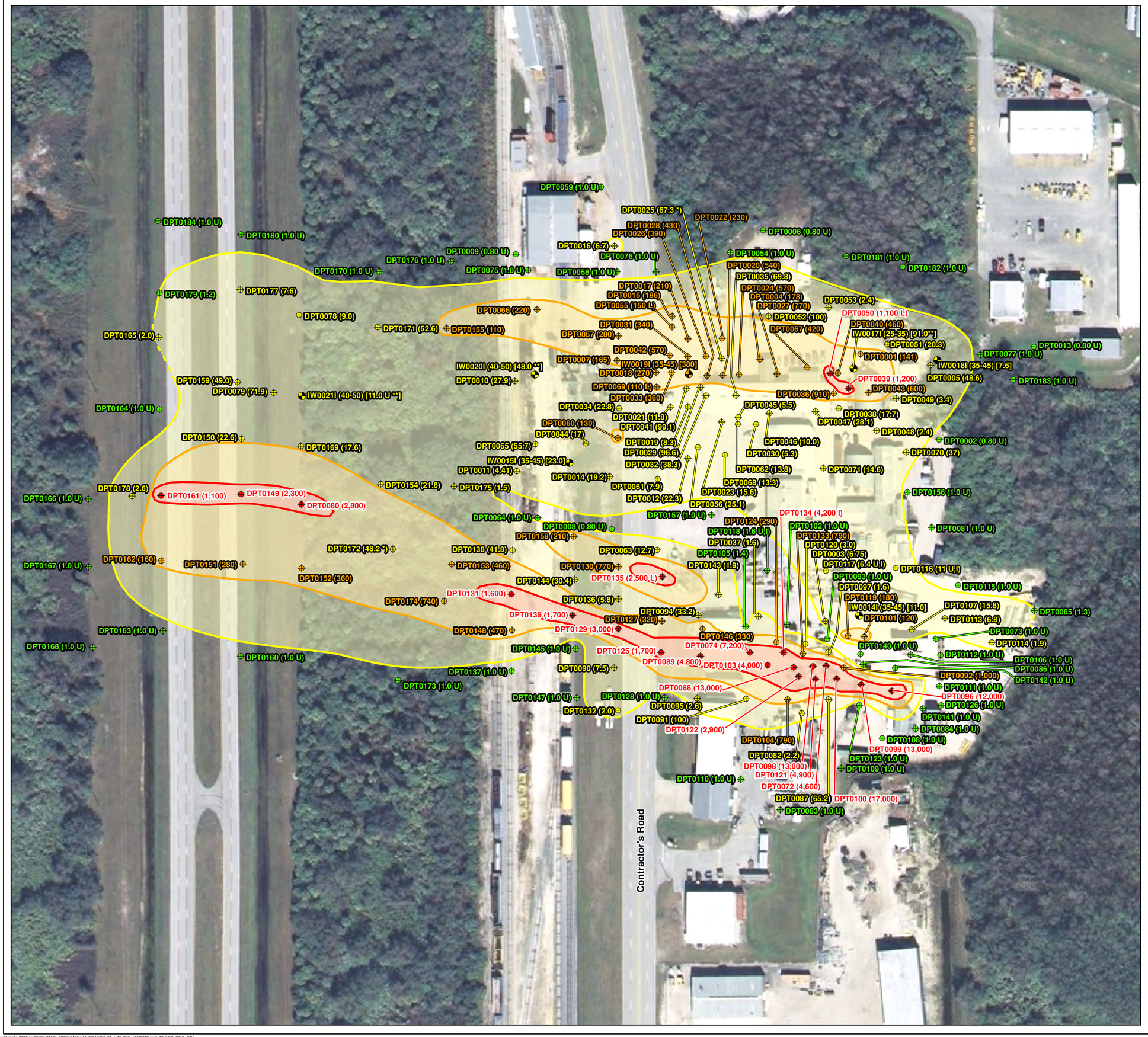
**Monitoring Well Location showing (screen interval (ft BLS) and [VC Concentration])**

- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)
- Inferred 1 µg/L VC Isopleth
- 1 µg/L VC Isopleth
- 100 µg/L VC Isopleth
- 1,000 µg/L VC Isopleth

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. VC indicates vinyl chloride.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. L indicates value exceeds calibration range.
6. U indicates value was not detected above the method detection limit.
8. GCTL indicates Groundwater Cleanup Target Level.
9. NADC indicates Natural Attenuation Default Concentration.
10. Prefix for all sampling locations is "CRHE-".
11. * indicates data not used to generate contours.
12. ** indicates well screens fall within on within more than one mapping interval.

Titusville-01\Data\GIS\FR1681_CRHE MXDs\FEB2012\VC_16_to30_ftbls_FEB2012.mxd 18 JUNE 2012 JRB

Figure 19
CRHE Area Summary of VC Results in Groundwater 16 to 30 ft BLS




N

100 50 0 100

Feet

**Legend**

**DPT Sampling Location showing (highest VC Concentration)**

- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)
- VC concentration greater than 1,000 µg/L (10X NADC)

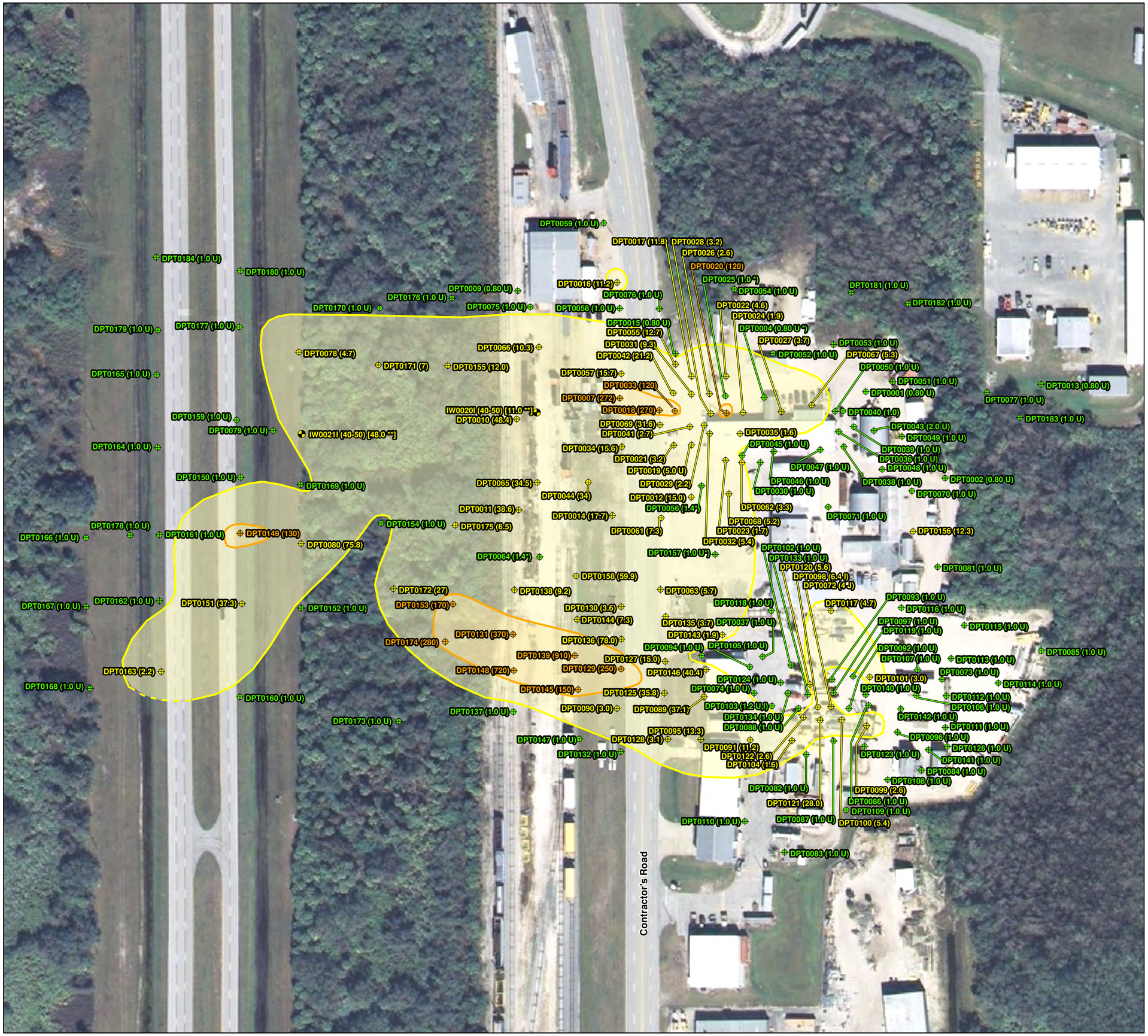
**Monitoring Well Location showing (screen interval (ft BLS) and [VC Concentration])**

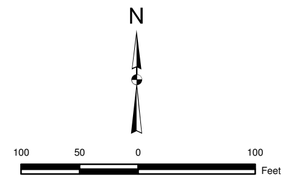
- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)
- 1 µg/L VC Isopleth
- Inferred 1 µg/L VC Isopleth
- 100 µg/L VC Isopleth
- 1,000 µg/L VC Isopleth

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. VC indicates vinyl chloride.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. L indicates value exceeds calibration range.
6. U indicates value was not detected above the method detection limit.
7. * indicates data not used to generate contours.
8. ** indicates well screens fall within on within more than one mapping interval.
9. GCTL indicates Groundwater Cleanup Target Level.
10. NADC indicates Natural Attenuation Default Concentration.
11. Prefix for all sampling locations is "CRHE-".
12. Only monitoring wells that were sampled in November 2009 are shown on this map.

Titusville-01\Data\GIS\FR1681_CRHE\MXDs\FEB2012\VC_31_to46_ftbls_FEB2012.mxd 13 JUNE 2012 JRB

Figure 20
CRHE Area Summary of VC Results in Groundwater 31 to 46 ft BLS




**Legend**

**DPT Sampling Location showing (highest VC Concentration)**

- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)

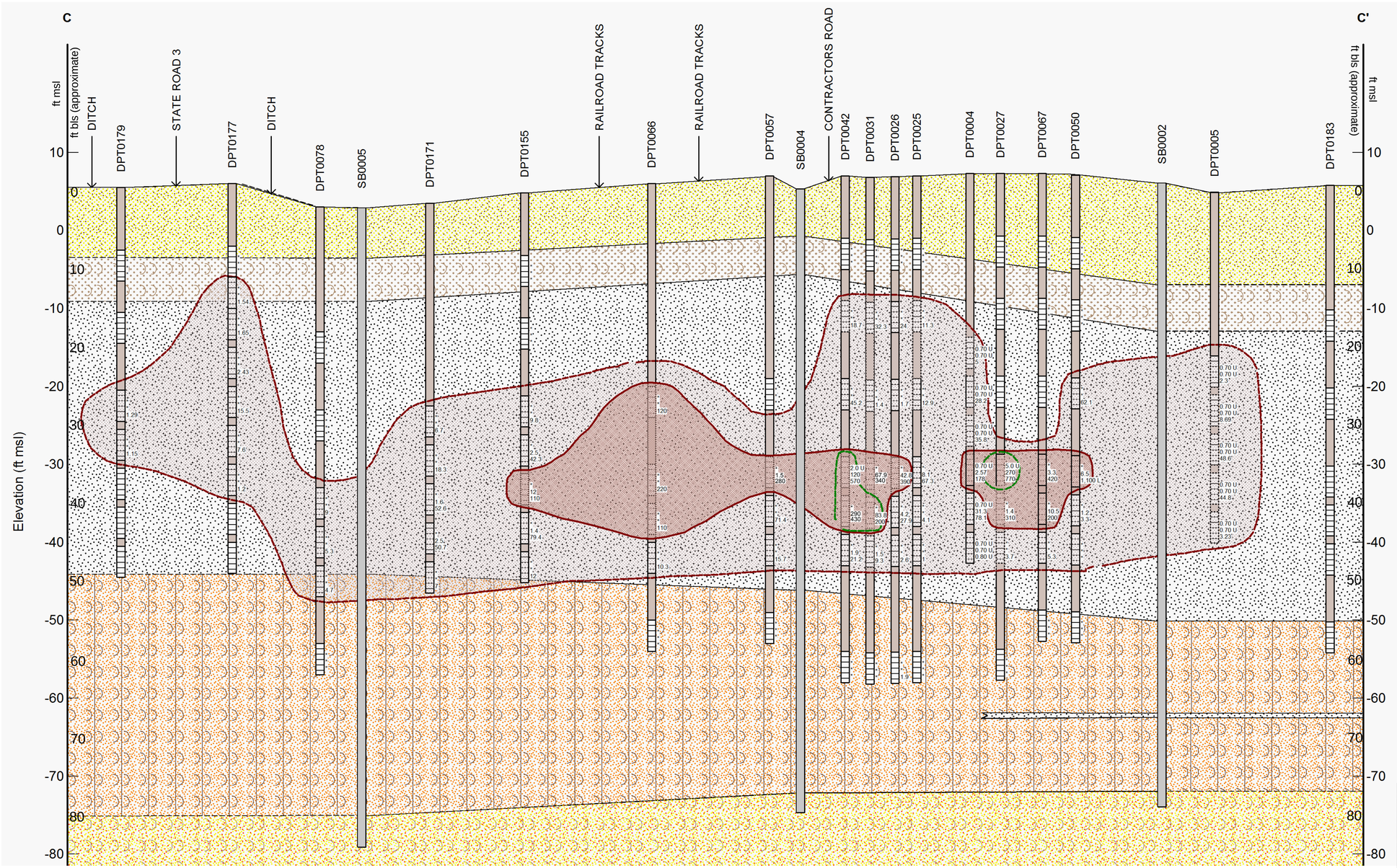
**Monitoring Well Location showing (screen interval (ft BLS) and [VC Concentration])**

- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)
- Inferred 1 µg/L VC Isopleth
- 1 µg/L VC Isopleth
- 100 µg/L VC Isopleth

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. VC indicates vinyl chloride.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. J indicates estimated value.
6. U indicates value was not detected above the method detection limit.
7. * indicates data not used to generate contours.
8. ** indicates well screens fall within on within more than one mapping interval.
9. GCTL indicates Groundwater Cleanup Target Level.
10. NADC indicates Natural Attenuation Default Concentration.
11. Prefix for all sampling locations is "CRHE-".
12. Only monitoring wells that were sampled in November 2009 are shown on this map.

Titusville-01\Data\0GIS\FR1681_CRHE\MXDs\FEB2012\VC_greater_than_46_ftbls_FEB2012.mxd 18 JUNE 2012 JRB

Figure 21
CRHE Area Summary of VC Results in Groundwater greater than 46 ft BLS




113 57 0 113 Feet

Horizontal 1" = 113'
Vertical exaggeration is 8

## Legend

- Lithology Boring
- Direct Push Technology (DPT) Location
- DPT Groundwater Sample Location

### Lithology

- Medium SANDS (SP) and silty SANDS (SM) of varying color
- Fine to medium SAND (SP/SW)/tan shell hash
- SAND (SP) fine-grained with shell 30 – 50%
- Silty SAND (SM) with varying amounts of clay and up to 10% shells
- Fine silty SAND (SM) with 20 – 30% shell fragments
- Inferred lithology

Notes:

1. Results presented in micrograms per liter (µg/L).
2. * indicates result value is less than or equal to 1.0 U.
3. ft indicates feet.
4. msl indicates mean sea level.
5. bls indicates below land surface.
6. GCTL indicates Florida Department of Environmental Protection (FDEP) Cleanup Target Level.
7. I indicates reported value is between the method detection limit (MDL) and the practical quantitation limit.
8. L indicates value exceeds calibration range.
9. NADC indicates FDEP Natural Attenuation Default Criteria.
10. U indicates not detected above MDL.
11. Soil boring locations were projected onto the transect.
12. All location IDs are abbreviated, full location IDs include “CRHE-” prefix.

Trichloroethene (TCE) (µg/L)
cis-1,2-dichloroethene (cDCE) (µg/L)
Vinyl Chloride (VC) (µg/L)

1 µg/L VC (GCTL)
100 µg/L VC (NADC)
70 µg/L cDCE (GCTL)

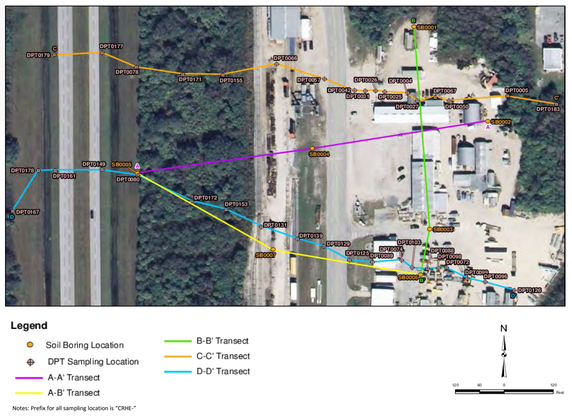
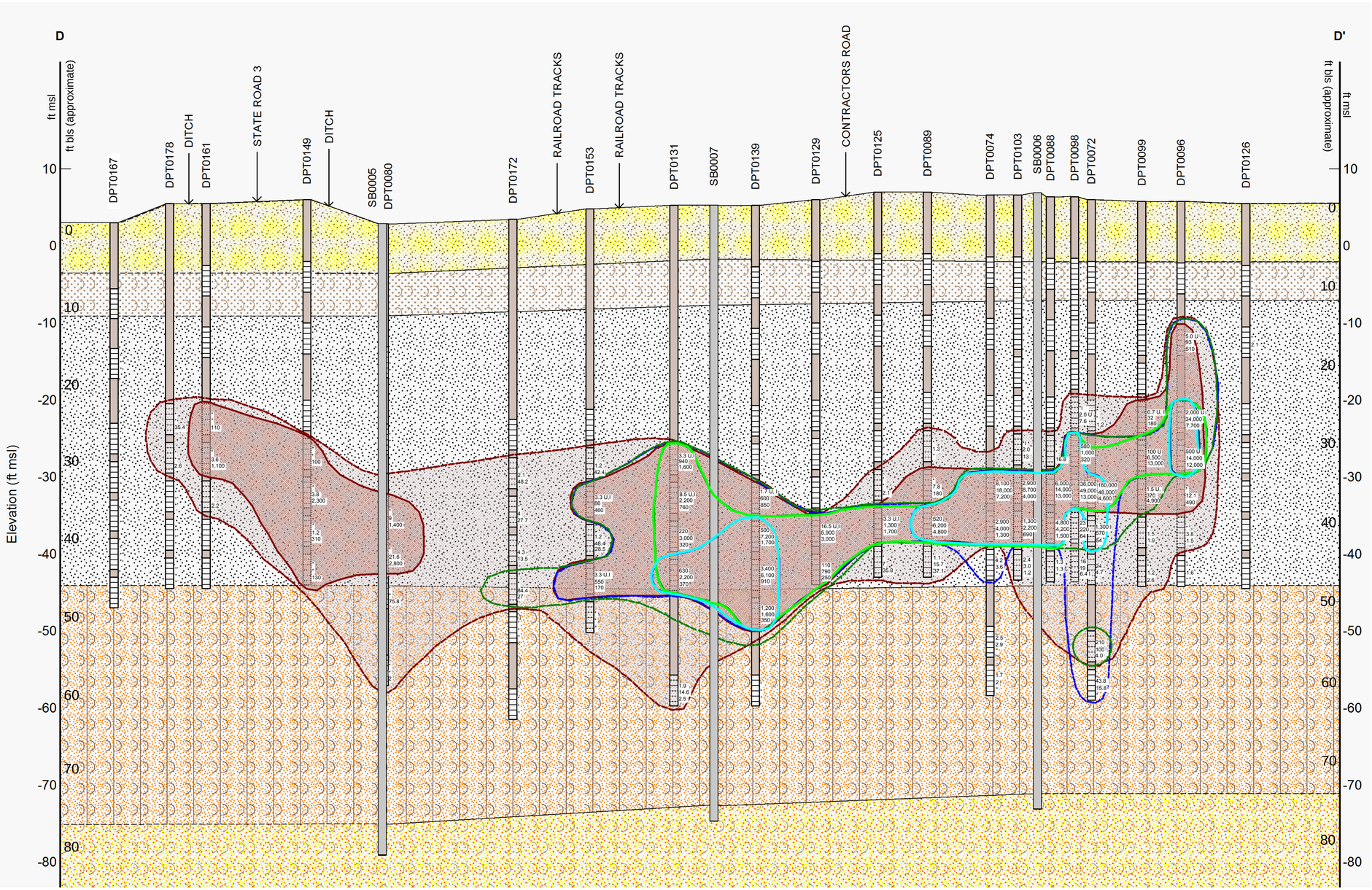



Figure 22
Lithologic Cross Section C to C' and CVOC Isocontours




122 61 0 122 Feet

Horizontal 1" = 122'
Vertical exaggeration is 9

## Legend

- Lithology Boring
- Direct Push Technology (DPT) Location
- DPT Groundwater Sample Location

### Lithology

- Medium SANDS (SP) and silty SANDS (SM) of varying color
- Fine to medium SAND (SP/SW)/tan shell hash
- SAND (SP) fine-grained with shell 30 – 50%
- Silty SAND (SM) with varying amounts of clay and up to 10% shells
- Fine silty SAND (SM) with 20 – 30% shell fragments
- Inferred lithology

Notes:

1. Results presented in micrograms per liter (µg/L).
2. * indicates result value is less than or equal to 1.0 U.
3. ft indicates feet.
4. msl indicates mean sea level.
5. bls indicates below land surface.
6. GCTL indicates Florida Department of Environmental Protection (FDEP) Cleanup Target Level.
7. I indicates reported value is between the method detection limit (MDL) and the practical quantitation limit.
8. L indicates value exceeds calibration range.
9. NADC indicates FDEP Natural Attenuation Default Criteria.
10. U indicates not detected above MDL.
11. Soil boring locations were projected onto the transect.
12. All location IDs are abbreviated, full location IDs include "CRHE-" prefix.

Trichloroethene (TCE) (µg/L)
cis-1,2-dichloroethene (cDCE) (µg/L)
Vinyl Chloride (VC) (µg/L)

- 1 µg/L VC (GCTL)
- 100 µg/L VC (NADC)
- 70 µg/L cDCE (GCTL)
- 700 µg/L cDCE (NADC)
- 3 µg/L TCE (GCTL)
- 300 µg/L TCE (NADC)

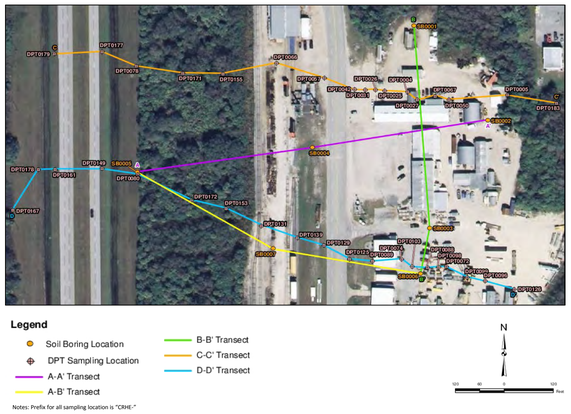
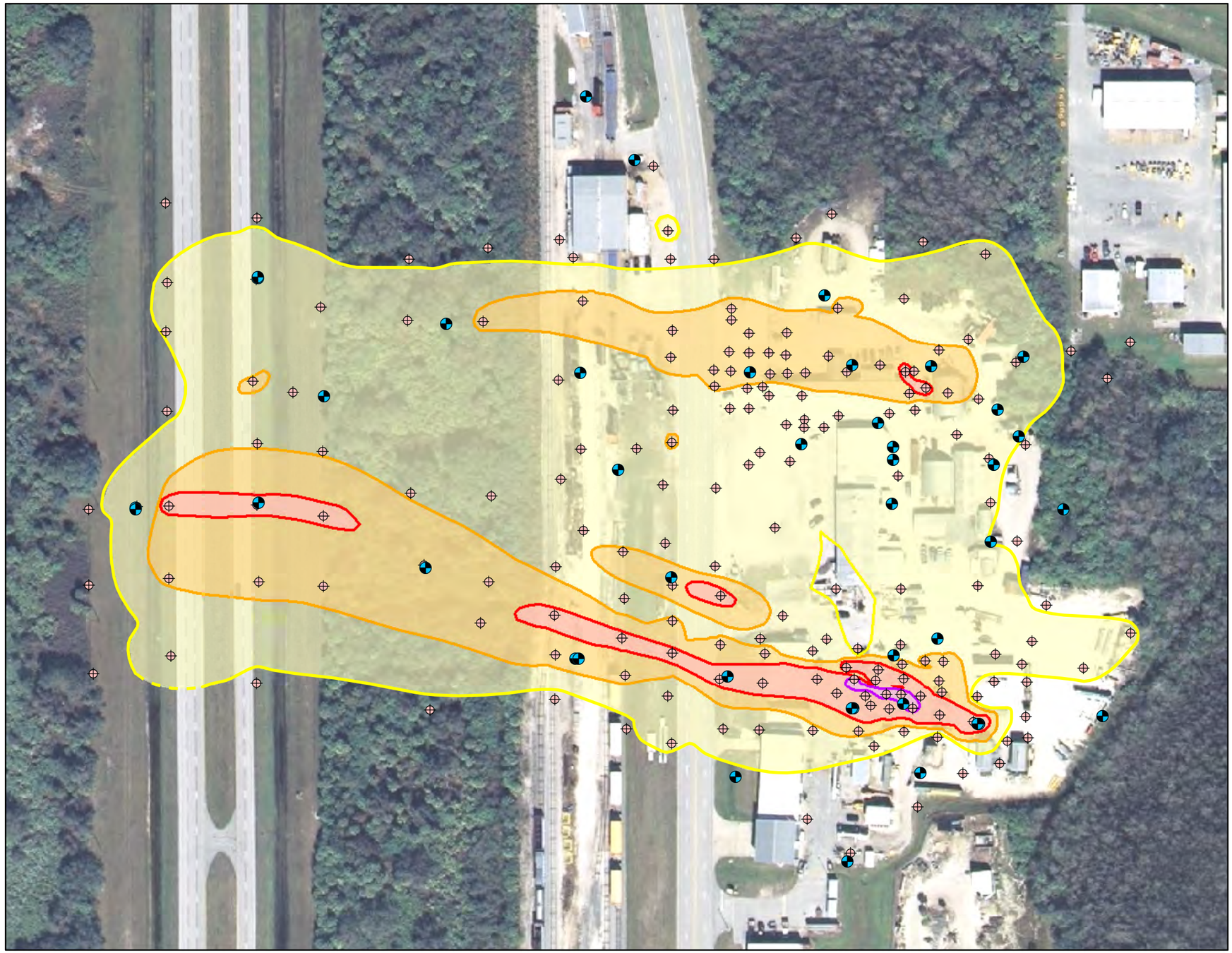



Figure 23
Lithologic Cross Section D to D' and CVOC Isocontours



N

140 70 0 140

Feet

**Legend**

- Monitoring Well Location
- DPT Sampling Location
- Inferred Low Concentration Plume (Concentrations Greater than GCTL)
- Low Concentration Plume (Concentrations Greater than GCTL)
- High Concentration Plume (Concentrations Greater than NADC)
- Hot Spot (Concentrations Greater than 10X NADC)
- Approximate 1% TCE Solubility

| Plume | Area (acres) |
|---|---|
| Low Concentration Plume (Concentrations Greater than GCTL) | 15.87 |
| High Concentration Plume (Concentrations Greater than NADC) | 4.71 |
| Hot Spot (Concentrations Greater than 10X NADC) | 0.75 |
| Approximate 1% TCE Solubility (TCE Concentrations Greater than 10,000 µg/L) | 0.03 |

Notes:
1. GCTL indicates Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Level.
2. NADC indicates FDEP Natural Attenuation Default Concentration.

Titusville-01\Data\0GIS\FR1681_CRHE\MXDs\APRIL2012\Greater_GCTL_NADC_10XNADC_APR2012.mxd 18 MAY 2012 JRB

Figure 24
Overall Extent of Groundwater Isopleths at CRHE
8 to 50 ft, below land surface

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# MEMORANDUM

| | |
|---|---|
| Date: | 15 June 2012 |
| To: | Anne Chrest |
| Copies to: | NASA Remediation Team |
| From: | Jill Johnson, P.G. and Jim Langenbach, P.E., BCEE |
| Subject: | Contractor's Road Heavy Equipment Area (CHRE) (SWMU 082) Step 1A and Step 1B Engineering Evaluation – Response to Comments |

Comments on the Step 1A and Step 1B Engineering Evaluation were received and are addressed below. The comment is listed first and Geosyntec's response is listed in italics below the comment.

**Arcadis Comments:**

The Step 1 Engineering Evaluation package for Contractors Road Heavy Equipment Area (CHRE) meets the requirements specified in the KSC Remediation Team Engineering Evaluation Process document. Based on our review of the ADP, sufficient data are available to advance the CRHE facility in the engineering evaluation process. However, closer spacing of borings may be considered to reduce uncertainties in the following areas:

- In the Source Zone, spacing between borings are approximately 35 to 50 feet such as between DPT0134 and DPT0098. Also, a MIP boring was advanced adjacent to DPT072 and there was good correlation between MIP response and the DPT groundwater data; however, no additional MIPs were conducted in the Source Zone. The typical application of MIP is to assess Source Zones. Additional DPT or MIP borings to reduce the spacing could provide further data on the potential presence of NAPL and its distribution.

  *Response: Comment on spacing noted. However, the spacing between the DPT locations identified above is the largest spacing in this area and several of the locations in this area are as close as 13 to 15 ft apart. Additional sampling locations have been proposed in this area to meet spacing guidelines. Originally, two days of MIP logging was planned; however, during advancement of the second location, the equipment malfunctioned. At this site, the MIP was intended to identify likely distribution of mass in the source zone to confirm that we sampled the appropriate depth intervals. It was*

*decided that the data obtained from the MIP before it malfunctioned was adequate to meet this objective and we proceeded with DPT sampling, which provided a robust data set.*

- Adjacent to the railroad line near DPT0139, the closest borings to the west and east are approximately 100 feet and 65 feet, respectively. Does the conceptual site model assume that this contamination is from the Source Zone or was there a separate release that may have occurred adjacent the rail line?

  *Response: The current CSM for the site assumes that these impacts are remnants from the identified source zone. It seems unlikely that a separate release would result in a dissolved plume with geometry that so closely mimics that of the centerline of the main plume emanating from the Source Zone. Additionally, there is likely increased drainage around the railroad tracks, wooded areas, and from paved surfaces that could potentially cause the plume to appear divided in this area. However, the DPT spacing in this area is about 50 ft and since the TCE concentration is just over 10X NADC, additional DPT locations are proposed in this area on a 25 ft spacing to confirm the data set.*

  *Along this same line of thought, we propose to advance an additional DPT location between DPT136 and DPT129 since there is potential that this very narrow TCE plume (TCE on >46 ft map) is passing between these two locations and then showing up at DPT139. This will also help to validate the CSM that the dissolved TCE, cDCE, and VC concentrations observed downgradient are associated with the upgradient release, not a separate source at this location.*

The following are ARCADIS' observations based on our review of the ADP package:

1. TCE plumes are conservatively interpreted based on elevated laboratory detection limits at locations such as DPT0116 and DPT0020. These isolated TCE plumes fall within the footprint of the composite plume and do not affect proposed remediation but consideration should be given to collecting confirmation monitoring well or DPT samples to simplify the conceptual site model (CSM) and refine the affected distribution of the chemicals of concern.

   *Response: Comment noted. In one of the areas indicated above, the elevated detection limit for TCE (16 to 30 ft BLS) in DPT0020 is surrounded by DPT locations at less than 25 ft spacing with results of 1 U. Given the relatively low concentrations in this area (primarily of vinyl chloride), as noted above, this will not affect the proposed remedial strategy.*

2. The contouring should be re-evaluated based upon the November 17, 2011 FDEP Rounding Memorandum. Several examples where the contour lines could be reduced are on Slide 24 at DPT0122 where TCE is 3.1 µg/l and Slide 30 where vinyl chloride concentrations could be rounded downward at DPT0162, DPT0174, and DPT0065.

   *Response: So noted. On Slide 24, the contour line is touching the symbol for DPT0122 so the isopleth was not revised but the symbol color was changed to green. Also, the contours indicated on Slide 30 have been corrected in the revised ADP, as well as similar edits to the map on Slides 31 and 32.*

3. EVS for TCE and DPT072 – A review of TCE concentrations in DPT072 show TCE at a concentration of 43.8 µg/L at a depth of 61 to 65 ft BLS. Is TCE delineated to GCTLs at depth in this area? The EVS graphic also shows the vertical depth not confirmed. Should this vertical delineation be confirmed with additional DPT or a vertical depth monitoring well? Please clarify the rationale for not installing a monitoring well in the Source Zone for comparison with direct push data such as DPT0072?

   *Response: We believe that the TCE concentrations observed at the 56 to 60 and 61 to 65 ft samples at this location are likely associated with dragdown from the 160,000 µg/L observed at 36 to 40 ft BLS at this location. After sampling at this location, we had our DPT subcontractor replace their decontamination water more frequently to mitigate potential dragdown issues. We propose to collect confirmation samples at 46 to 50 ft, 56 to 60 ft, and 61 to 65 ft BLS adjacent to DPT072 to confirm vertical delineation in this area (though it is certainly possible that these locations will contain low-level TCE concentrations). Also, a vertical delineation well will be considered in this area as part of a performance network when/if active remediation proceeds in this area of the site.*

4. Slide 31 – On this slide, vinyl chloride concentrations at the 31 to 46 ft BLS interval are presented and indicate a vinyl chloride Hot Spot that extends from the TCE Source Zone toward DPT0131. Another Hot Spot begins approximately 170 feet hydraulically down gradient at DPT0080. How does this separate Hot Spot fit into the conceptual site model; is this further down gradient Hot Spot associated with a separate release near the rail line?

   *Response: The current CSM assumes that the down gradient Hot Spot is associated with the main Source Zone, not a separate release. It seems unlikely that a separate release would result in a dissolved plume with geometry that so closely mimics that of the centerline of the main plume emanating from the Source Zone, as discussed previously. There was limited access for DPT sampling in this area; however, if we could conduct additional sampling in this area, it is likely that the plumes would connect. Additional*

*sampling has been proposed in this area to refine the dataset for completion if/when this typically saturated area is accessible.*

5. EVS for VC and Figure 9 – There are multiple locations where VC concentrations are well above GCTLs in the deepest DPT locations; these include DPT0174, DPT0148, DPT0149, DPT0158, DPT0129, and several others with lower concentrations but still above GCTLs. Should deeper DPT intervals be investigated or vertical delineation confirmation with monitoring wells be completed at these locations?

   *Response: While it is true that VC concentrations are above GCTLs in the indicated locations (concentrations range from 59.9 to 720 µg/L), these DPT locations were terminated at 50 ft BLS, which is towards the base of the identified impacts (just above the identified semi-confining unit). DPT borings were advanced across the site for vertical delineation purposes at regular lateral intervals to 65 ft BLS and clean bottom samples were obtained at 78% of completed sample locations. The majority of the remaining samples only slightly exceeded the GCTL and the other locations (as listed above and another comment below) were terminated at approximately 50 ft BLS because there are nearby samples that were advanced to 60 to 65 ft BLS for vertical delineation purposes. It should also be noted that only one of these locations has TCE above GCTL in the deepest sample (DPT0129). At this location, TCE is vertically delineated at DPT0139, 65 ft away.*

   *From a holistic site perspective, the overall site data indicates that the vertical delineation completed at the site achieves the intended purpose based upon: (i) DPT sampling results; (ii) EVS model iso-solid interpretation; and (iii) site lithologic characteristic. However, additional vertical delineation samples have been proposed, primarily in the Source Zone area, at locations where VC concentrations in the deepest sample are above the GCTL.*

6. The mass estimates were presented in Slides 37 and 38. Slide 37 indicates that the mass was only estimated for the plume area >10x NADCs. It would be beneficial to have mass estimates for the Source Zone, Hot Spots, High Concentration Plume, and Low Concentration Plume for future use in the Step 1b and Step 2 engineering evaluations.

   In addition on Slide 37, the table indicates calculation of mass greater than 10x NADCs. We believe this should say mass less than (< 10xNADC)?

   *Response: Slide 37 has been updated to include mass estimates for the Source Zone, Hot Spots, High Concentration Plume, and Low Concentration Plume.*

7. A comprehensive list of technologies were evaluated and screened for applicability to remediate the Hot Spots and Source Zone. Bioremediation and air sparging were retained for further evaluation for the Hot Spots and Source Zone. In addition, EZVI™ was retained for potential application in the Source Zone. We generally concur with the screening process, rationale, and retained technologies.

   We would recommend consideration for the development of various alternatives of the retained technologies for cost comparisons. For example, consider evaluating air sparge wells with radius of influence coverage across the entire Hot Spot versus use of picket fence spacing of sparge wells. The same type of evaluation could also be considered for the bioremediation alternative including use of recirculation.

   *Response: Comment noted. Given the limited aerial extent of the Hot Spots and Source Zone, customized alternatives will be developed for each retained alternative, which is consistent with the approach taken at other sites.*

8. We concur with the identified data gaps and would recommend that these be addressed prior to development of the Step 2. In addition, further assessment in locations as identified above should be considered.

   *Response: Additional DPT locations are proposed and results will be presented to the NASA Remediation Team in a subsequent data gap ADP.*

**Tetra Tech Comments:**

Tetra Tech generally concurs with the information presented in the Contractor's Road Heavy Equipment Area (CRHE) Step 1A and 1B Engineering Evaluation ADP, with the following comments:

Step 1A Comments:

1. Slide 18 – The conversion for the K value from ft/d to ft/yr appears to be slightly miscalculated, assuming 365 days/year.

   *Response: These data were taken directly from the RFI document prepared by others. The discrepancy is a rounding difference of 0.6%, which arose from the previous consultant reporting a rounded K value of 7.6 ft/d rather than 7.556 ft/d.*

2. Slide 19 – Please reference the yellow highlighting for the analytical results for DPT072 and DPT100 represent, possibly concentrations greater than NADC?

   *Response: Slide 19 has been revised to include a note to reference that the yellow highlighting represents concentrations greater than NADCs.*

3. Slide 22 – The southeastern plume with a hot spot area is defined by one actual detection and multiple elevated detection limits. Will the data set suit for future remedial decision making? In this case, the HCP footprint could potentially be overestimated.

   *Response: We do not believe that the HCP is overestimated. While the TCE HCP on this figure is defined by detections in only two locations (3,000 µg/L at DPT092 and 3,800 µg/L at DPT097) and an elevated detection limit in a third location (2,000 U at DPT096), the cDCE and VC concentrations at these locations confirm that the overall HCP in this area of the site is well-defined (i.e., cDCE of 22,000 µg/L at DPT092, 34,000 µg/L at DPT096, and 52,000 µg/L at DPT097, and VC of 2,600 µg/L at DPT092, 7,700 µg/L at DPT096, and 1,500 µg/L at DPT097). Also, these locations are surrounded by non-detect concentrations. The overall HCP plume in this area is based on true NADC exceedances and the proposed focus of remedial action will not be driven by elevated detection limits.*

4. Slide 27 – Further delineation surrounding DPT0174 to the west and southwest may be necessary.

   *Response: This area is typically wet and/or submerged so we sampled accessible areas on a grid pattern in areas we were able to clear and access. We believe the DPT dataset provides adequate data at this time given the groundwater flow direction, north to south extent of the plume, and shape of the dissolved plume. We concur that higher resolution spacing may be appropriate if active remediation is conducted in this area but since the COCs in the vicinity of DPT174 are daughter products, and like similar sites, this area of the site may not be actively remediated in the near future, we considered the delineation adequate. However, based on Team feedback, additional sampling locations have been proposed in this area.*

5. Slide 28 – An additional sample location southwest of DPT0174 may be necessary to define the HCP.

   *Response: See above response.*

6. Slide 30 – Recommend further delineation of NADC exceedances at DPT0159, DPT066, and DPT0052, detected in the northern portion of the site to attain recommended criteria of 50 ft spacing for HCP.

   *Response: The concentrations at the indicated locations are not significantly above NADCs (120 to 130 µg/L) and are not parent compound (VC only). However, based on Team feedback additional locations have been proposed in the indicated areas.*

7. Slide 31 – Recommend tighter boundary data points around the DPT0080/0149/0161 HCP.

   *Response: We recommend that additional sampling be completed if/when active remediation is conducted in this area; however, based on Team feedback additional locations have been proposed in the indicated areas.*

8. Slide 32 – Recommend further delineation southwest of DPT0174.

   *Response: See above responses for Slides 27 and 28.*

9. Figure 9 – Several DPT locations have exceedances at their deepest interval (for example, 127, 129, 130, 135, 148, 149, 174), usually at 46'-50' bgs. Concentrations at several of these locations, such as 127, 148, 158, and 174, are fairly high. There is vertical delineation at some nearby points (including one deep well in the area), but at least one location, DPT131, also has an exceedance at 60+' bgs. None of the locations listed above (with the exception of DPT131) are shown on the CVOC cross-sections (Figures 22 and 23). Additional vertical delineation may be required.

   *Response: We do not feel that it is necessary to complete vertical delineation in every location, but DPT borings were advanced to 65 ft terminal depth across the site to provide overall vertical delineation of the plume. One of the benefits of conducting the EVS modeling while assessment activities are being conducted is to show visually that there are sample locations spread across the site providing vertical delineation of impacts without needing to advance every boring to non-detect concentrations. The VC concentration in DPT131 (2.5 µg/L) exceeds the GCTL, but the decision was made not to advance the boring further to delineate this single digit VC concentration. Additionally, it should be noted that DPT locations 136, 139, 064, 144, and 145 in the immediate vicinity of those listed above have clean bottoms at 60 to 65 ft BLS. Significant contaminant mass is not likely present at this depth; however; since this potentially represents a data gap, a boring will be advanced adjacent to DPT131 to collect a confirmation sample at 61 to 65 ft and possibly 66 to 70 ft BLS, if needed.*

Step 1B Comments:

- General – Further sampling may be needed to be performed in order to fully delineate HCP, Hot Spots, and Source Zone.

  *Response: Additional sampling has been proposed as discussed above.*

- Slide 6 – The mass is listed as 238 pounds; in the Step 1A, 224 pounds is used. Were different areas used for these two calculations? Since the technology screening is by plume interval, it would be beneficial to show mass distribution by plume interval.

  *Response: In the spreadsheet for the mass estimates, an extra cell was inadvertently included in the mass estimates when total dissolved and total sorbed numbers were calculated from the mass estimates by constituent. This has been corrected resulting in mass estimates of 224 and 227 pounds in the Step 1A and 1B ADPs, respectively (the difference of approximately 1% in these numbers is related to rounding).*

- Slide 12 – 0.75 acres seems like a good area for a heating project, especially considering the depth. It is not so small that the unit costs would be too high. Unless there is a different reason for not considering the heating technologies, it should potentially be retained.

  *Response: Originally heating technologies were retained, but as compared to the other potential options for this site (bioremediation and air sparging), the unit costs for heating technologies will be higher. Therefore, the decision was made to eliminate it at this step in the process.*

- Slide 15 – Additional data gaps - similar to the "General" comment above, better delineation of the HCP and hot spots will be required prior to design activities; we suggest that delineation to the KSC-recommended intervals be completed at that time.

  *Response: We agree that there are several areas, as discussed herein, which could be refined when/if NASA would like to conduct remediation in these areas. In the Source Zone, where Step 2 activities will likely be focused, we feel that the dataset is adequate for proceeding with the additional DPT locations that have been proposed.*

- Slide 17 – Hot Spots for cDCE and VC are not specifically addressed since TCE was separated out.

  *Response: Agreed. The technologies that have been recommended for retention for evaluation during the Step 2 EE are appropriate for TCE and daughter products. However, we did not focus on constituents on Slide 17 because we are seeking team consensus on the retained technology list, not areas of the site or constituents to be evaluated.*

***

# APPENDIX C

# STEP 1 FOR HS1
# ENGINEERING EVALUATION ADP
# (electronic copy only)

Geosyntec consultants

# Contractor's Road Heavy Equipment (CRHE) Area (SWMU055)

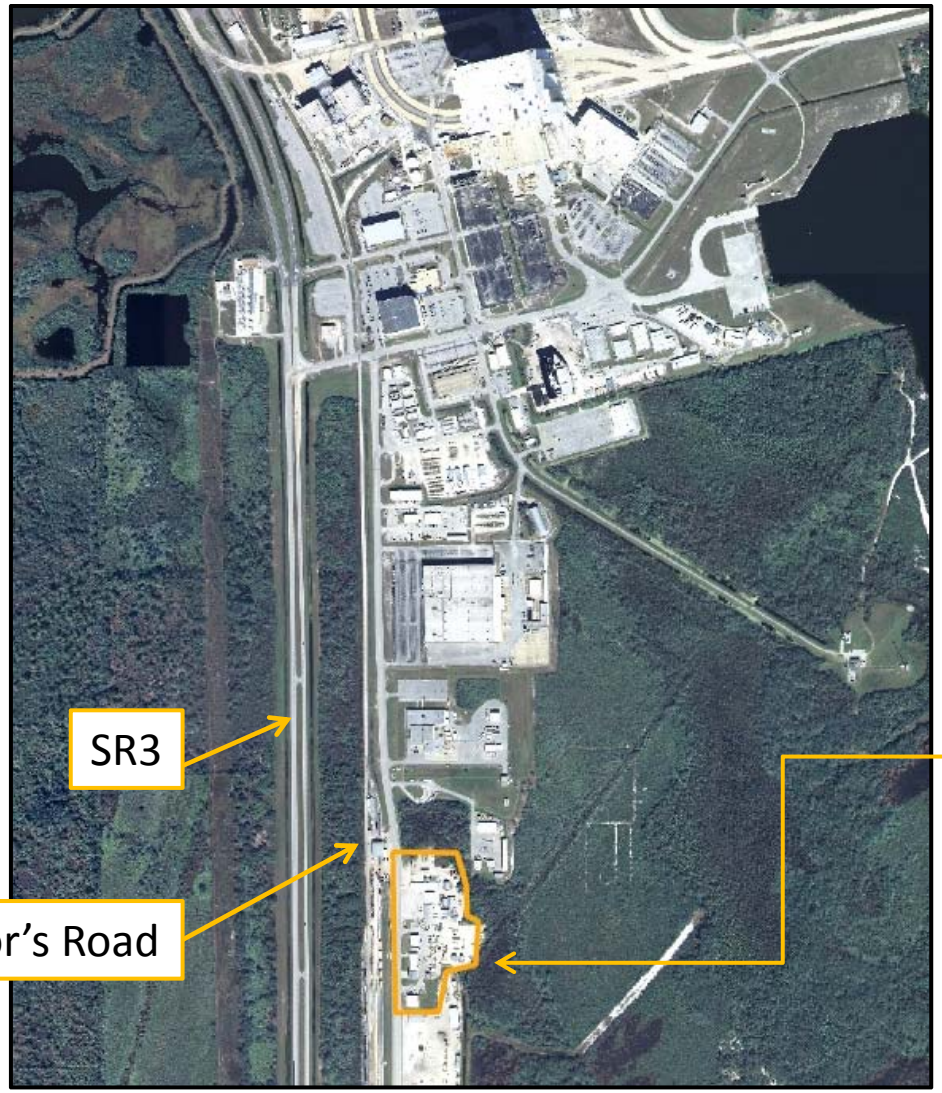
## Step 1 Engineering Evaluation – Hot Spot 1

December 2013

# Today's Presentation

- Step 1 Section A
  - Site Overview
  - Review of June 2012 Step 1 ADP
  - Definition of Hot Spot 1 (HS1) Area
  - Site Conditions
  - Summary of Supplemental Site Assessment Activities
  - Test Consensus
- Step 1 Section B
  - Review of Pertinent Site Conditions
  - List of Technologies
  - Engineering Data Gaps
  - Technologies Retained
  - Path Forward/Test Consensus

# Site Location



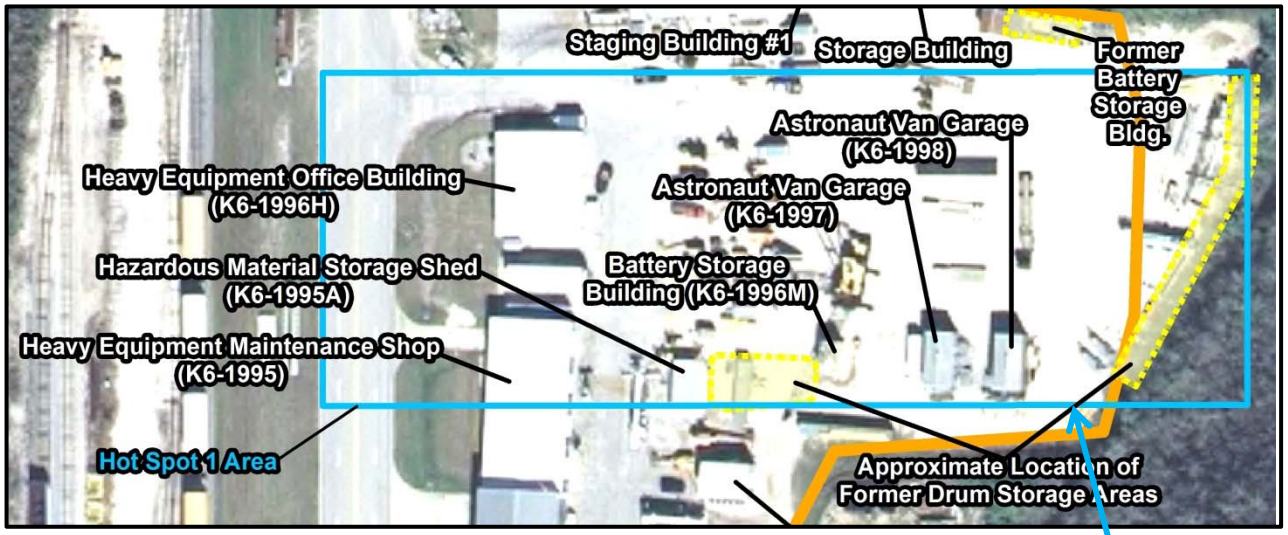
# Site Overview

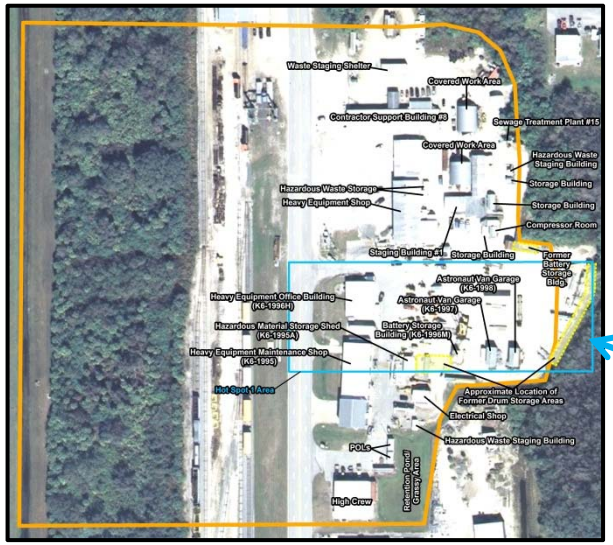
- Overall site features:
  - About 23 acres
  - Paved portions
  - Majority of site is gravel and dense woods
  - Many underground utilities
  - Thick road base in some areas to support heavy equipment
- Historical site use:
  - Hazardous Waste Storage/Staging
  - Printed Circuit Board Manufacturing
  - Domestic Wastewater Treatment
  - Heavy Equipment Maintenance/Storage (historical and current use)

*Photograph of heavy equipment storage at CRHE; view facing south from the Contractor's Road entrance driveway, with Heavy Equipment Office Building (K6-1996H) shown on far right.*

# Site Overview

- HS1 features:
  - About 3 acres
  - Paved and gravel
  - Underground utility corridor along Contractor's Road
  - Thick road base in northern part of HS1

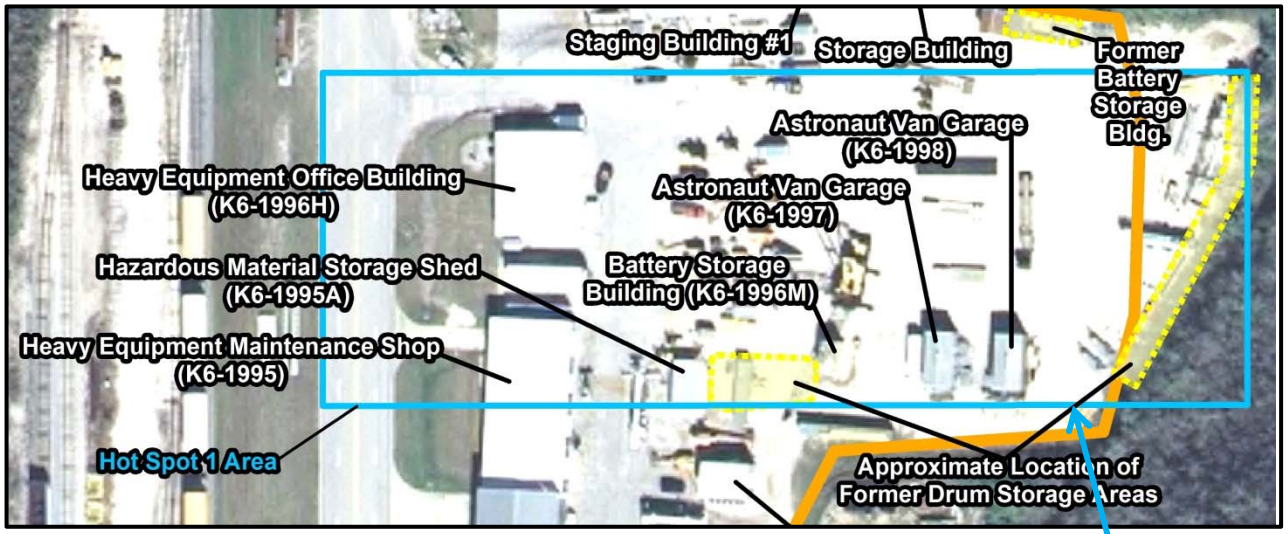


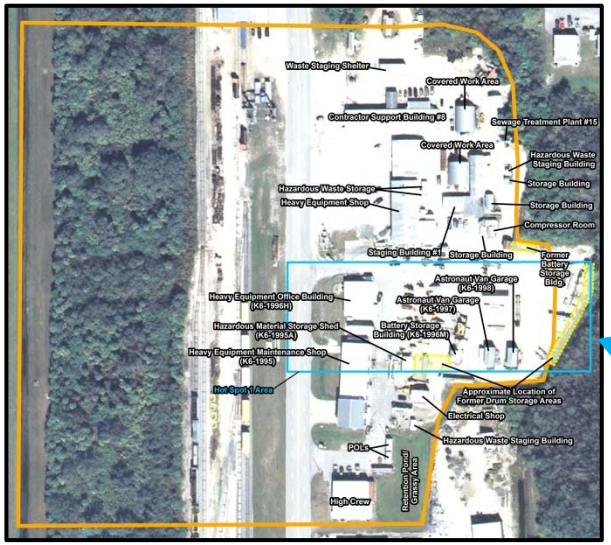




Hot Spot 1 Area

# Site Overview

- Numbered buildings and support structures in HS1
  - K6-1995: Heavy Equipment Maintenance Shop
  - K6-1995A: Hazardous Material Storage Shed
  - K6-1996H: Heavy Equipment Office Building
  - K6-1996M: Battery Storage Building
  - K6-1997 and K6-1998: Astronaut Van Garages




Hot Spot 1 Area

# Assessment Background

- 1994: Preliminary assessment (EG&G, Inc.)
  - Identified CVOCs and metals in GW
  - Recommended additional assessment
- 1997-1999: RFI (HSW, Inc.)
  - VC up to 370 µg/L in northern area (waterloo profiler)
  - TCE up to 41 µg/L (in IW-4I), down to 0.4 µg/L by end of RFI activities
  - Highest concentrations between about 15 and 45 ft BLS

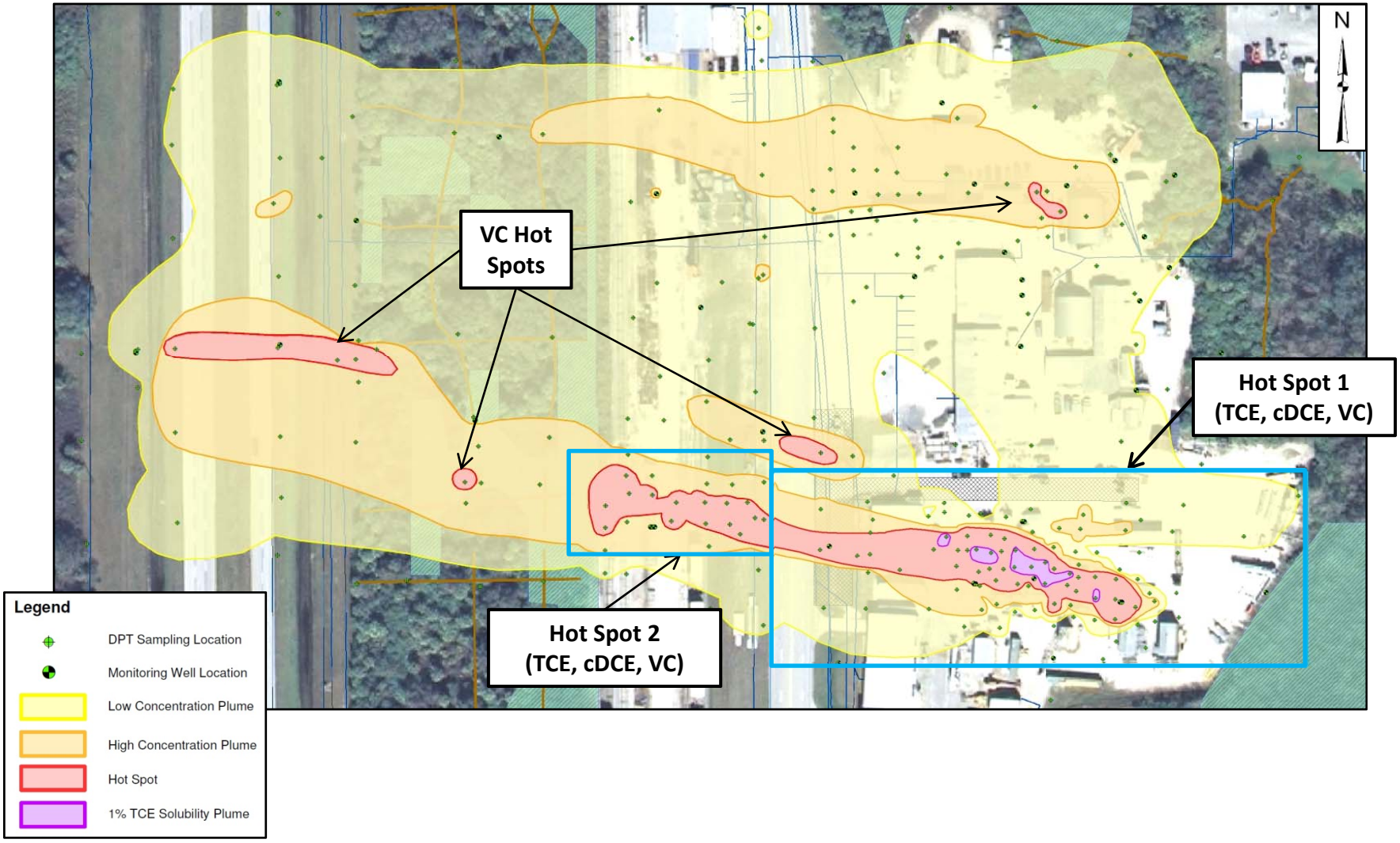
# Assessment Background

- 2000: Corrective Measures Study (CMS) (HSW, Inc.)
  - Site clean up goals established for industrial setting
  - LUCIP for groundwater
  - No active corrective measures recommended
  - LTM program to monitor natural attenuation of CVOCs in groundwater
  - 10 year estimated timeframe to reach cleanup goals
- 2000 – 2005: Semi-annual GW sampling in 7 wells
- 2005 – 2009: Site incorporated into VAB LTM program
- May 2010: Team approved discontinuing LTM program at the Site until assessment is complete
- 2009 – 2013: Supplemental Site Assessment

# Review of June 2012 Step 1 ADP

- Step 1 submitted for entire site in June 2012
- Team expressed concerns regarding delineation and recommended additional sampling
- Five weeks of additional sampling was conducted between October 2012 and June 2013
- Delineation of site-wide LCP, HCP, and HS2 is on-going
- Copy of June 2012 ADP and response to comments are included electronically with this ADP for reference

# Overall Site and Identification of Hot Spots



# Hot Spot 1 Area

Note: DPT spacing based on 100 ft spacing for LCP, 50 ft spacing for HCP samples, 25 ft spacing for HS samples, and limited 10 ft spacing for Source Zone.

Office/Admin Building

Area of Subsurface Obstructions

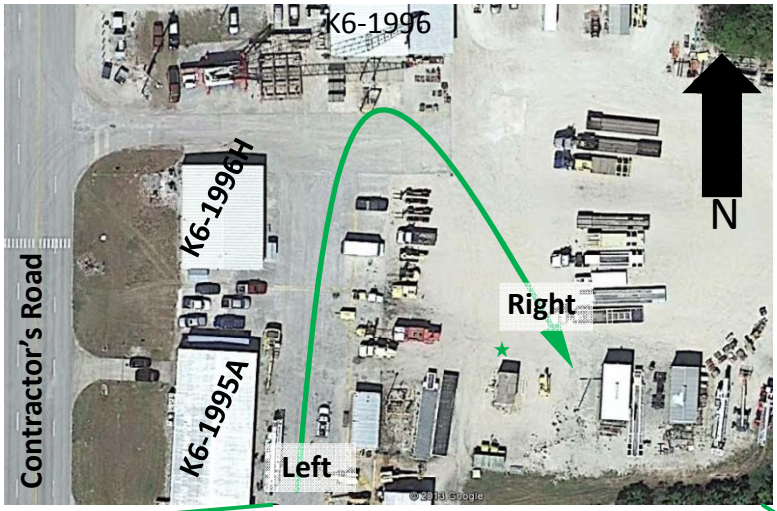
Utility Corridor

# Hot Spot 1 Supplemental Site Assessment

- 1 MIP profile
- DPT groundwater samples in HS1
  - 745 from 94 locations
  - Generally sampled from 16 to 60 ft BLS at 4 ft intervals
  - Some sampling to 70 ft BLS for vertical delineation
- Water level measurements (Mar-12 and July-13)
- Lithology borings to 80 ft BLS (1 within HS1, 1 just west)
- Monitoring well installation and sampling (July-13)
  - deep well (65 to 75 ft BLS) to confirm vertical delineation in source area
- Monitoring well sampling (Mar-12)

# Site Conditions

- Lithology
- Hydrogeologic site characteristics
- Groundwater flow



# Cross Section Plan View

Geosyntec consultants

# Response to Comments

Jacobs-CORE Comment #1: There are 3 soil borings used to generally describe the lithology across the southern portion of the plume (which includes HS1). Only one is within HS1, and it is primarily downgradient (west) of the highest levels of TCE. Consider adding at least one soil boring east of SB06 and DPT72 to ensure the entire area where DNAPL could be present is adequately characterized from a lithology perspective. It would be advantageous to understand in more specific detail the interval between 35 and 50 ft, particularly in evaluating source area treatment technologies.

*Response: Although it is true that only one soil boring is in HS1 area, there were a total of 7 lithology borings advanced across entire site to characterize subsurface lithology. Lithology collected at site to date and presented in this ADP was generally consistent and is adequate for meeting objectives of Step 1 EE; however, potentially collecting additional, focused lithology data in the selected remedial area (depending on selected remedy) may be useful. This additional data can be gathered before the remedy is implemented.*

# Lithology A to A'

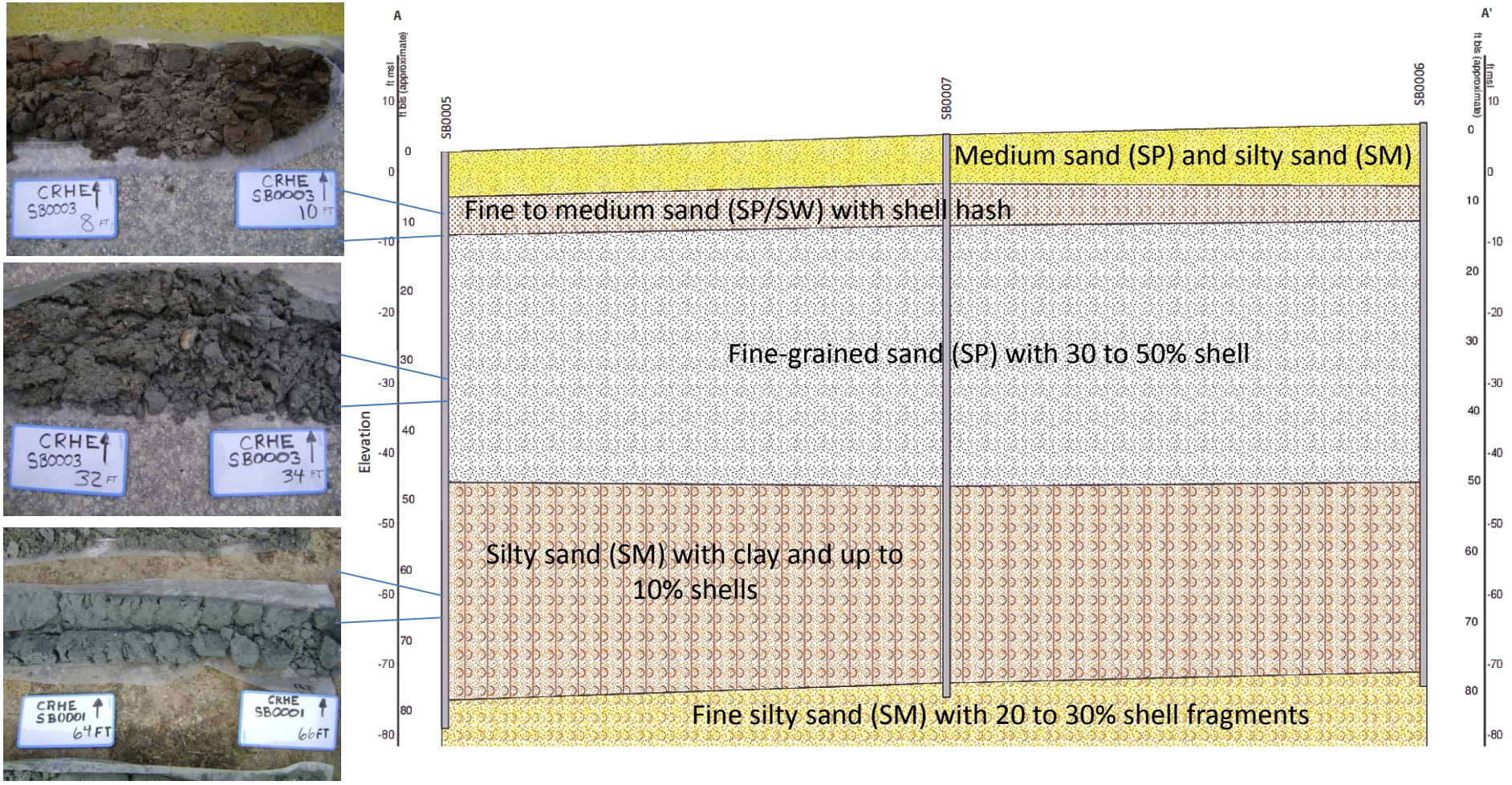



Figure 1

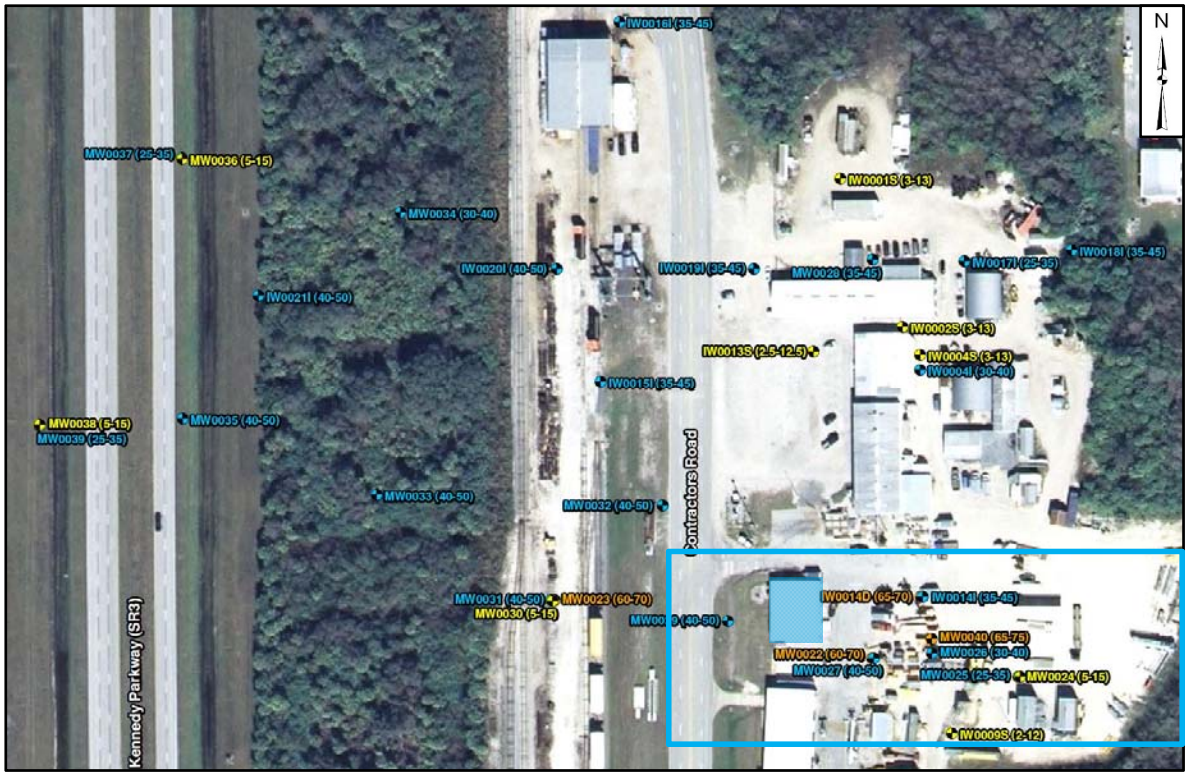
# Response to Comments

Jacobs-CORE Comment #2: Slides 13, 14, 24, 42 – The lithology description shows a fairly consistent fine-grained sand and shell layer from approximately 12 to 50 ft bls; however, the highest levels of TCE are shown in the 36 to 40 ft bls depth range. This indicates something pertinent in or just below this zone, which could be holding DNAPL, and that is discussed on Slide 42. Should that be shown on the lithology drawing (Slide 14)? Again, more detail of this interval would be beneficial in planning and executing any technology which targets the source zone.

*Response: The lithology presented on the cross section (Figure 1) is generalized and the surfaces for lithology transitions were correlated. In SB0006, there are changes in the ratios of sand, shell and clay at 35, 41, and 51 ft BLS. As discussed in a previous response, depending on the selected remedial options, it may be useful to collect additional, focused lithology information in this zone.*

# Current Monitoring Well Network

- 17 shallow (<15 ft BLS) (yellow)
- 23 intermediate (25 to 50 ft BLS) (blue)
- 4 deep wells (>60 ft BLS) (orange)



# Shallow Groundwater Flow – July 2013

Figure 2

Note:

1. Screen interval is presented in feet, below land surface (ft, BLS).
2. Elevation is presented in ft and is referenced to the North American Datum of 1988.

# Response to Comments

TT Comment #1: Slide 16 – The water level MW0024 does not appear to be consistent with the expected potentiometric surface nor do the plumes appear to mimic the easterly directional divide. Is there a suspected cause for the groundwater divide in the region of this well to result in the significant easterly component? Please confirm if this is an anomaly and if MW0025 may be hydraulically communicating with MW0024.

*Response: Historically, shallow gw has been observed to be influenced by wetlands that are to the N, E, and W; therefore, the easterly shallow gw flow is not unexpected.*

*Based on lithology, it is possible that there is a hydraulic connection between MW24 and MW25. MW24 is partially screened in the same unit as monitoring well MW25 (fine grained sand with shell unit).*

*Some of the gw elevations referenced NGVD29 and some NAVD88. The gw elevations were updated to reference NAVD88 and updated gw elevation maps have been provided.*

# Intermediate Groundwater Flow – July 2013

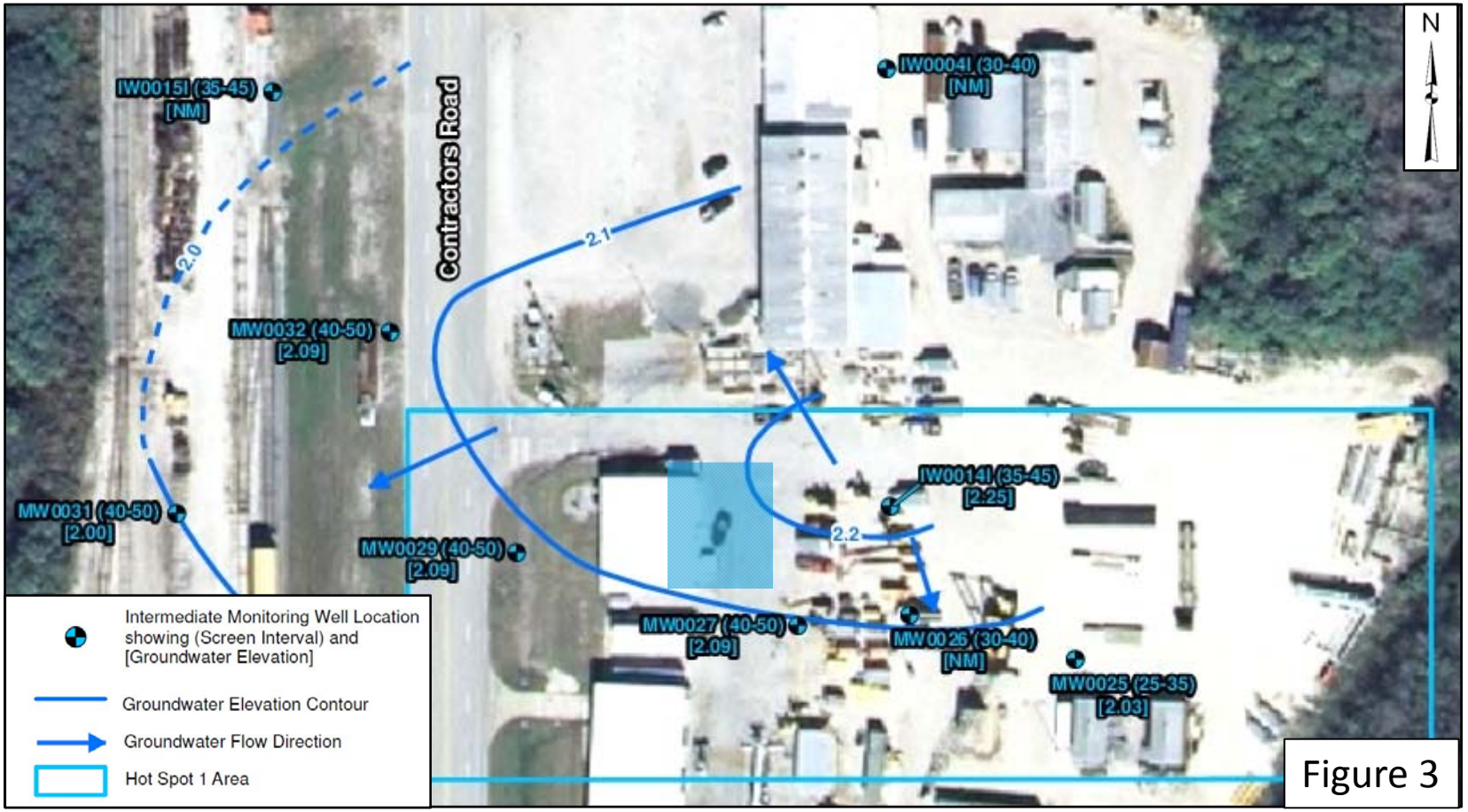



Figure 3

Note:

1. Screen interval is presented in feet, below land surface (ft, BLS).
2. Elevation is presented in ft and is referenced to the North American Datum of 1988.

# Response to Comments

Jacobs-CORE Comment #3: Slide 17 – The shape of the plume generally provides good confirmation of the gradient and gradient trends at a site. The CRHE intermediate groundwater flow map shows a fairly strong southerly component that does not correlate well with the plume configuration. Could the MW0029 measurement be incorrect (possibly a damaged well)?

*Response: It does appear that monitoring well MW29 is controlling the groundwater flow direction, but we feel this is based on the limited number of water levels that were collected, since this effort was focused on HS1. There was no damage observed to the well during the water level collection.*

# Deep Groundwater Flow – July 2013

Figure 4

Note:

1. Screen interval is presented in feet, below land surface (ft, BLS).
2. Elevation is presented in ft and is referenced to the North American Datum of 1988.
3. MW0040 was installed by others but not surveyed. DTW was 2.32 ft BLS but groundwater elevation could not be calculated.

# Hydrogeologic Site Conditions

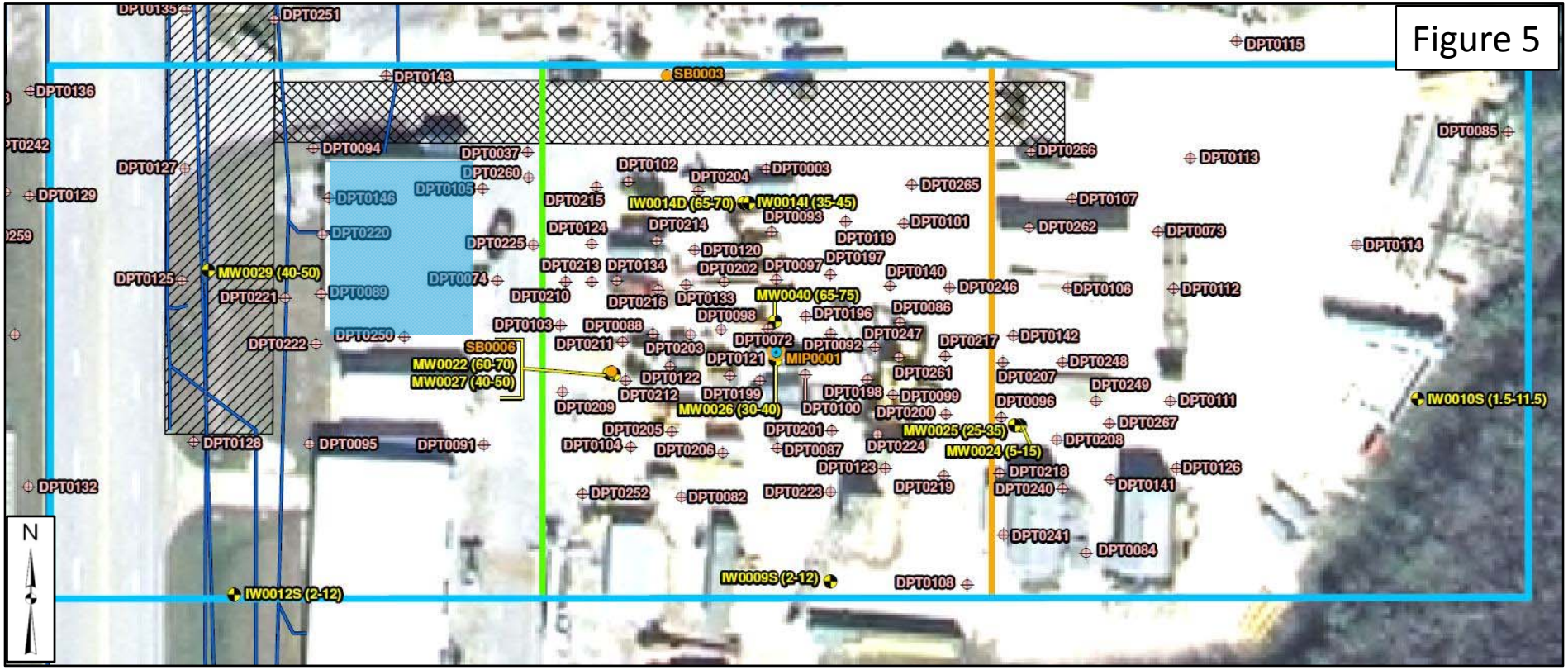
- General groundwater flow direction within HS1
  - Shallow: Variable (west and east components of flow)
  - Intermediate: Generally southwest
  - Deep: Southwest (based on 3 wells in southern portion of site)
- Depth to groundwater 2 to 6 ft BLS
- K of 7.6 ft/d (2,774 ft/yr) from specific capacity tests on shallow and intermediate wells during RFI

| GW Zone | Approx. Depth (ft, BLS) | Av Gradient (ft/ft) | Est. GW Flow Velocity (ft/y) |
|---|---|---|---|
| Shallow | <15 | 0.002 | 28 ft/y* |
| Intermediate | 15 to 55 | 0.005 | 69 ft/y* |
| Deep | >60 | 0.002 | -- |

* Actual groundwater flow velocity is likely highly variable with higher K plume transport intervals and lower K mass storage intervals.

# Sample Locations

Figure 5




Notes:

1. Tag maps included as Figures 6, 7, and 8 (not included in presentation).
2. Sampling not conducted within building because the building functions as administrative space and a conference room. Pending Step 2 technology selection, DPT stepouts can be conducted using angled DPT drilling, if needed.
3. Sample locations could not be cleared in the utility corridor after the early locations were completed (i.e., DPT125 and DPT127).

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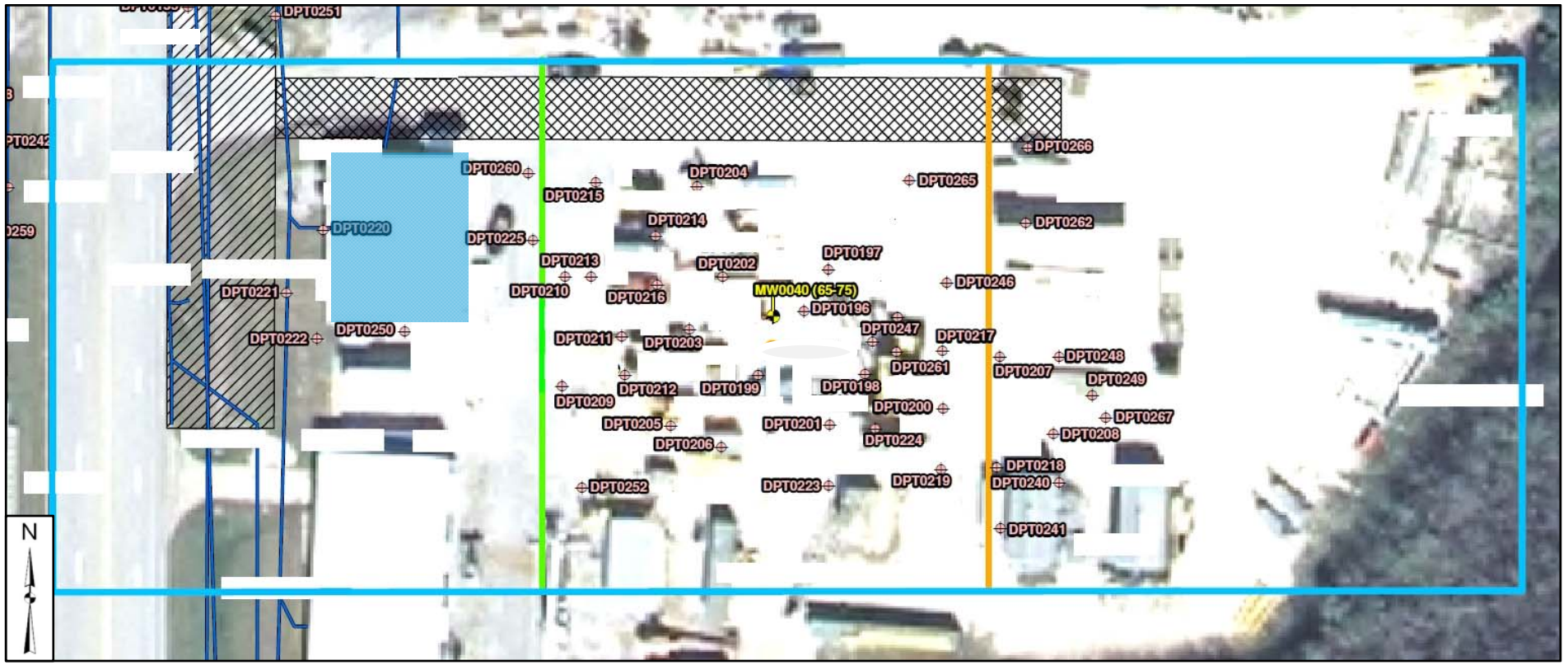
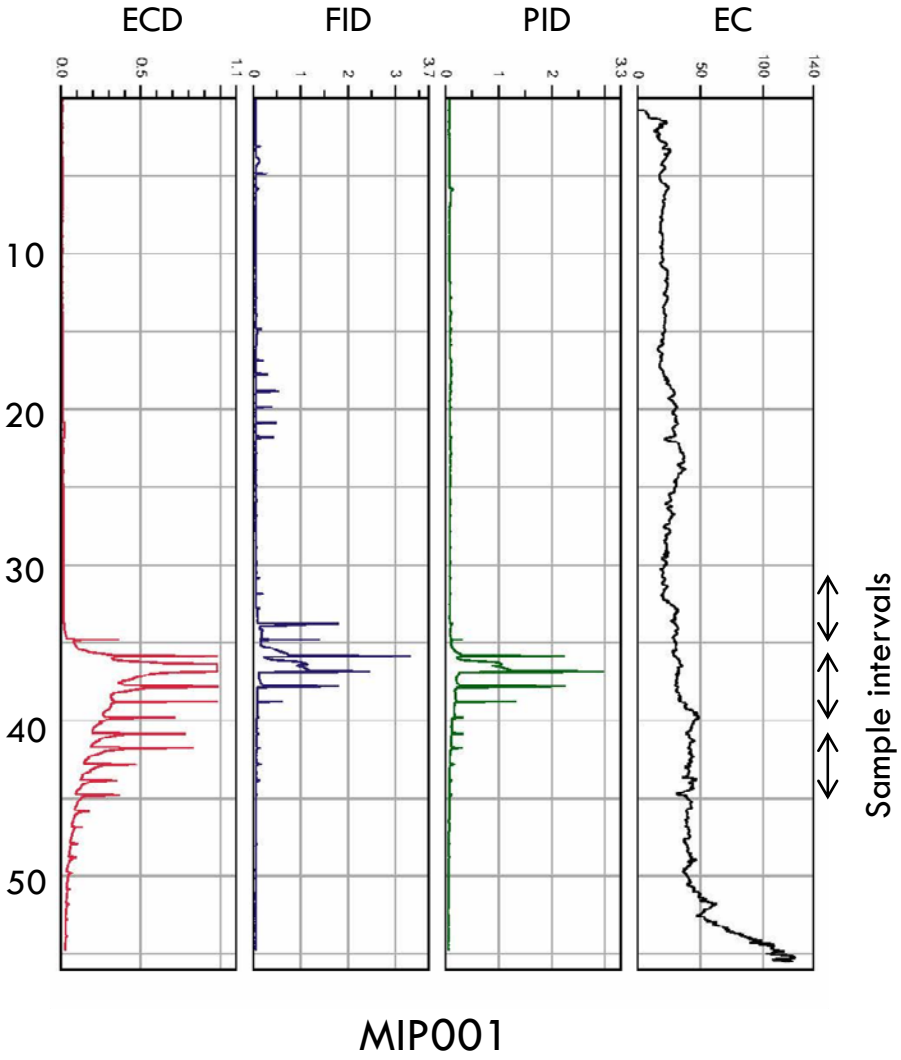
# Sample Locations (since June 2012 ADP)




**Legend**

- Membrane Interface Probe (MIP) Location
- Soil Sampling Location
- DPT Sampling Location
- Monitoring Well Location showing screen interval (ft BLS)
- Underground Utilities
- East Side Spider Division Line
- West Side Spider Division Line
- Hot Spot 1 Area
- Area of Subsurface Obstructions
- Utility Corridor

# MIP Results




MIP001

| DPT072 | | | |
|---|---|---|---|
| Interval (ft, BLS) | TCE (µg/L) | cDCE (µg/L) | VC (µg/L) |
| 8 to 12 | 1.0 U | 1.0 U | 1.0 U |
| 16 to 20 | 1.0 U | 1.0 U | 1.0 U |
| 26 to 30 | 1.0 U | 1.0 U | 1.2 |
| 36 to 40 | **160,000** | **48,000** | **4,600** |
| 41 to 45 | **1,300** | **570** | **54** |
| 46 to 50 | **24.0** | 4.7 | 1.0 U |
| 56 to 60 | **210** | **100** | 4.0 J |
| 61 to 65 | **43.8** | 15.8 | 1.0 U |

| DPT100 | | | |
|---|---|---|---|
| Interval (ft, BLS) | TCE (µg/L) | cDCE (µg/L) | VC (µg/L) |
| 8 to 12 | 1.0 U | 1.0 U | 1.0 U |
| 12 to 16 | 1.0 U | 1.0 U | 1.0 U |
| 16 to 20 | 1.0 U | 1.0 U | 1.0 U |
| 21 to 25 | 1.0 U | 1.0 U | 1.0 U |
| 26 to 30 | 1.0 U | 1.0 U | 1.0 U |
| 31 to 35 | **21,000** | **31,000** | **7,400** |
| 36 to 40 | **32,000** | **59,000** | **17,000** |
| 41 to 45 | **210** | **380** | **72.0** |
| 46 to 50 | **19.5** | 28.0 | **5.4** |

Yellow highlighting indicates concentrations above NADCs.

# Response to Comments

TT Comment #2: Slide 22 – TCE mass consistently seems concentrated from 36 to 45 feet bls. Are there any lithologic or geotechnical variations in this zone that resulted in the majority of mass in this depth interval? Discussion of the site conceptual model from a mass and lithologic standpoint would be a beneficial addition to the CHRE Step 1 EE and downstream remedial decision making.

*Response: The CSM will be discussed from this perspective during the ADP presentation. The lithology borings and MIP log correlate and show a change in lithology at approximately 50 ft BLS. The FID, ECD, and PID results from the MIP log and the DPT sampling results show a majority of the mass is present from 36 to 45 ft BLS. Reviewing the soil boring logs shows that between 30 and 40 ft BLS at the site, the lithology transitions from a sand with ~30% shell to sand with ~50% or more shell. Similar to other sites, the primary high concentration interval maybe associated with an interval of silty sand that is not visible to the eye.*

# Hot Spot 1 Supplemental Site Assessment

- Max concentrations identified in HS1 (µg/L)
  - TCE = 160,000 (DPT72, 36 to 40 ft BLS) (represents 14.5% of TCE solubility; DNAPL likely present)
  - cDCE = 110,000 L (DPT200, 26 to 30 ft BLS) (L=value exceeded calibration range)
  - VC = 19,000 (DPT200, 31 to 35 ft BLS)
- Source Zone defined as 11,000 µg/L (1% TCE solubility) because this represents the area where DNAPL could be present
- ½ detection limit was used for contouring purposes for ND values

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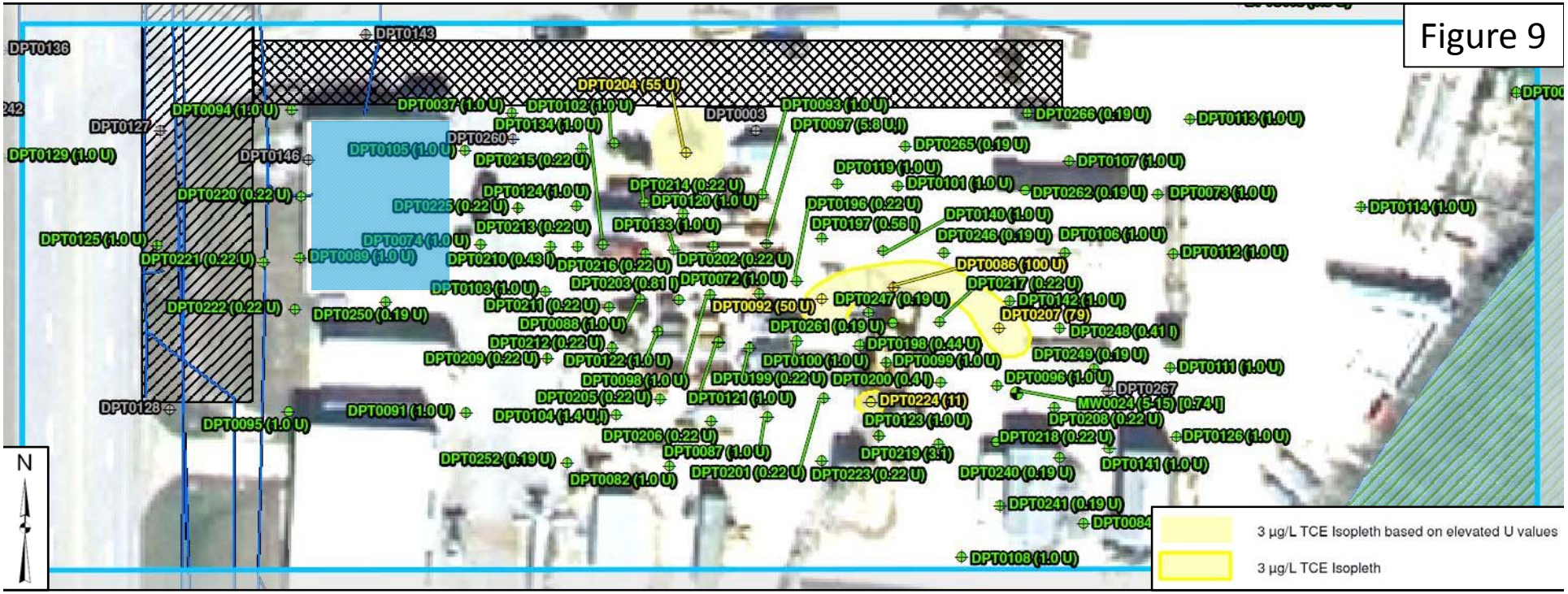
# TCE 8 to 16 ft BLS

Figure 9




**Legend**

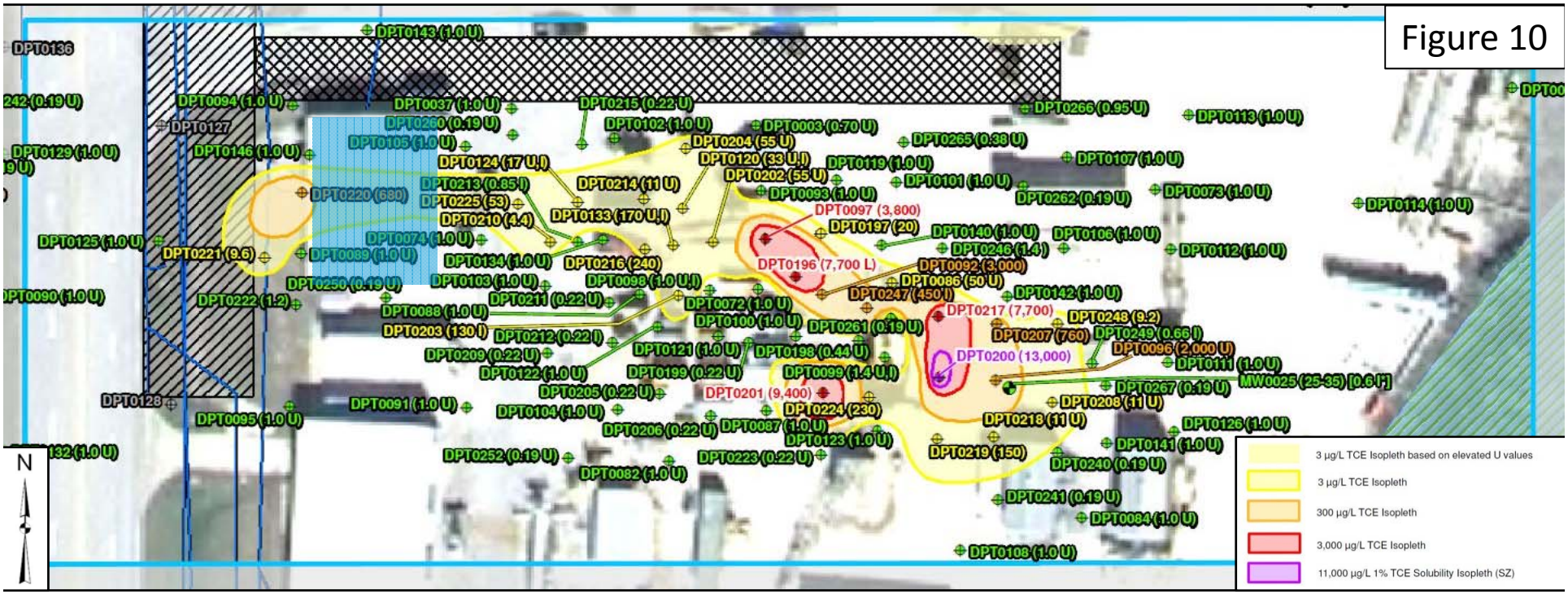
DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest TCE Concentration)**

TCE concentration less than or equal to 3 µg/L
(Only locations with results > 1.0 U are labeled)

# TCE 16 to 30 ft BLS

Figure 10




Comment: Stepouts around DPT0200 at 10 ft spacing will be considered pending Step 2 technology selection (i.e., ERH would warrant higher resolution; air sparge or bioremediation likely would not).

**Legend**

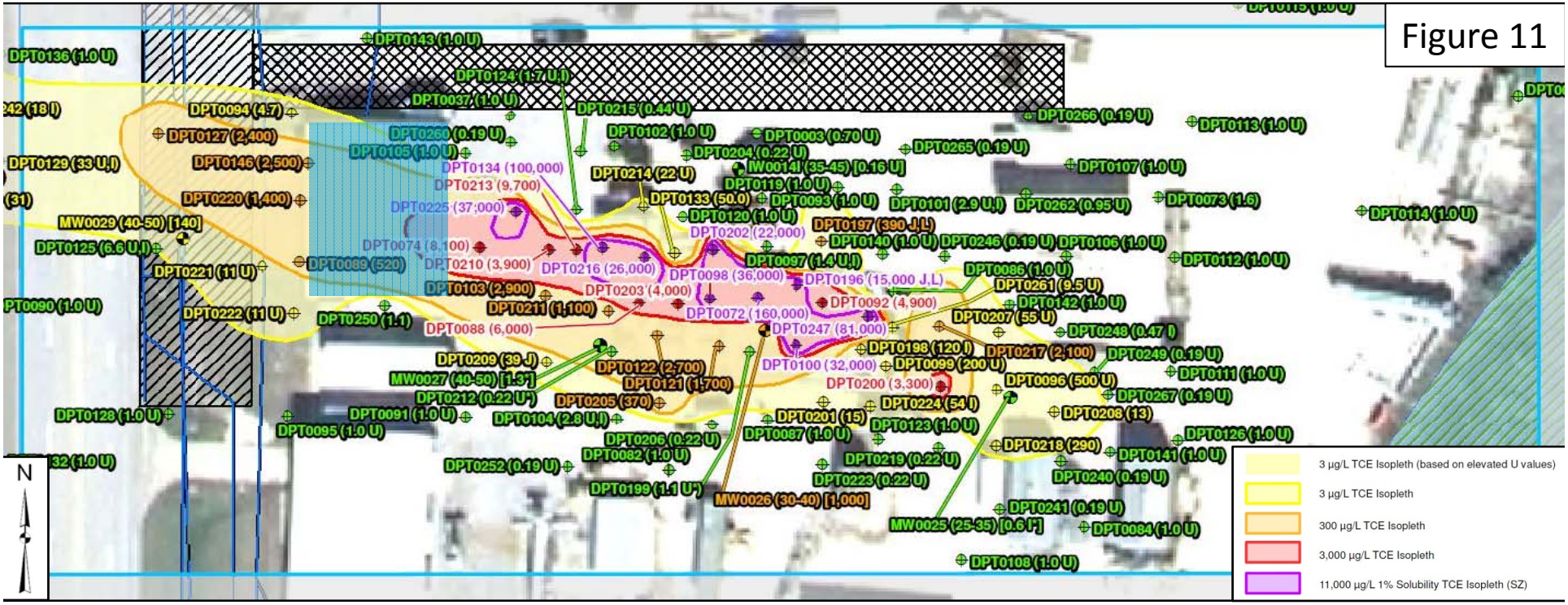
DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest TCE Concentration)**

TCE concentration less than or equal to 3 µg/L
(Only locations with results > 1.0 U are labeled)

# TCE 31 to 46 ft BLS

Figure 11




**Legend**

DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest TCE Concentration)**

TCE concentration less than or equal to 3 µg/L
(Only locations with results > 1.0 U are labeled)

# Response to Comments

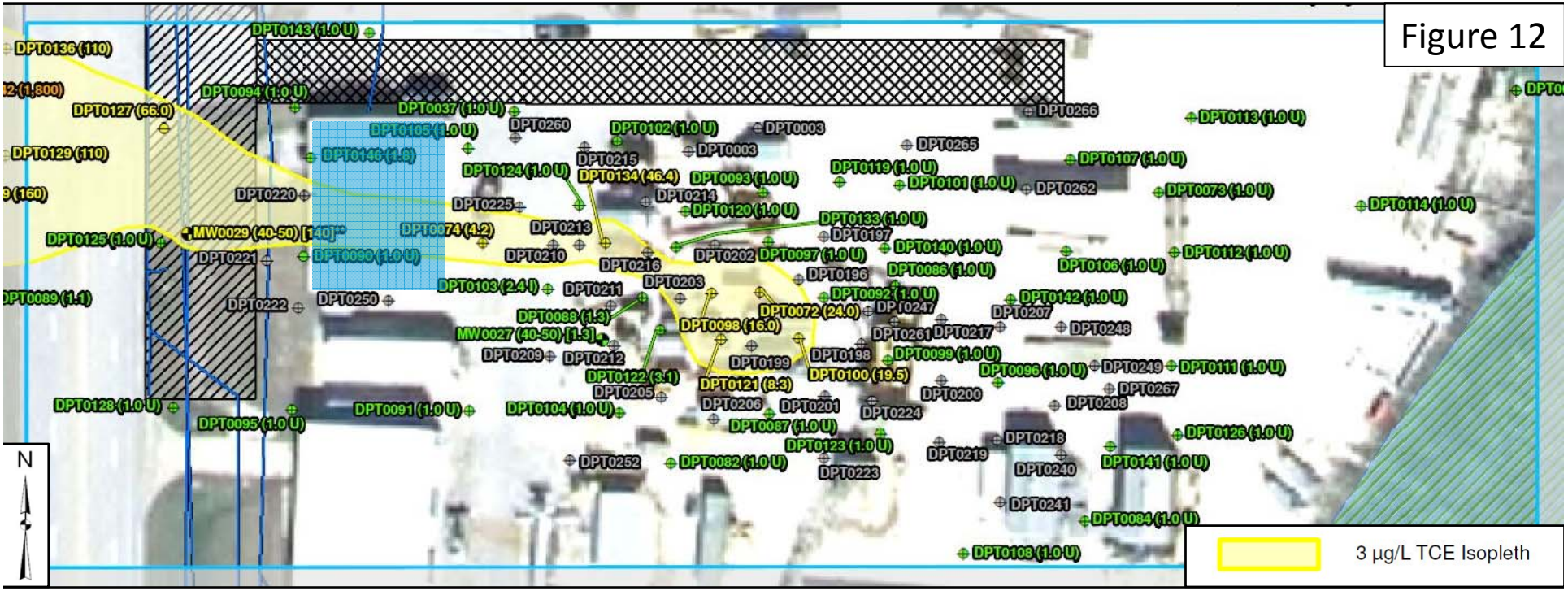
Jacobs-CORE Comment #4: Slides 26 and 44 to 46 – Minor comment, but from a remediation perspective it seems prudent to assume that the area between DPT0098 and DPT0216 is above 1% solubility (contoured purple). The same could be considered for the area between DPT0247 and DPT0196, along with the area between DPT0134 and DPT0225. Again, this is just from a remediation perspective based upon the potential error in sampling in these high concentration areas, but it affects the SZ area shown on Slides 44 – 46, and also would affect the size and planning of any SZ remediation alternative.

*Response: We concur that the 1% solubility areas could be combined into one area for purposes of the Step 2 and Step 3 EE.*

Geosyntec consultants

# TCE 46 to 56 ft BLS

Figure 12




**Legend**

DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest TCE Concentration)**

TCE concentration less than or equal to 3 µg/L
(Only locations with results > 1.0 U are labeled)

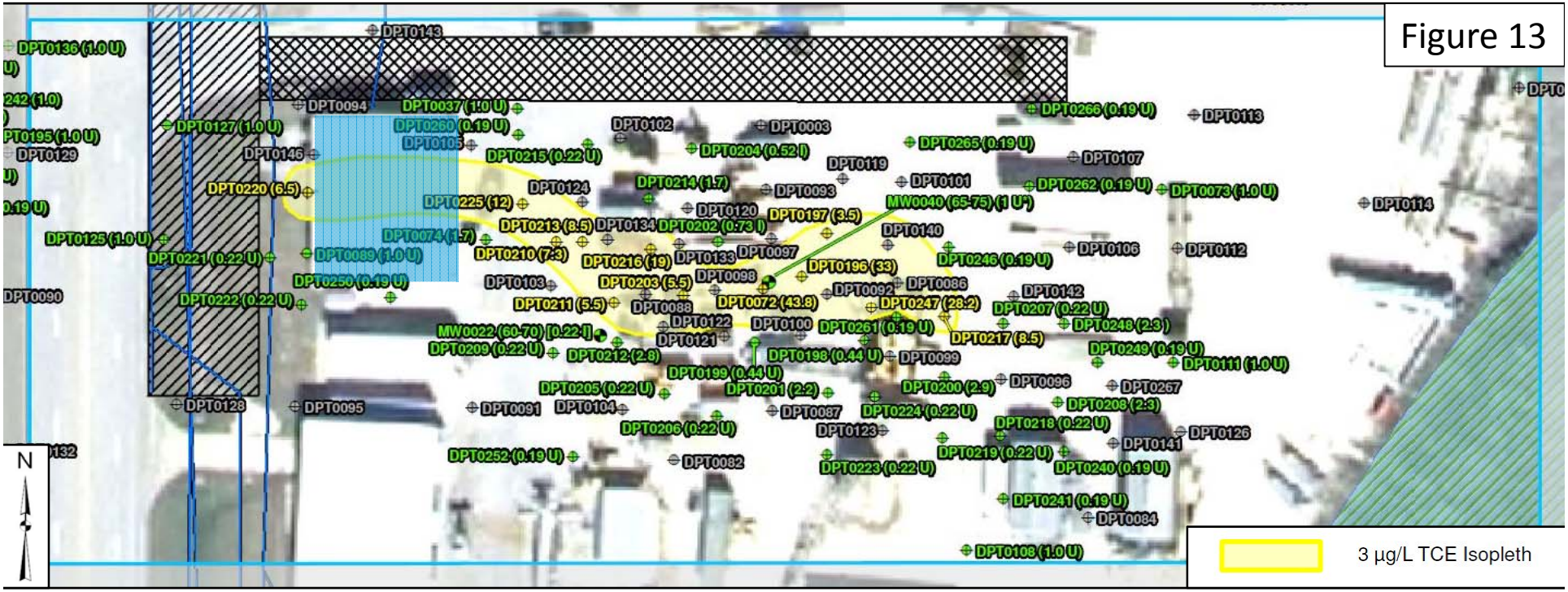
# Response to Comments

TT Comment #3: Slide 27 – Elevated TCE results are present in DPT0196, 0202, 0225, and 0247 within the 41 to 45 feet bls sampling interval, and these locations were not sampled within the 46 to 50 feet bls interval. Please confirm if this is a vertical data gap since a sampling point is not present between 45 to 56 feet bls with moderate detections from 56 to 60 feet bls.

*Response: We do not feel that this is a data gap. There is a high density of data in each depth zone in HS1, although, as identified, toward the end of the sampling effort, sampling intervals were focused based on the previous results. Also, sampling at depth in these locations was discontinued because of the concern for dragdown and with the understanding that a vertical delineation well would be installed and sampled (MW40).*

# TCE Greater than 56 ft BLS

Figure 13




**Legend**

DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest TCE Concentration)**

TCE concentration less than or equal to 3 µg/L
(Only locations with results > 1.0 U are labeled)

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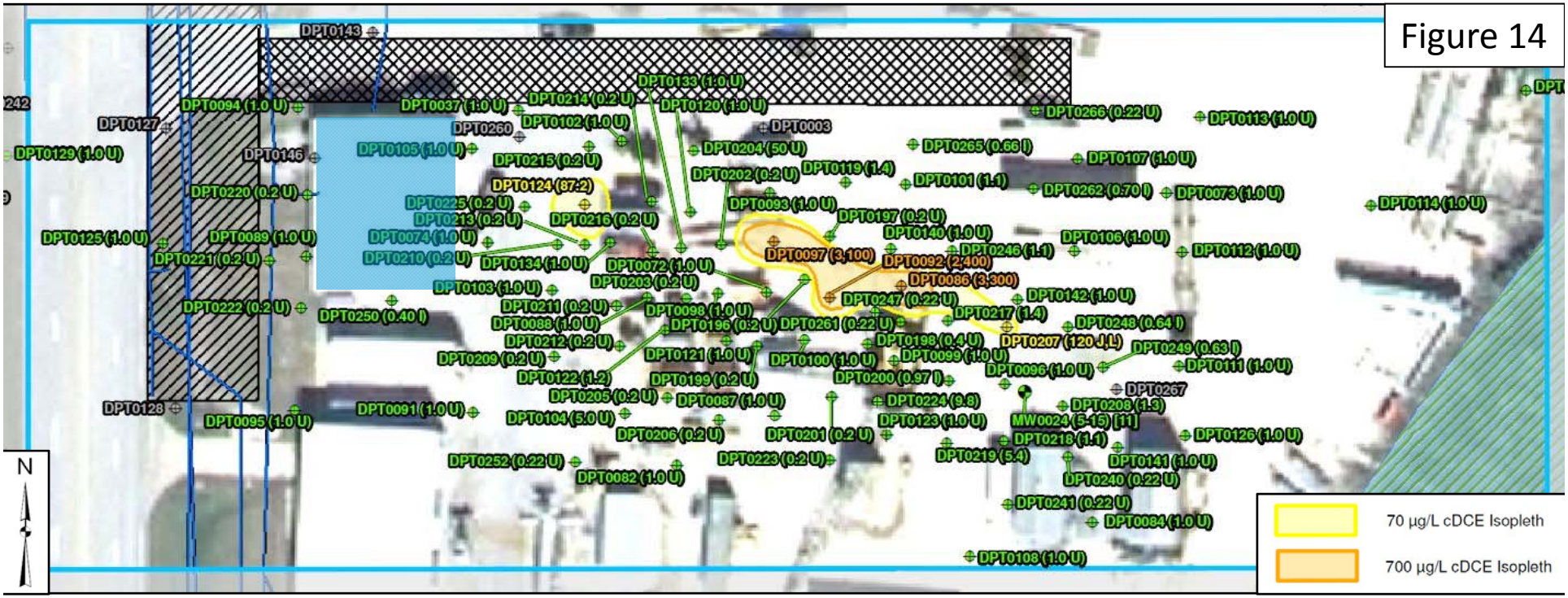
# cDCE 8 to 16 ft BLS

Figure 14




**Legend**

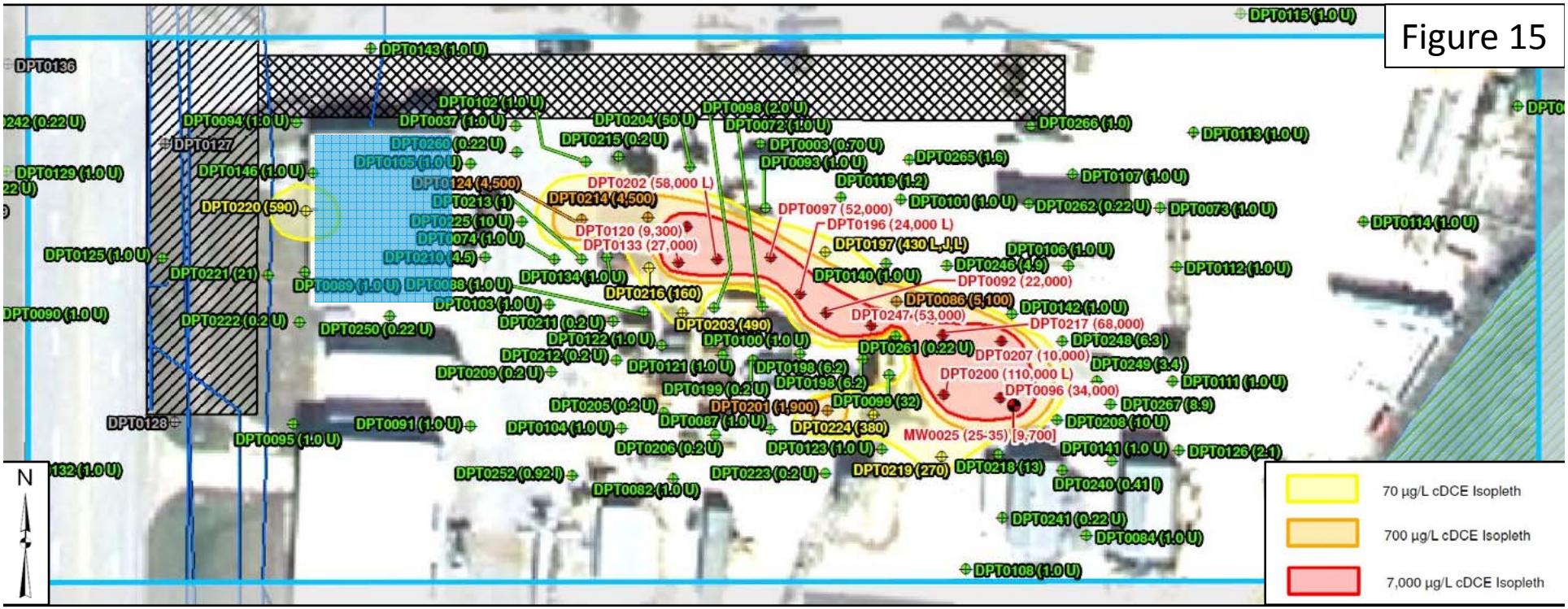
DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest cDCE Concentration)**

cDCE concentration less than or equal to 70 µg/L

# cDCE 16 to 30 ft BLS

Figure 15




**Legend**

DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest cDCE Concentration)**

cDCE concentration less than or equal to 70 µg/L

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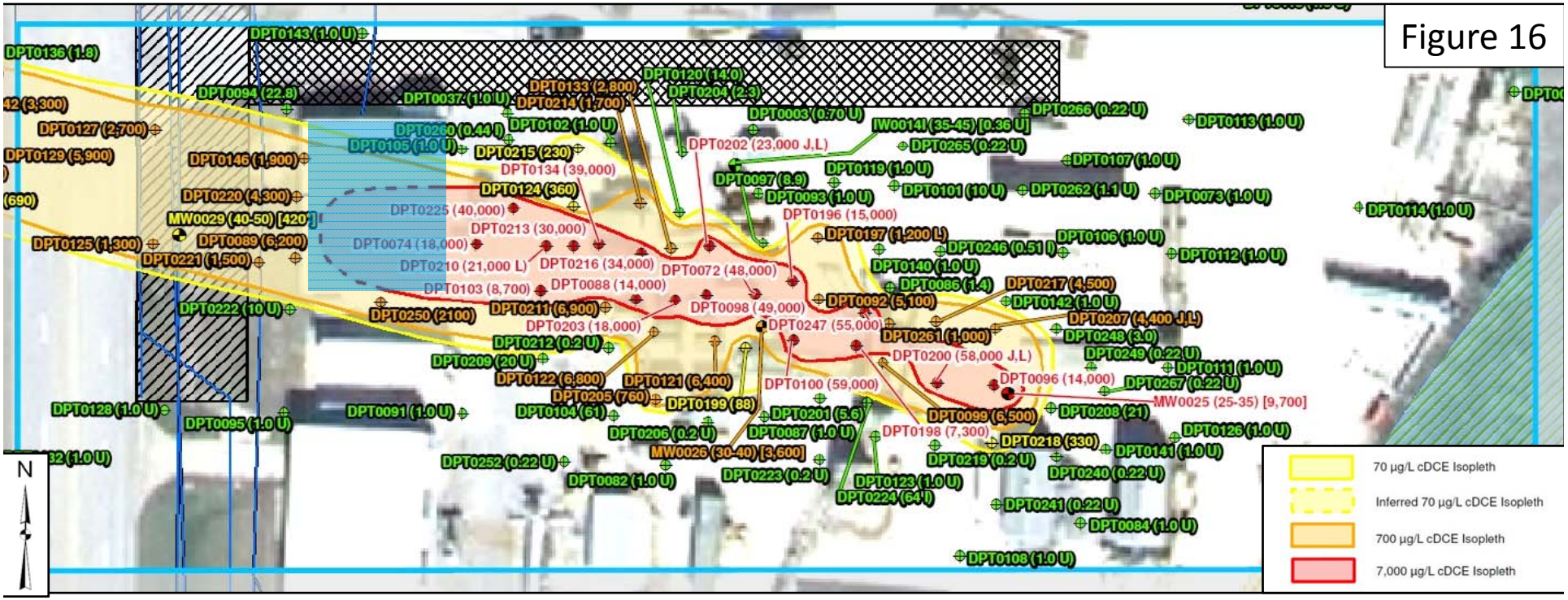
# cDCE 31 to 46 ft BLS

Figure 16




**Legend**

DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest cDCE Concentration)**

cDCE concentration less than or equal to 70 µg/L

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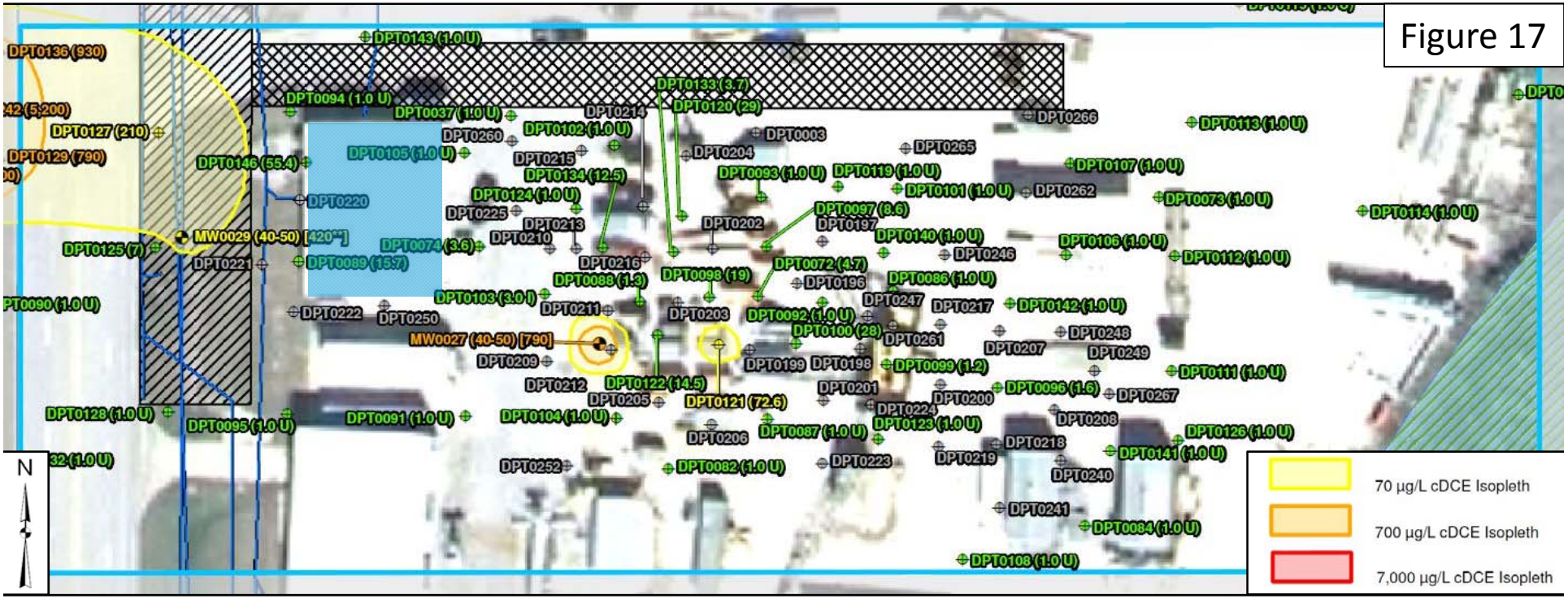
# cDCE 46 to 56 ft BLS

Figure 17




**Legend**

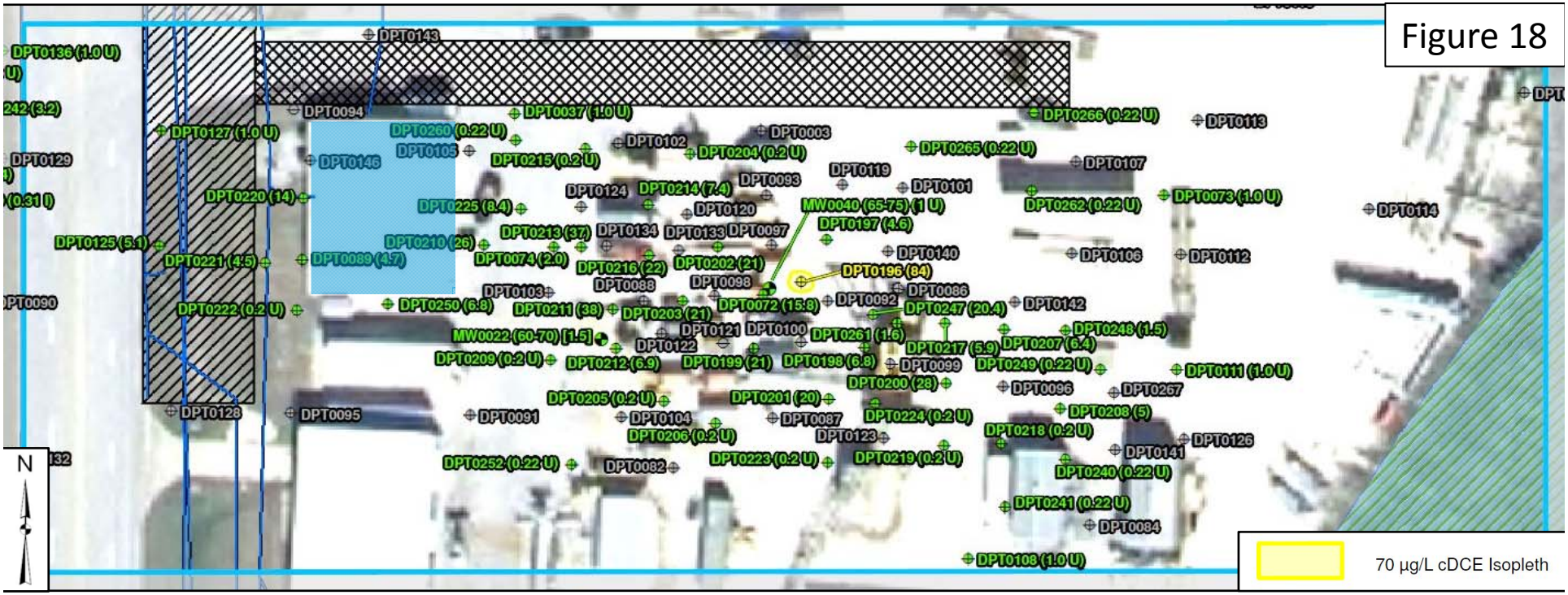
DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest cDCE Concentration)**

cDCE concentration less than or equal to 70 µg/L

# cDCE Greater than 56 ft BLS

Figure 18




**Legend**

DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest cDCE Concentration)**

cDCE concentration less than or equal to 70 µg/L

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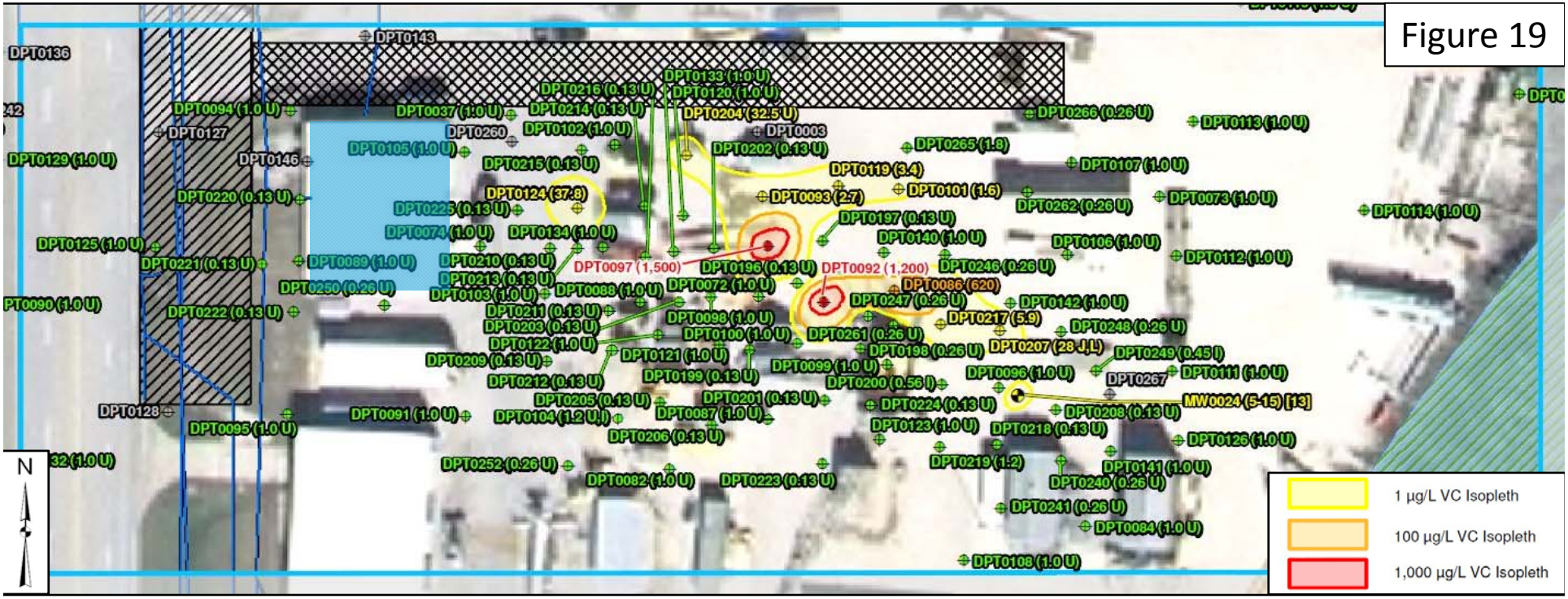
# VC 8 to 16 ft BLS

Figure 19




**Legend**

DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest VC Concentration)**

VC concentration less than or equal to 1 µg/L

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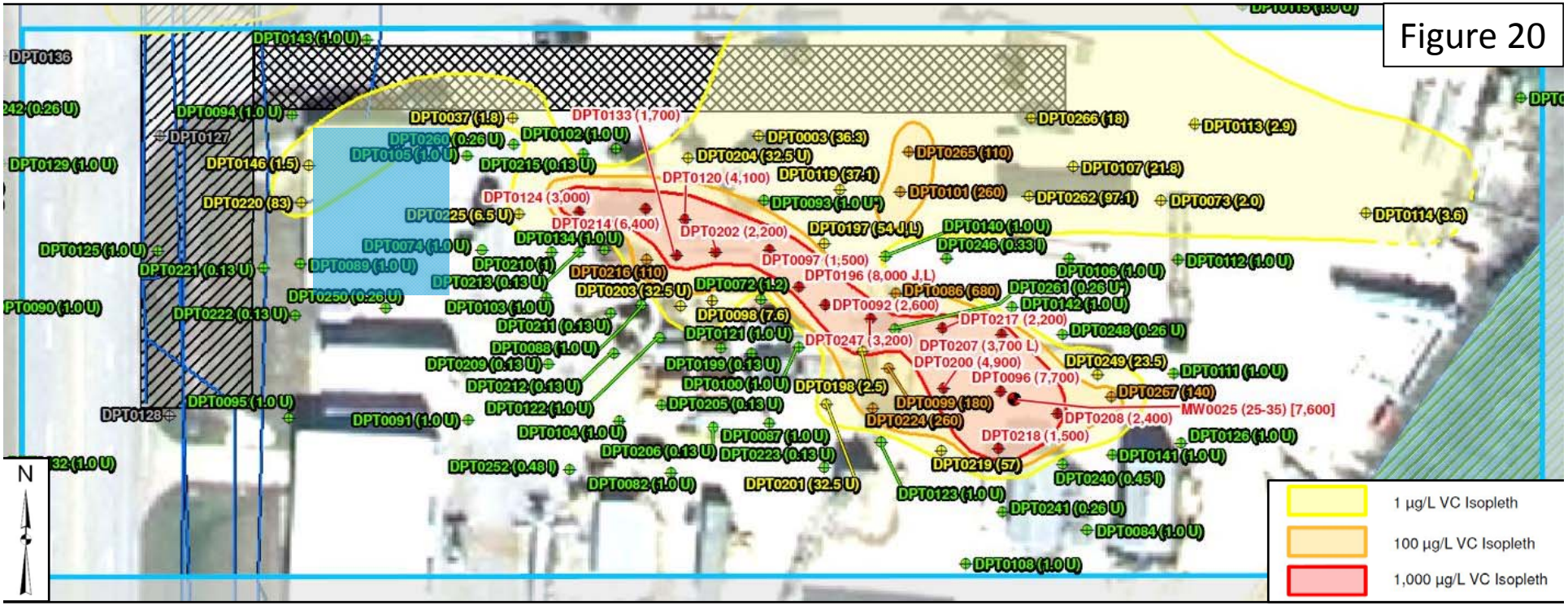
# VC 16 to 30 ft BLS

Figure 20




**Legend**

DPT Location Not Sampled in this Interval

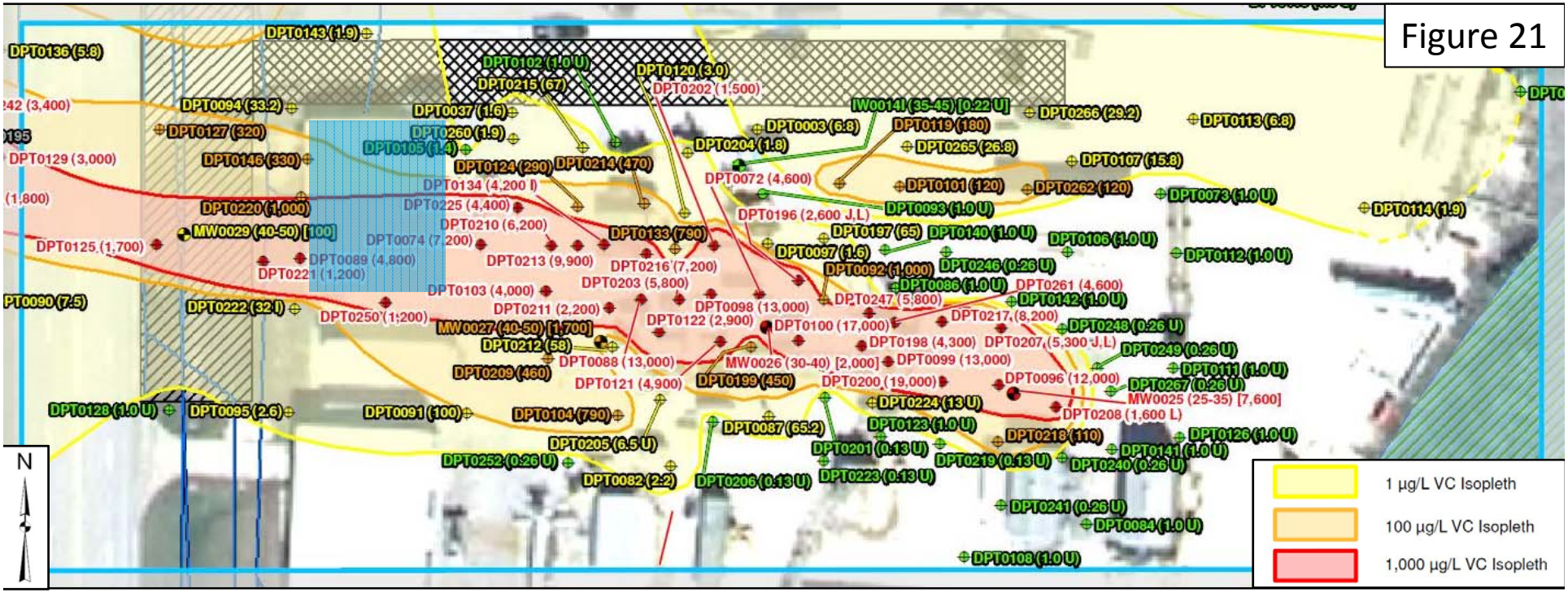
**DPT Sampling Location showing (highest VC Concentration)**

VC concentration less than or equal to 1 µg/L

Geosyntec consultants

# VC 31 to 46 ft BLS

Figure 21




**Legend**

DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest VC Concentration)**

VC concentration less than or equal to 1 µg/L

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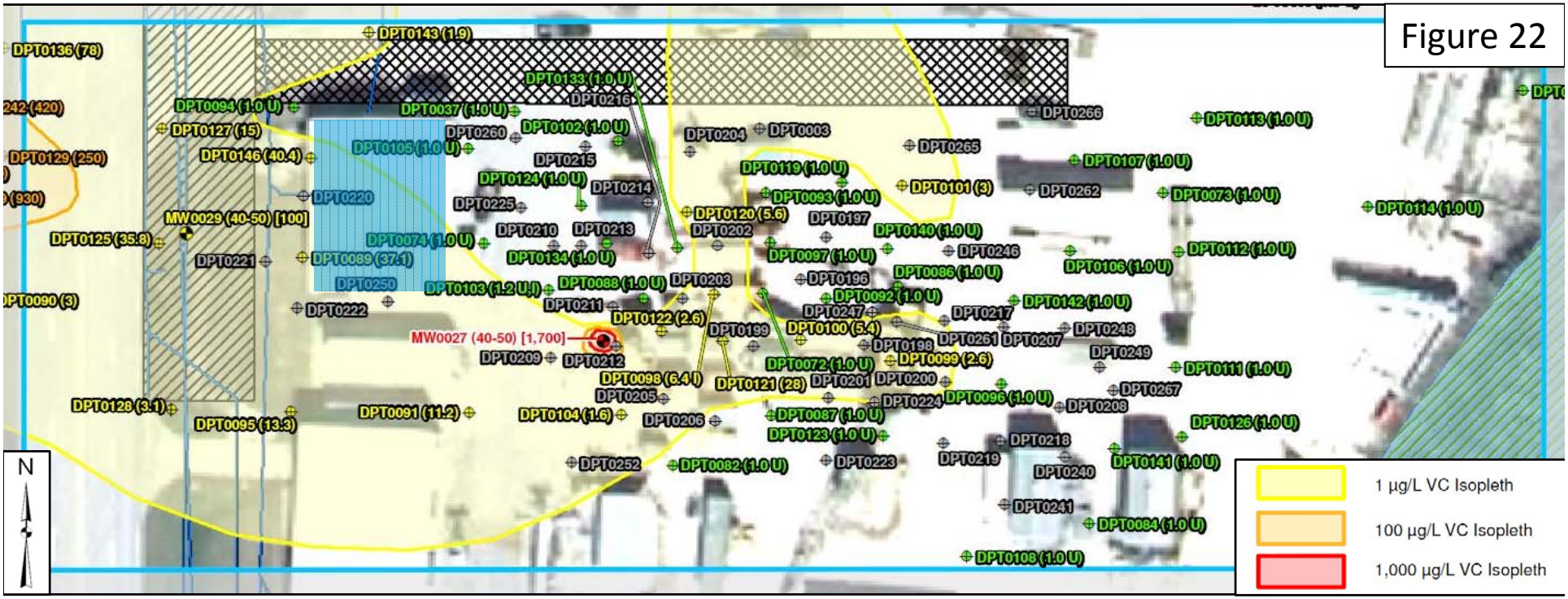
# VC 46 to 56 ft BLS

Figure 22




**Legend**

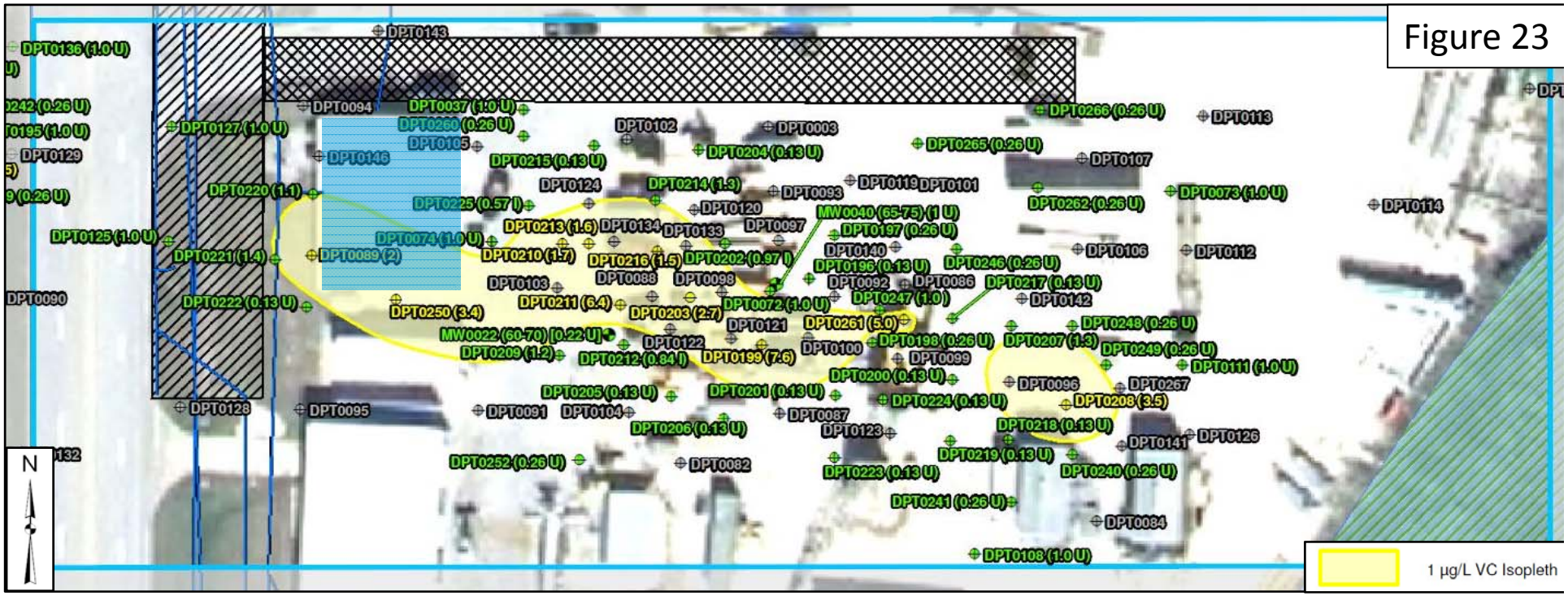
DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest VC Concentration)**

VC concentration less than or equal to 1 µg/L

# VC Greater than 56 ft BLS

Figure 23




**Legend**

DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest VC Concentration)**

VC concentration less than or equal to 1 µg/L

# Cross Section Plan View

# CVOC Cross Section

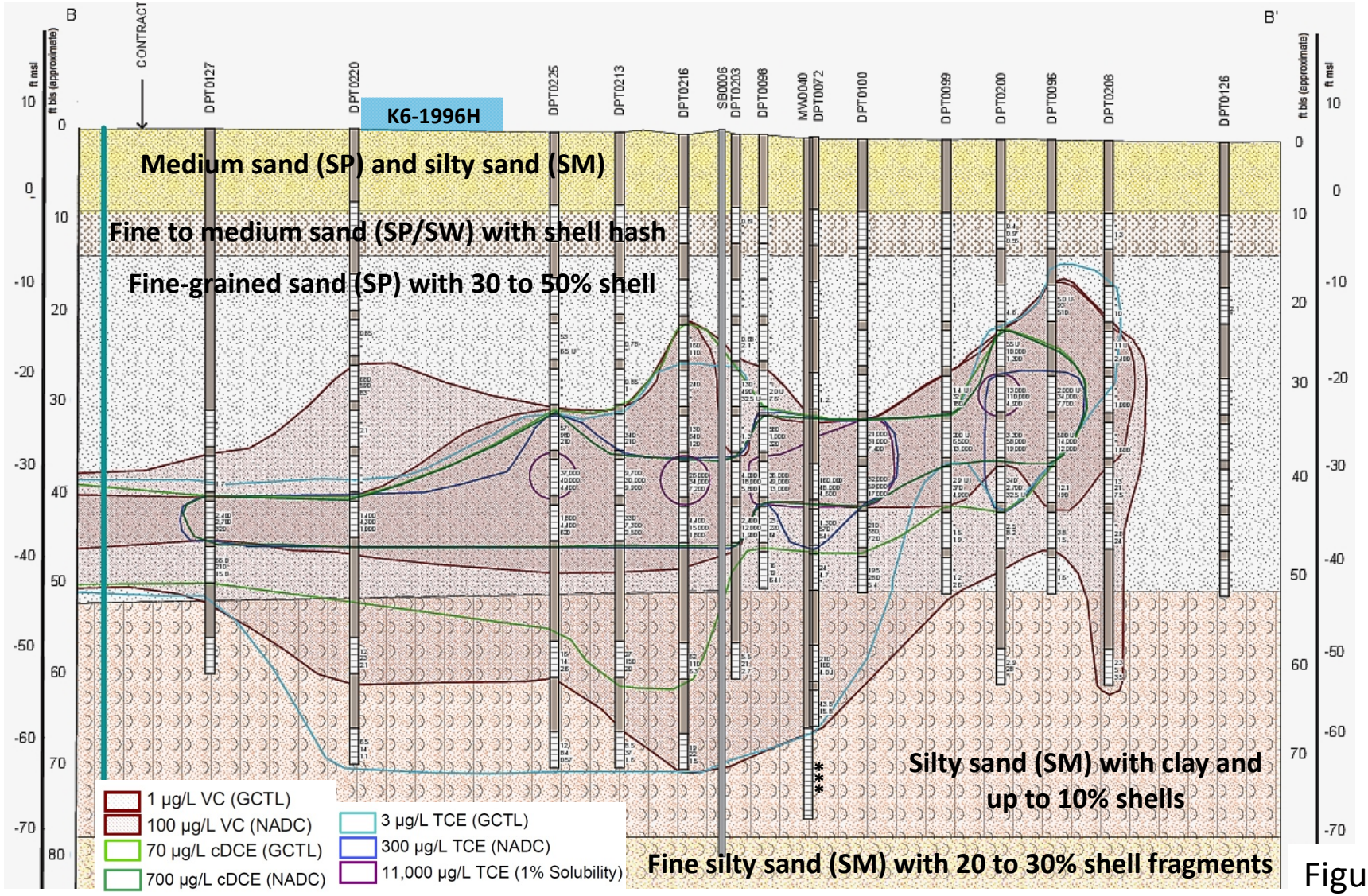



Figure 24

# View 4dim EVS Files

Note: In the EVS model, ½ detection limit was used for ND values.

# Response to Comments

TT Comment #4: Slide 41 (EVS) – When viewing the plume intervals, it is difficult to interpret internal zones (e.g., HS and SZ) due to the large thickness of data points. Suggest minimizing or showing as a discrete point within the middle of the sample interval. Review of the SZ in EVS was not completed due to this interference. Additionally, the deep interval bottom does not appear to be vertically delineated via EVS visual inspection.

*Response: The EVS models were revised several times with this concern in mind. The EVS model was provided for each COC with the focus on HS1 area only, and then with the entire site shown. The locations with concentrations<GCTL were made transparent to make the area with high concentrations easier to view. We do not feel it is necessary to revise the EVS model. Additionally, the SZ was delineated with a permanent deep well (MW40) near the highest observed TCE concentrations at the site.*

# Supplemental Assessment/ Delineation Summary

- Impacts generally from 8 to 50 ft BLS
- Max concentrations (µg/L)
  - TCE = 160,000 (DPT72, 36 to 40 ft BLS)
  - cDCE = 110,000 L (DPT200, 26 to 30 ft BLS)
    - L indicates the value exceeded the calibration range
  - VC = 19,000 (DPT200, 31 to 35 ft BLS)
- SZ contaminant mass is mainly 30 to 46 ft BLS (60% of mass in that zone within 36 to 40 ft BLS)
- Lithology
  - primarily sand until ~45 to 50 ft BLS (based on visual observations, MIP, and DPT data)
  - below ~ 45 to 50 ft BLS, lithology is silty sand, with varying amounts of clay (semi-confining layer)
- MW40 installed to evaluate potential dragdown in source area DPTs and results confirmed vertical delineation

# Contaminant Mass Evaluation

| Constituent | Depth Interval (ft) | Average Concentration (µg/L) | Pore Volume (L) | Equilibrium Soil Conc. (mg/kg) | Dissolved Mass (lbs) | Sorbed Mass (lbs) | Total Mass (lbs) |
|---|---|---|---|---|---|---|---|
| TCE | 0 to 16 | 5.4 | 7.87E+04 | 0.003 | 0.001 | 0.003 | 0.004 |
| | 16 to 30 | 40 | 8.50E+05 | 0.02 | 0.07 | 0.2 | 0.3 |
| | 30 to 46 | 251 | 2.79E+06 | 0.1 | 1.5 | 4.7 | 6.3 |
| | 46 to 56 | 10 | 8.28E+05 | 0.005 | 0.02 | 0.06 | 0.08 |
| | >56 | 7.2 | 1.58E+06 | 0.003 | 0.03 | 0.08 | 0.1 |
| | **Total** | | | | **2** | **5** | **7** |
| cDCE | 0 to 16 | 246 | 3.21E+04 | 0.03 | 0.02 | 0.01 | 0.03 |
| | 16 to 30 | 1,474 | 4.83E+05 | 0.2 | 1.6 | 1.3 | 2.9 |
| | 30 to 46 | 2,125 | 1.31E+06 | 0.3 | 6.1 | 5.2 | 11.3 |
| | 46 to 56 | 230 | 1.68E+05 | 0.03 | 0.09 | 0.07 | 0.2 |
| | >56 | 108 | 4.51E+04 | 0.01 | 0.01 | 0.01 | 0.02 |
| | **Total** | | | | **8** | **7** | **15** |
| VC | 0 to 16 | 6.5 | 1.06E+06 | 0.0005 | 0.02 | 0.007 | 0.02 |
| | 16 to 30 | 79 | 3.05E+06 | 0.006 | 0.5 | 0.3 | 0.8 |
| | 30 to 46 | 212 | 5.75E+06 | 0.02 | 2.7 | 1.3 | 4.0 |
| | 46 to 56 | 12 | 2.44E+06 | 0.001 | 0.06 | 0.03 | 0.09 |
| | >56 | 2.4 | 5.44E+05 | 0.0002 | 0.003 | 0.001 | 0.004 |
| | **Total** | | | | **4** | **2** | **6** |
| | | | | | | **Total Mass** | **30*** |

Notes:
1. Pore volume is estimated via EVS.
2. Soil density assumed to be 100 lb/ft3.
3. Foc assumed to be 0.003 which was taken from estimate provided by Tetra tech in Step 1 ADP for Hot Spot 2 for a sand with shell.
4. Koc data calculated from Sawyer, McCarty and Parkin, 5th Edition (2002); TCE = 165.7 L/kg, cDCE = 45.6 L/kg and VC = 26.3 L/kg.
5. Calculations do not consider potential DNAPL mass.

*Rounded to nearest tens of lbs.

# Contaminant Mass Evaluation

| Plume | Dissolved (lbs) | Sorbed (lbs) | Total (lbs) | % of Total Mass |
|---|---|---|---|---|
| LCP | 1 | 1 | 2 | 7% |
| HCP | 5 | 5 | 10 | 33% |
| HS | 8 | 8 | 16 | 53% |
| **Total** | **14** | **14** | **30*** | |

| TCE | Dissolved (lbs) | Sorbed (lbs) | Total (lbs) | % of Total Mass |
|---|---|---|---|---|
| LCP | 0.2 | 0.8 | 1.0 | 15% |
| HCP | 0.7 | 2.1 | 2.8 | 41% |
| HS | 0.6 | 1.7 | 2.3 | 33% |
| SZ | 0.2 | 0.6 | 0.8 | 12% |
| **Total** | **2** | **5** | **7** | |

## Source Zone:

- Defined by DNAPL threshold for TCE of 11,000 µg/L
- Covers ≈ 0.04 acres

Notes:
1. Pore volume is estimated via EVS.
2. Soil density assumed to be 100 lb/ft3.
3. Foc assumed to be 0.003 which was taken from estimate provided by Tetra tech in Step 1 ADP for Hot Spot 2 for a sand with shell.
4. Koc data calculated from Sawyer, McCarty and Parkin, 5th Edition (2002); TCE = 165.7 L/kg, cDCE = 45.6 L/kg and VC = 26.3 L/kg.
5. Calculations do not consider potential DNAPL mass.

*Rounded to nearest tens of lbs.

**Table 1. Mass Calculations**

| | Average Concentration (µg/L) | Source of Average Concentration | Area ($ft^2$) | Thickness (ft) | Pore Volume (L) | Dissolved Mass (lbs) | Equilibrium Soil Concentration (mg/kg) | Sorbed Mass (lbs) | Total Mass (lbs) |
|---|---|---|---|---|---|---|---|---|---|
| 300 µg/L > TCE > 3 µg/L | 52 | Hand Calculated | 34,412 | 25 | 6.09E+06 | 0.7 | 0.02 | 2.1 | 2.8 |
| | 27 | EVS Estimate | --- | --- | 4.17E+06 | 0.2 | 0.01 | 0.8 | 1.0 |
| 3,000 µg/L > TCE > 300 µg/L | 1,314 | Hand Calculated | 17,860 | 10 | 1.26E+06 | 3.7 | 0.63 | 11.3 | 15 |
| | 995 | EVS Estimate | --- | --- | 3.12E+05 | 0.7 | 0.48 | 2.1 | 2.8 |
| 11,000 µg/L > TCE > 3,000 µg/L | 5,947 | Hand Calculated | 5,663 | 10 | 4.01E+05 | 5.3 | 2.9 | 16.2 | 21 |
| | 5,047 | EVS Estimate | --- | --- | 5.01E+04 | 0.6 | 2.4 | 1.7 | 2.3 |
| TCE > 11,000 µg/L | 46,750 | Hand Calculated | 1,742 | 5 | 6.17E+04 | 6.4 | 22 | 19.5 | 26 |
| | 19,701 | EVS Estimate | --- | --- | 4.45E+03 | 0.2 | 9.5 | 0.6 | 0.8 |
| | | | | | **Total Dissolved Mass** | **1.7 to 16 lbs** | **Total Sorbed Mass** | **5.2 to 49 lbs** | |
| | | | | | | | **Total TCE Mass** | **6.9 to 65 lbs** | |
| 700 µg/L > cDCE > 70 µg/L | 236 | Hand Calculated | 31,799 | 25 | 5.63E+06 | 2.9 | 0.03 | 2.5 | 5.4 |
| | 246 | EVS Estimate | --- | --- | 1.24E+06 | 0.7 | 0.03 | 0.6 | 1.2 |
| 7,000 µg/L > cDCE > 700 µg/L | 3,153 | Hand Calculated | 24,829 | 20 | 3.52E+06 | 24 | 0.4 | 21 | 45 |
| | 2,184 | EVS Estimate | --- | --- | 5.81E+05 | 2.8 | 0.3 | 2.4 | 5.2 |
| cDCE > 7,000 µg/L | 26,443 | Hand Calculated | 10,019 | 10 | 7.09E+05 | 41 | 3.5 | 35 | 76 |
| | 14,386 | EVS Estimate | --- | --- | 1.36E+05 | 4.3 | 1.9 | 3.7 | 8.0 |
| | | | | | **Total Dissolved Mass** | **7.8 to 69 lbs** | **Total Sorbed Mass** | **6.6 to 58 lbs** | |
| | | | | | | | **Total cDCE Mass** | **14 to 127 lbs** | |
| 100 µg/L > VC > 1 µg/L | 18 | Hand Calculated | 86,249 | 30 | 1.83E+07 | 0.7 | 0.001 | 0.3 | 1.1 |
| | 10 | EVS Estimate | --- | --- | 1.18E+07 | 0.2 | 0.001 | 0.1 | 0.4 |
| 1,000 µg/L> VC > 100 µg/L | 387 | Hand Calculated | 33,977 | 20 | 4.81E+06 | 4.1 | 0.03 | 2.0 | 6.1 |
| | 321 | EVS Estimate | --- | --- | 1.13E+06 | 0.8 | 0.02 | 0.4 | 1.2 |
| VC > 1,000 µg/L | 3,672 | Hand Calculated | 18,731 | 15 | 1.99E+06 | 16 | 0.28 | 7.8 | 24 |
| | 2,375 | EVS Estimate | --- | --- | 5.99E+05 | 3.1 | 0.18 | 1.5 | 4.7 |
| | | | | | **Total Dissolved Mass** | **4.2 to 21 lbs** | **Total Sorbed Mass** | **2 to 10 lbs** | |
| | | | | | | | **Total VC Mass** | **6.2 to 31.1 lbs** | |
| | | | | | | | **Total Mass** | **27 to 223 lbs** | |

**Notes:**

1. Pore volume for EVS calculations was estimated via EVS and for the hand calculations was estimated using area and depth provided assuming a porosity of 0.25.
2. Soil density assumed to be 100 $lb/ft^3$.
3. Foc assumed to be 0.003 which was taken from estimate provided by Tetra tech in Step 1 ADP for Hot Spot 2 for a sand with shell.
4. Koc data calculated from Sawyer, McCarty and Parkin, 5th Edition (2002); TCE = 165.7 L/kg, cDCE = 45.6 L/kg and VC = 26.3 L/kg.

# Response to Comments

TT Comment #5: Slide 43/44 – TT does not agree with the methodology used for the mass calculation and the interpretation of the CSM. The mass is also not in agreement to the previous Step 1A EE. Applying an average concentration over the entirety of the plume area and not within specific isoconcentration intervals does not seem appropriate. The averaging methods used appear to have resulted in a misrepresentation of an average concentration and mass that is skewed low. Based on the information provided within the Step 1 EE, we would anticipate the TCE mass to be higher. Please revisit the mass calculation and revise the Part B technology screening as a result of the revision, where appropriate.

*Response: The mass calculation was performed using two different methods, both of which used the average concentrations for the specific isoconcentrations (e.g., NADC >COC>GCTL, 10XNADC>COC>NADC). One was performed by depth interval and one for the overall plume (as concentric rings not averaged over the entirety of the plume). The average concentrations presented were calculated by hand and by EVS. The mass calculations consistently documented a similar mass estimate within the same order of magnitude. We believe the multiple approaches used and similarity in results provides a reasonable estimate of mass. No revisions are warranted.*

# Response to Comments

TT Comment #1B: Slide 58 – Given the suspected under allocation of mass at CRHE, we do not concur to the Source Zone remedial technologies retained until the contaminant mass calculation and distribution is revised and redistributed to the team.

*Response: See previous response, additional information was provided regarding the mass calculations. We believe that the information presented is adequate to make a decision regarding retained remedial technologies.*

# Response to Comments

Jacobs-CORE Comment #5: Slides 43/44 – Both slides note that DNAPL mass was not considered in estimating contaminant mass. What is the rationale for excluding DNAPL from the mass estimate? Consider developing mass estimates for the SZ and HS independently (including DNAPL mass), then adding those to the gross average of the remaining HCP and LCP.

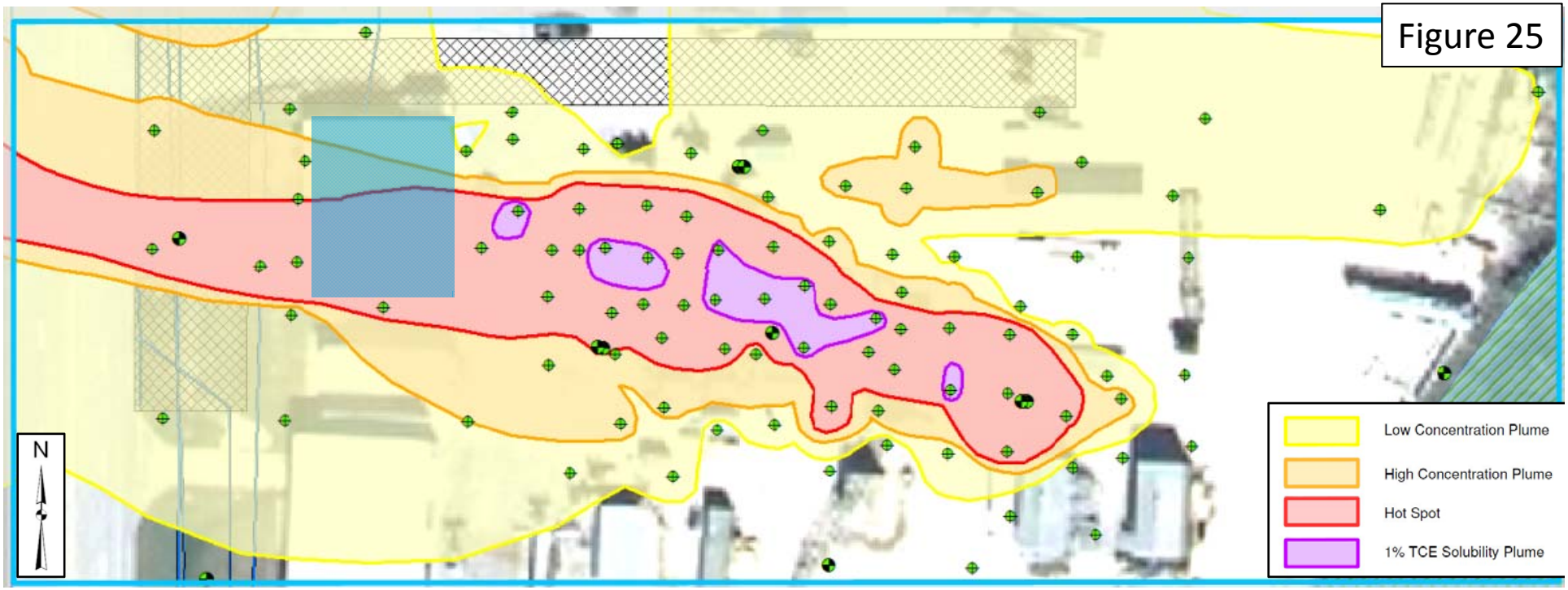
*Response: The note was intended to indicate that a specific quantity of DNAPL product at 12.2 lb/gallon density was not considered to occupy some assumed fraction of pore spaces over some assumed area and assumed thickness. We considered the sorbed mass partitioned fraction to account for DNAPL (ganglia and/or limited sorbed form present). Estimating DNAPL mass at a site is difficult, even with high resolution gw sampling data. If it is assumed that DNAPL occupies 0.01 to 0.1% of pore space (of 1% solubility area), there would be ~0.45 to 4.5 gallons of TCE DNAPL, which is ~5.5 to 55 lbs of DNAPL. Regardless of absence/presence and/or form of DNAPL, the overall mass estimate provides a reasonable order of magnitude estimate of mass likely present in HS1.*

# Potential Treatment Areas

- SZ (1% TCE solubility)
  - 0.04 acres
  - Represents about 1 to 26 lbs of total mass
  - ~4 to 12% of total mass
- CVOCs > 10xNADC
  - 0.43 acres
  - Represents about 16 to 147 lbs of total mass
  - ~59 to 66% of total mass
- Max treatment depth of 50 ft BLS
  - 97% of mass above this depth
  - semi-confining layer at this depth

# Overall Hot Spot 1 Area

Figure 25




| Plume Within HS1 | Area (acres) |
|---|---|
| LCP (>GCTL) | 1.99 |
| HCP (>NADC) | 0.78 |
| Hot Spot (>10xNADC) | 0.43 |
| SZ (> 11,000 µg/L TCE; 1% solubility) | 0.04 |

# Test Consensus - Step 1A

- Delineation in HS1 is complete for:
  - Source Zone (TCE greater than 11,000 µg/L)
  - Hot Spot (TCE and cDCE greater than 10xNADC)
  - HCP (concentration of TCE greater than NADC)
  - LCP (concentration of TCE greater than GCTL)
- cDCE HCP and LCP plumes are co-mingled with adjacent HS areas; delineation within HS1 is complete
- VC Hot Spot, HCP and LCP plumes are co-mingled with adjacent HS areas; delineation within HS1 is complete

# Step 1 – Section B

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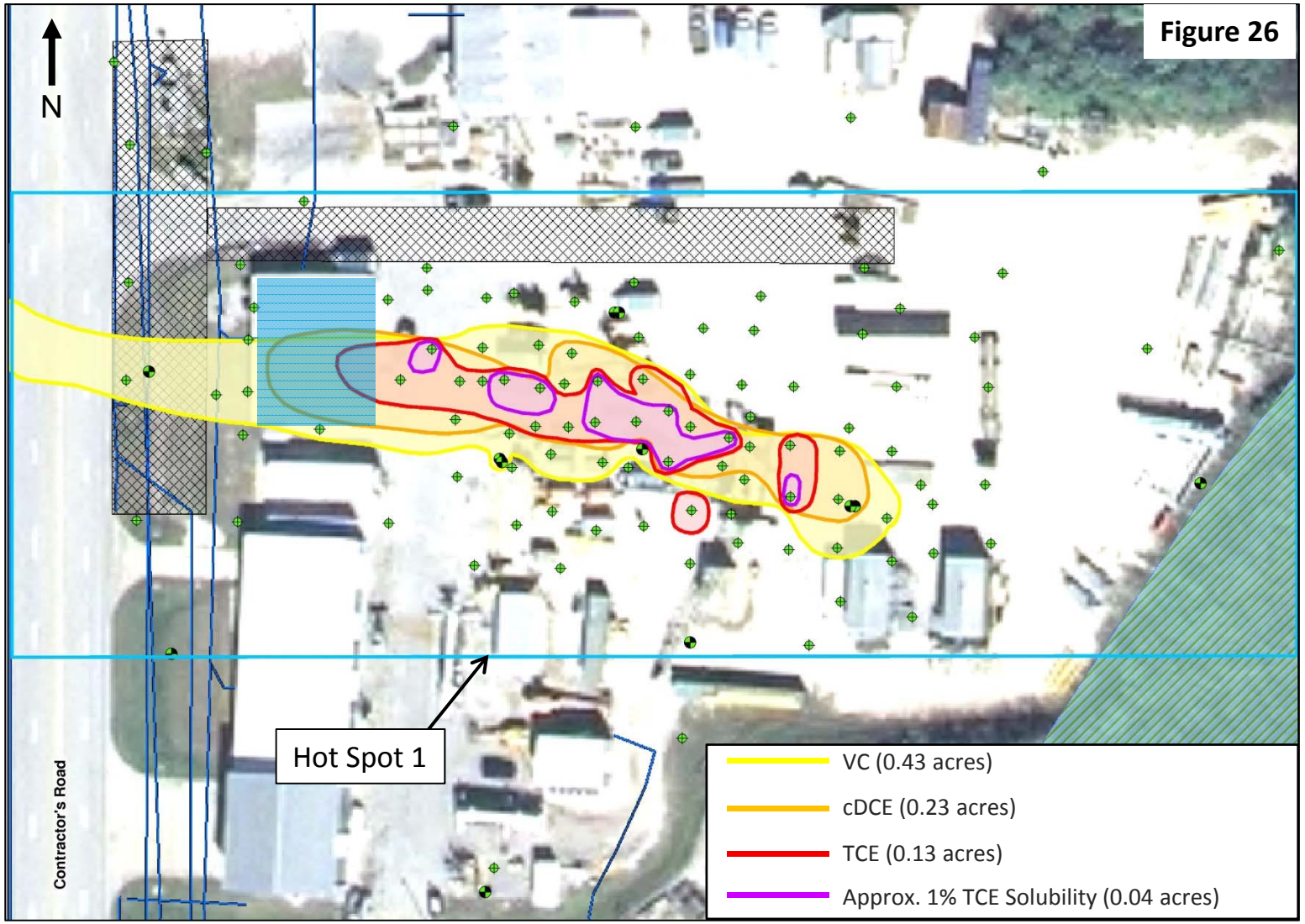
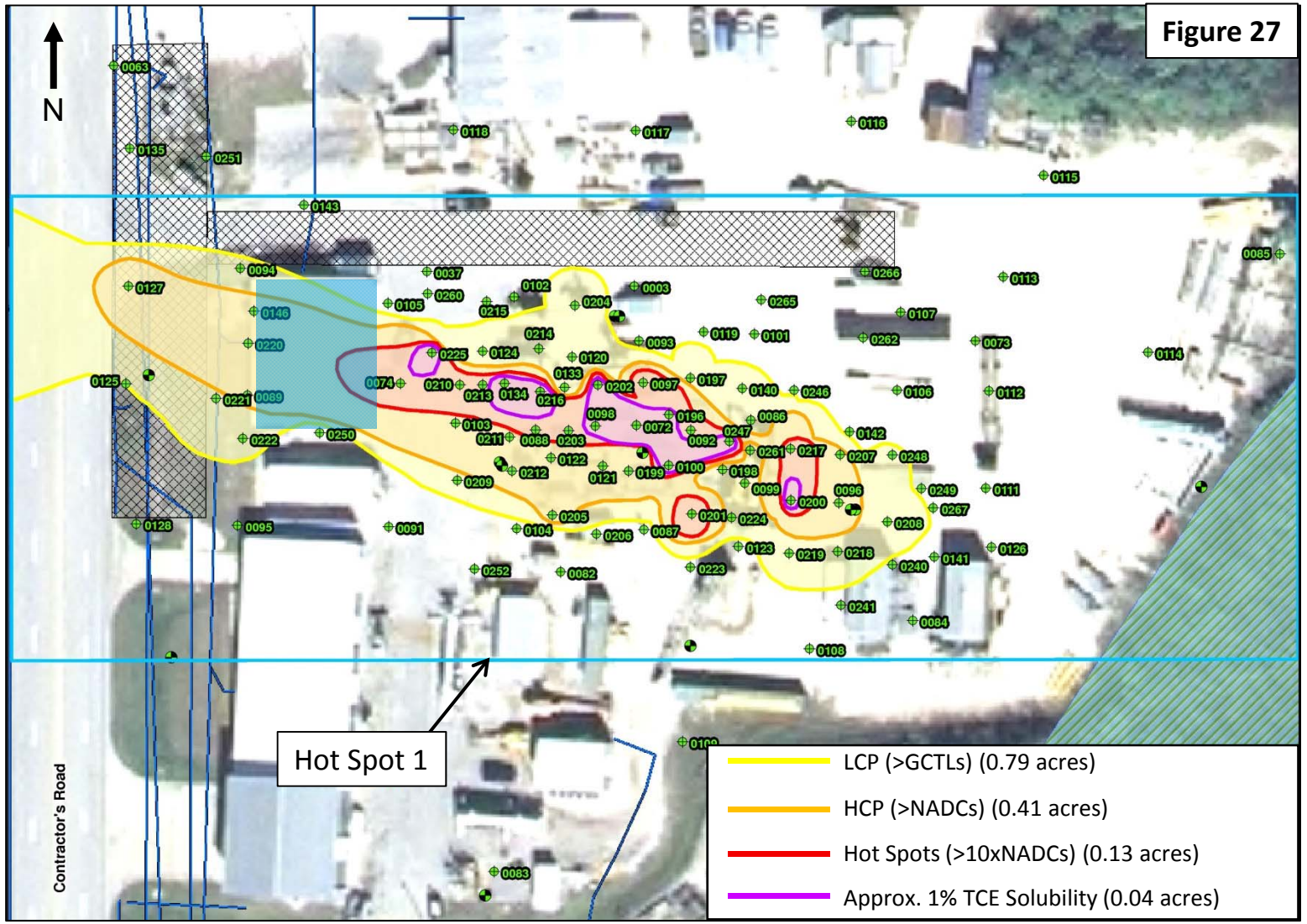
# 10x NADC Plumes Hot Spot 1



# Overall TCE Plume Hot Spot 1

Figure 27



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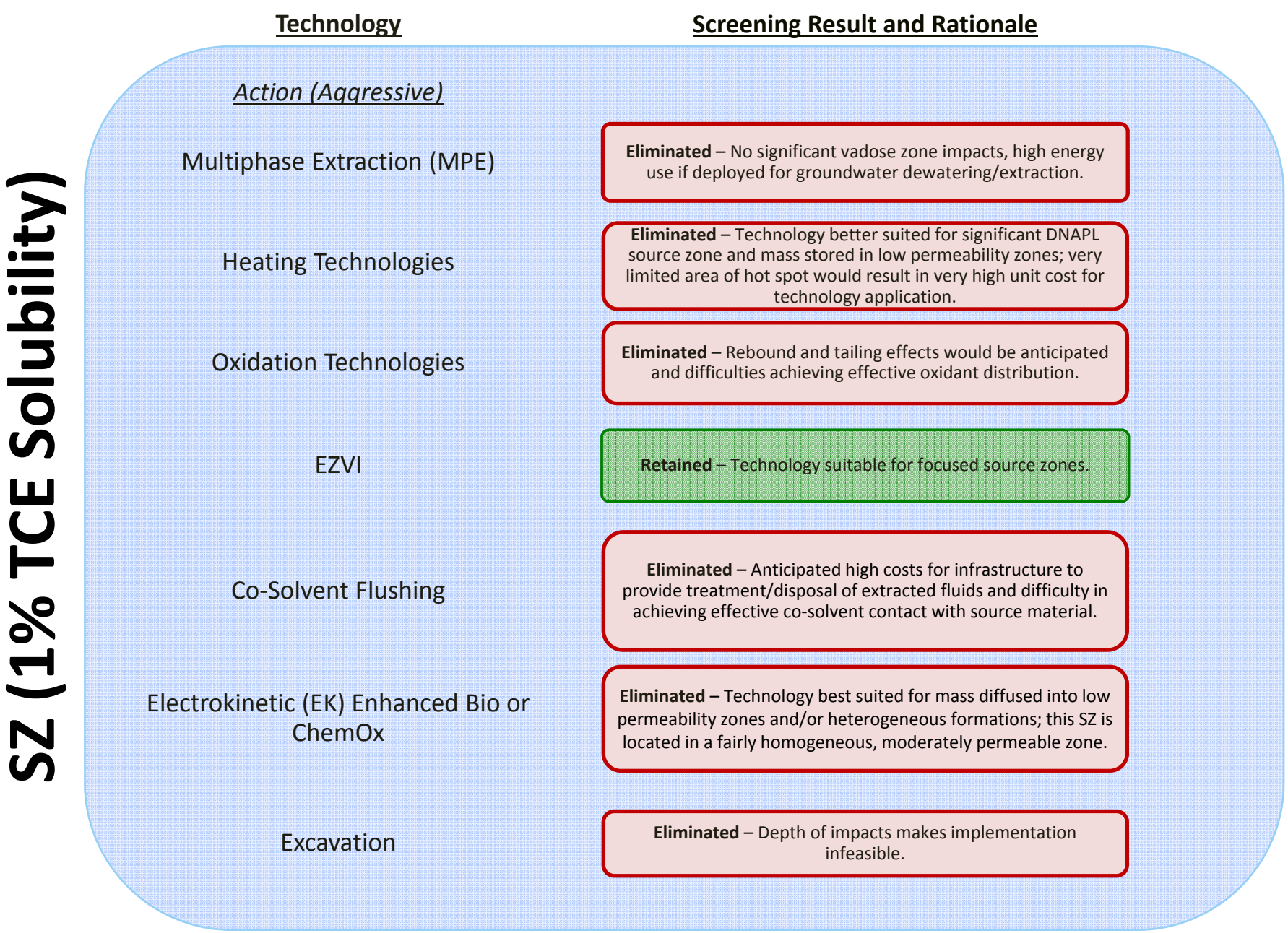
# Review of Pertinent Site Conditions

- Buildings/site structures and large equipment storage
- Downgradient edge of 10x NADC is under building
- HS1 area is mostly gravel/concrete
- Impacts generally present from 8 to 50 ft BLS
  - SZ contaminant mass is mainly 36 to 40 ft BLS
- Lithology is primarily sand until approximately 45 to 50 ft BLS (based on visual observations, MIP, and DPT data)
  - Below approximately 45 to 50 ft BLS lithology is silty sand, with varying amounts of clay (semi-confining layer)

# SZ (1% TCE Solubility)

| Technology | Screening Result and Rationale |
|---|---|
| *No Action* | |
| No Further Action | **Eliminated** – Not protective of human health and environment or allowed from a regulatory perspective. |
| *Limited Action (Passive)* | |
| Institutional Controls | **Retained** – Facility Land Use Controls warranted to prevent exposure to groundwater and/or installation of potable wells. |
| Monitoring (LTM, MNA) | **Eliminated** – Not protective of human health and environment or allowed from a regulatory perspective unless in conjunction with another technology. |
| *Action (Aggressive)* | |
| GW Extraction (Hydraulic Containment, pump and treat) | **Conditionally Retained** – Only suitable for plume containment and/or as a component of another aggressive treatment technology. |
| Impermeable Barrier | **Eliminated** – Not feasible due to site features (buildings, roads and railroad tracks); multiple discrete areas. |
| Bioremediation (Bioaugmentation, Biostimulation) | **Retained** – Reductive dechlorination occurring at site based on cDCE and VC production, but would require additional data. |
| Large Diameter Auger (LDA) (solidification, steam, EZVI approaches) | **Eliminated** – Technology better suited for significant DNAPL source zone and mass stored in low permeability zones; based upon site features and very limited footprint of SZ impacts, will likely result in very high unit costs. |
| Air Sparge | **Retained** – Effective treatment above semi-confining layer (~50 ft BLS) for volatilization of CVOCs. |


SZ (1% TCE Solubility)
Technology
Screening Result and Rationale
Action (Aggressive)
Multiphase Extraction (MPE)
Eliminated – No significant vadose zone impacts, high energy use if deployed for groundwater dewatering/extraction.
Heating Technologies
Eliminated – Technology better suited for significant DNAPL source zone and mass stored in low permeability zones; very limited area of hot spot would result in very high unit cost for technology application.
Oxidation Technologies
Eliminated – Rebound and tailing effects would be anticipated and difficulties achieving effective oxidant distribution.
EZVI
Retained – Technology suitable for focused source zones.
Co-Solvent Flushing
Eliminated – Anticipated high costs for infrastructure to provide treatment/disposal of extracted fluids and difficulty in achieving effective co-solvent contact with source material.
Electrokinetic (EK) Enhanced Bio or ChemOx
Eliminated – Technology best suited for mass diffused into low permeability zones and/or heterogeneous formations; this SZ is located in a fairly homogeneous, moderately permeable zone.
Excavation
Eliminated – Depth of impacts makes implementation infeasible.

# Response to Comments

Jacobs-CORE Comment #1B: Slide 53 (SZ Technology Screening) – Regarding elimination of LDA as an alternative. True that the SZ area is small which could make it cost prohibitive for LDA, but this area is totally accessible and, considering performance of LDA projects locally that have shown >95% efficiency over time, it may be worth considering since the likelihood of enhanced effectiveness could out-weigh the negative aspect of a higher cost. At a minimum, it would be nice to understand costs associated with LDA compared to other technologies, especially considering the performance.

*Response: We do not feel that LDA is an appropriate technology for this site based on the following: (i) the technology is better suited for source zones with significant DNAPL mass and mass stored in low permeability zones; (ii) access at the site is difficult due to buildings and storage of large pieces of equipment and conex boxes; and (iii) settling at the site after LDA implementation could result in damage to buildings or loss of storage area for the facility.*

# Response to Comments

Jacobs-CORE Comment #2B: Slide 53 (SZ Technology Screening) – AS Retained: It is evident that there is a low permeable zone somewhere around 40 ft bls which is possibly holding DNAPL. Will AS be able to effectively permeate through this zone and access the source mass that may be dispersed in diffusion limited zones? This has historically been an issue with sites that rebound following the use of pump and treat and air sparge technologies. If you have already compared the CRHE lithology to other sites where AS is effective and found that the CRHE lithology is favorable, a statement to that effect would be helpful. If not, the additional lithologic boring suggested above would be helpful, or consider whether a pilot test is needed.

*Response: The lithology borings did not indicate any low permeability zone above ~50 ft BLS. We do believe that AS will effectively treat mass at this site if the system is installed and operated properly. Additional soil borings can be collected as part of the Step 3 EE to assure the sparge screens are set in the appropriate locations.*

# Hot Spot 1 (>10xNADCs)

| Technology | Screening Result and Rationale |
|---|---|
| *No Action* | |
| No Further Action | **Eliminated** – Not protective of human health and environment or allowed from a regulatory perspective. |
| *Limited Action (Passive)* | |
| Institutional Controls | **Retained** – Facility Land Use Controls warranted to prevent exposure to groundwater and/or installation of potable wells. |
| Monitoring (LTM, MNA) | **Eliminated** – Not protective of human health and environment or allowed from a regulatory perspective unless in conjunction with another technology. |
| *Action (Aggressive)* | |
| GW Extraction (Hydraulic Containment, pump and treat) | **Conditionally Retained** – Only suitable for plume containment and/or as a component of another aggressive treatment technology. |
| Impermeable Barrier | **Eliminated** – Not feasible due to site features (buildings, roads and railroad tracks); multiple discrete areas. |
| Bioremediation (Bioaugmentation, Biostimulation) | **Retained** – Reductive dechlorination occurring at site based on cDCE and VC production, but would require additional data. |
| Large Diameter Auger (LDA) (solidification, steam, EZVI approaches) | **Eliminated** – Not feasible due to site features – buildings, roads and railroad tracks. |
| Air Sparge | **Retained** – Effective treatment above semi-confining layer (~50 ft BLS) for volatilization of CVOCs. |

# Hot Spot 1 (>10xNADCs)

| Technology | Screening Result and Rationale |
|---|---|
| *Action (Aggressive)* | |
| Multiphase Extraction (MPE) | **Eliminated** – No significant vadose zone impacts, high energy use if deployed for groundwater dewatering/extraction. |
| Heating Technologies | **Eliminated** – Technology better suited for significant DNAPL source zone and mass stored in low permeability zones; very limited area of hot spot would result in very high unit cost for technology application. |
| Oxidation Technologies | **Eliminated** – Rebound and tailing effects would be anticipated and difficulties achieving effective oxidant distribution. |
| EZVI | **Eliminated** – Technology better suited for focused DNAPL source zones not dissolved CVOCs. |
| Co-Solvent Flushing | **Eliminated** – Technology better suited for focused DNAPL source zones. |
| Electrokinetic (EK) Enhanced Bio or ChemOx | **Eliminated** – Technology better suited for focused uniform distribution of e-donor, microbial culture, or oxidant in limited footprint areas with high level of heterogeneity and diffused mass/DNAPL in low permeability zones. |
| Excavation | **Eliminated** – Depth of impacts makes implementation infeasible. |

# Engineering Data Gaps

- Additional data to evaluate bioremediation
  - Sample four intermediate wells down plume centerline and across site
    - MW25 (25-35)
    - MW29 (40-50)
    - MW35 (40-50)
    - MW19I (35-45)
  - Analyze samples for the following parameters
    - MEEs, sulfate, sulfide
    - Dhc and vcrA
    - VOCs including Freon 113
    - 1,4-Dioxane
- Evaluate existing electric service for air sparging

# Response to Comment

TT General Comment #7 Was 1,4-dioxane sampled at CRHE? If so, please include in ADP.

*Response: Select site monitoring wells were sampled and analyzed for 1,4-dioxane in 1997. The sample results were all non-detect (500 U and 2,500 U µg/L), but with DLs>FDEP GCTL (3.2 µg/L). It is proposed that samples collected from wells that will be sampled to collect additional data to evaluate bioremediation (MW0025, MW0029, MW0035 and MW0019I), will be analyzed for 1,4-dioxane.*

# Engineering Data Gap Proposed Sampling Locations

# Retained Technologies

## SZ (>1% TCE solubility)

- Retained technology
  - Institutional controls
  - Bioremediation
  - Air sparging
  - EZVI
- Conditionally retained
  - Groundwater extraction in combination with bioremediation

## Hot Spots (>10x NADC)

- Retained technology
  - Institutional controls
  - Bioremediation
  - Air sparging
- Conditionally retained
  - Groundwater extraction in combination with bioremediation

Air sparge and bioremediation are scalable to larger treatment areas

# Response to Comments

Jacobs-CORE Comment: Slide 58 – Air Sparge and Bioremediation are listed as scalable to larger treatment areas. Please confirm that other combined technologies, such as EZVI and Bioremediation, will also be looked at for scaling to larger zones.

*Response: EZVI was only recommended for evaluation in the area with TCE concentrations greater than 1% solubility. EZVI will not be considered for scaling to larger zones due to the elevated cost which would be anticipated in a larger area.*

# Path Forward/Test Consensus

- Proceed to Step 2
- Presumptive interim GW monitoring for LCP and HCP
- Separate evaluations for retained technologies
  - SZ (1% TCE solubility)
  - CVOCs > 10xNADC
- Test consensus
  - 1% solubility (11,000 µg/L) TCE as SZ
  - Technologies retained for evaluation in Step 2
  - Possibility to scale bioremediation and air sparging to larger treatment area

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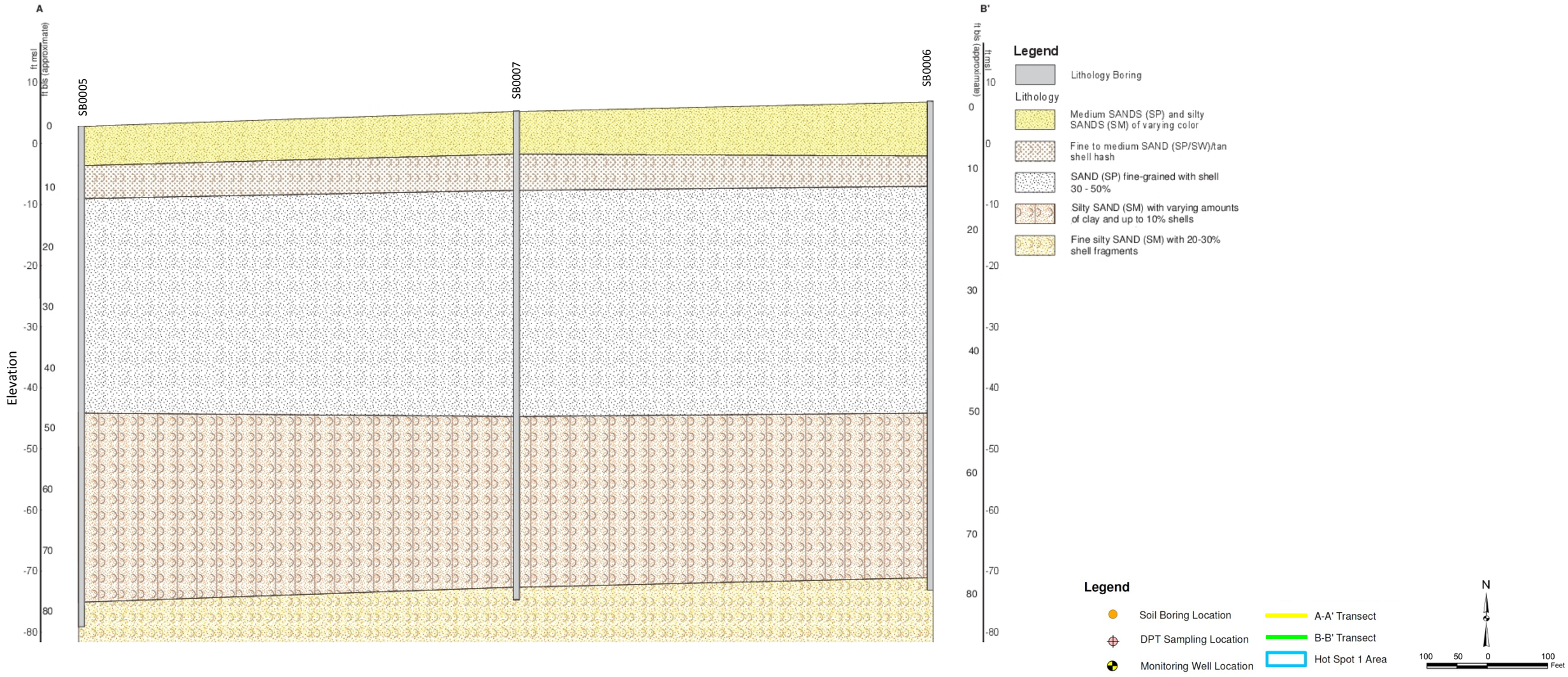



Notes:
1. ft indicate feet.
2. msl indicates mean sea level.
3. bls indicates below land surface.

Figure 1
Lithologic Cross Section A to A'

N

100 50 0 100

Feet

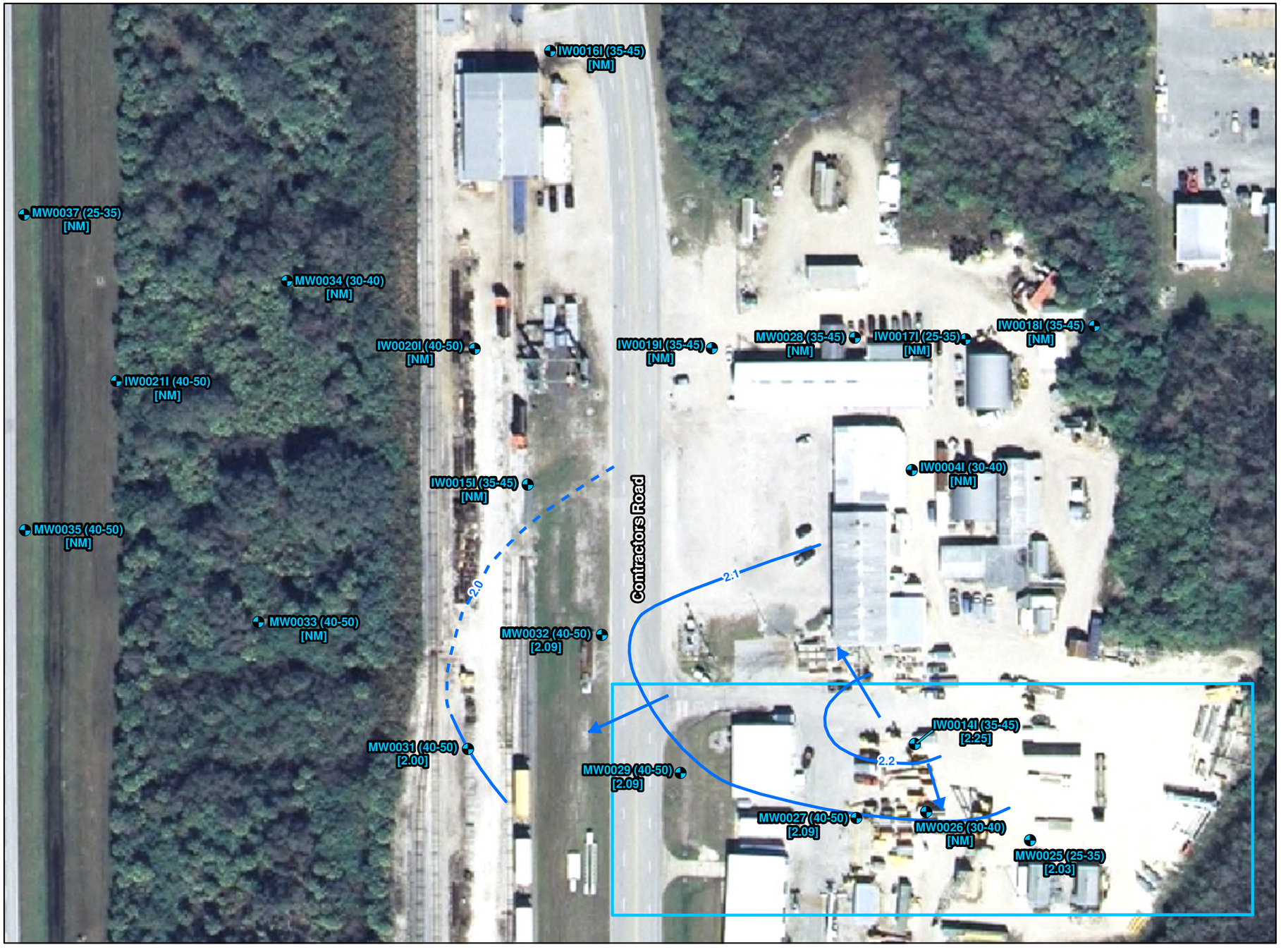
**Legend**

- Shallow Monitoring Well Location showing (Screen Interval) and [Groundwater Elevation]
- Groundwater Elevation Contour
- Groundwater Flow Direction
- Hot Spot 1 Area

Note:
1. Screen interval is presented in feet, below land surface (ft, BLS).
2. Elevation is referenced to the North American Datum of 1988.
3. NM indicates not measured.
4. Prefix for all sampling locations is "CRHE-".

Path: (Titusville-01\DATA) T:\0GIS\FR1681_CRHE\MXDs\AUG2013\Shallow_GW_elev_JULY2013.mxd 26 November 2013 JRB

Figure 2
Shallow Groundwater Elevation Contours - July 2013




N

100 50 0 100

Feet

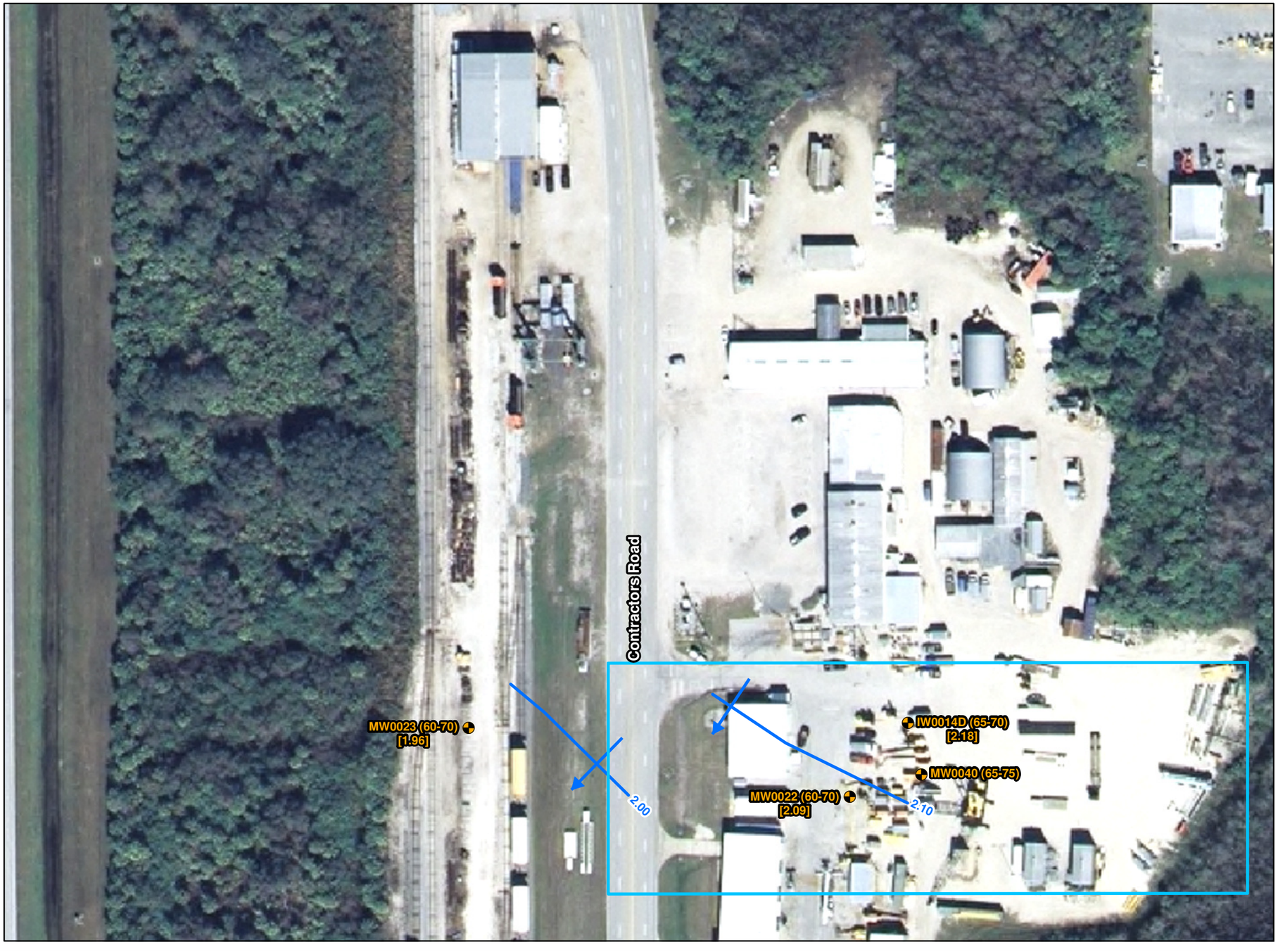
**Legend**

- Intermediate Monitoring Well Location showing (Screen Interval) and [Groundwater Elevation]
- Groundwater Elevation Contour
- Groundwater Flow Direction
- Hot Spot 1 Area

Note:
1. Screen interval is presented in feet, below land surface (ft, BLS).
2. Elevation is referenced to the North American Datum of 1988.
3. NM indicates not measured.
4. Prefix for all sampling locations is "CRHE-".

Path: (Titusville-01\DATA) T:\0GIS\FR1681_CRHE\MXDs\AUG2013\Int_GW_elev_JULY2013.mxd 26 November 2013 JRB

Figure 3
Intermediate Groundwater Elevation Contours - July 2013




N

100 50 0 100

Feet

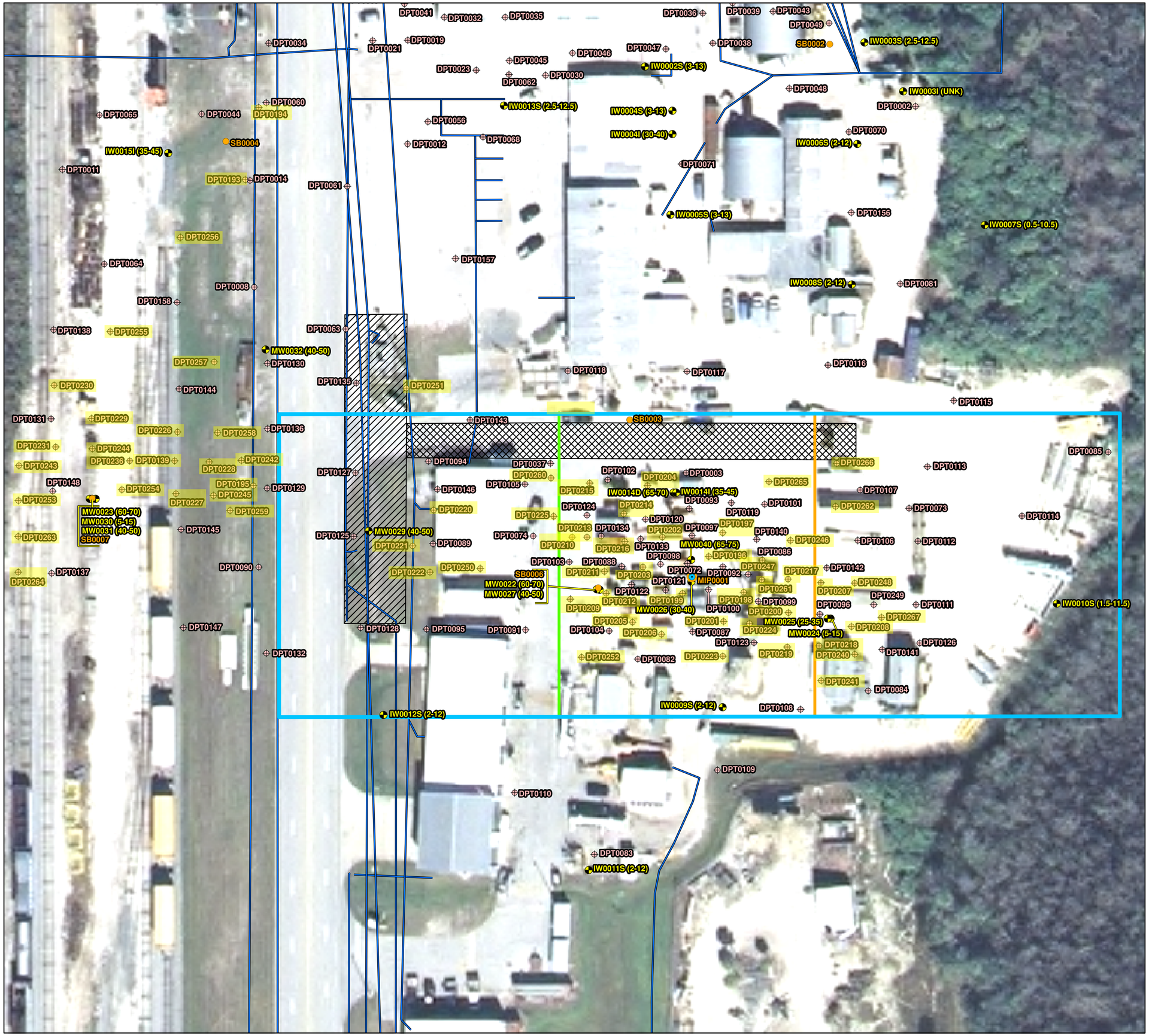
**Legend**

- Deep Monitoring Well Location showing (Screen Interval) and [Groundwater Elevation]
- Groundwater Elevation Contour
- Groundwater Flow Direction
- Hot Spot 1 Area

Note:
1. Screen interval is presented in feet, below land surface (ft, BLS).
2. Elevation is referenced to the North American Datum of 1988.
3. Prefix for all sampling locations is "CRHE-".

Path: (Titusville-01\DATA) T:\0GIS\FR1681_CRHE\MXDs\AUG2013\Deep_GW_elev_JULY2013.mxd 03 September 2013 JRB

Figure 4
Deep Groundwater Elevation Contours - July 2013



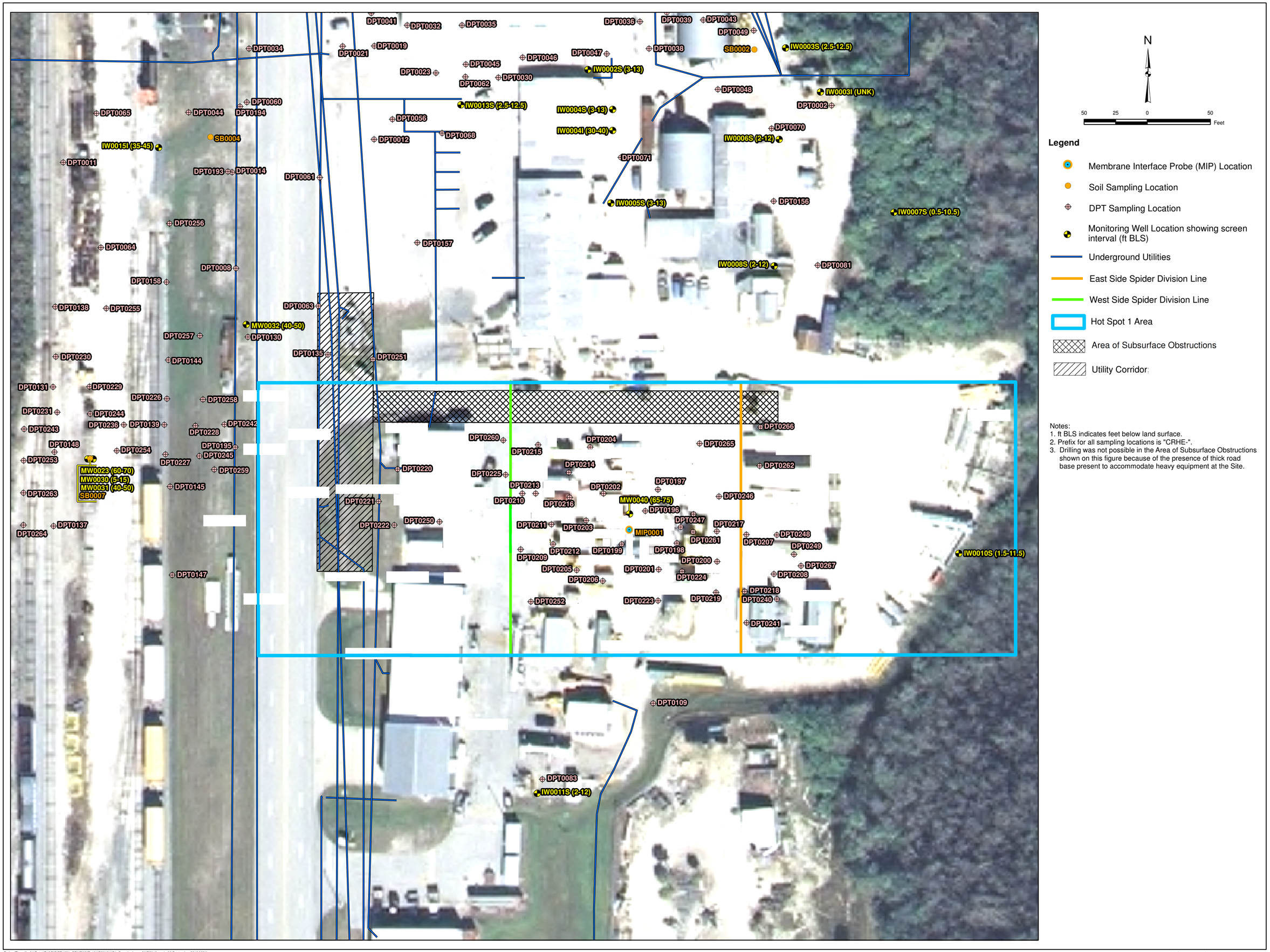

**Legend**

- Membrane Interface Probe (MIP) Location
- Soil Sampling Location
- DPT Sampling Location
- Monitoring Well Location showing screen interval (ft BLS)
- Underground Utilities
- East Side Spider Division Line
- West Side Spider Division Line
- Hot Spot 1 Area
- Area of Subsurface Obstructions
- Utility Corridor

Notes:
1. ft BLS indicates feet below land surface.
2. Prefix for all sampling locations is "CRHE-".
3. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.

Path: (\Tbusville-01\Data\P:\0GIS\FR1681_CRHE\MXDs\AUG2013\HS1_Sample_Locs_AUG2013.mxd 06 September 2013 MAH

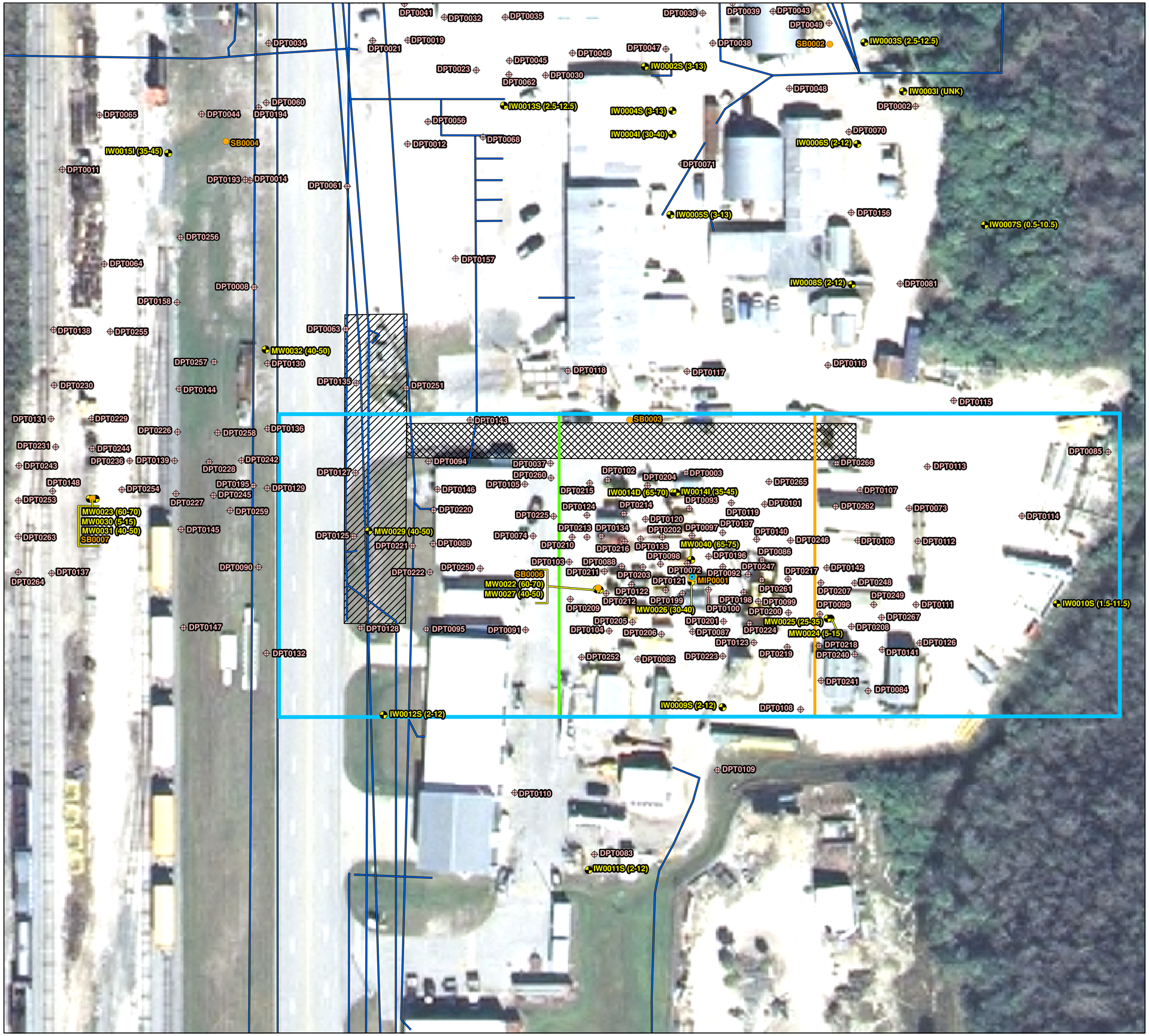
Figure 5
CRHE Hot Spot 1 Sample Locations




Notes:
1. ft BLS indicates feet below land surface.
2. Prefix for all sampling locations is "CRHE-".
3. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.

Path: (Titusville-01\Data\P:\0GIS\FR1681_CRHE\MXDs\AUG2013\HS1_Sample_Locs_AUG2013.mxd 06 September 2013 MAH

Figure 5
CRHE Hot Spot 1 Sample Locations




Notes:
1. ft BLS indicates feet below land surface.
2. Prefix for all sampling locations is "CRHE-".
3. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.

Path: (\\tusville-01\Data\P:\0GIS\FR1681_CRHE\MXDs\AUG2013\HS1_Sample_Locs_AUG2013.mxd 06 September 2013 MAH

Figure 5
CRHE Hot Spot 1 Sample Locations

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. I indicates reported value is between the method detection limit and the practical quantitation limit.
4. U indicates value was not detected above the method detection limit.
5. GCTL indicates Groundwater Cleanup Target Level.
6. NADC indicates Natural Attenuation Default Concentration.
7. Prefix for all sampling locations is "CRHE-".
8. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.

| Screening Criteria | | | |
|---|---|---|---|
| Parameter | Abbreviation | GCTL | NADC |
| Tetrachloroethene | PCE | 3 | 300 |
| Trichloroethene | TCE | 3 | 300 |
| cis-1,2-Dichloroethene | cDCE | 70 | 700 |
| trans-1,2-Dichloroethene | tDCE | 100 | 1,000 |
| 1,1-Dichloroethane | 1,1-DCA | 70 | 700 |
| Vinyl Chloride | VC | 1 | 100 |

DPT0143 (Oct-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 10/14/2010 | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **1.9** |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **1.0** |

DPT0037 (Aug-09)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 08/04/2009 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **1.8** |
| | 28 to 28 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **1.6** |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 61 to 65 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0084 (May-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 03/01/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 03/02/2010 | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | **4.7** | 22 | 2.0 | NA | **33.2** |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0105 (Jun-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 06/17/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 12 to 16 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.4 |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0260 (June-13)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 06/05/2013 | 16 to 20 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 21 to 25 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 26 to 30 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 41 to 45 | 0.23 U | 0.19 U | 0.44 I | 0.29 U | NA | **1.9** |
| | 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |

DPT0027 (Aug-10& Oct-12)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 08/06/2010 | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **1.7** |
| | 41 to 45 | **52 U J** | **2,400** | **2,700** | **120** | NA | **320** |
| | 46 to 50 | 2.6 U J | **66.0** | **210** | 6.2 | NA | **15.0** |
| 10/05/2012 | 56 to 60 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0146 (Oct-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 10/12/2010 | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **1.5** |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.1 |
| | 36 to 40 | 1.0 U | 1.0 U | 7.1 | 4.3 | NA | **18.4** |
| | 41 to 45 | **24 U J** | **2,500** | **1,900** | 100 | NA | **330** |
| | 46 to 50 | 1.0 U | 1.8 | 55.4 | 3.0 | NA | **40.4** |

DPT0220 (Mar-13)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 03/27/2013 | 8 to 12 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U |
| | 16 to 20 | 0.16 U | 0.22 U | 0.2 U | 1.5 | NA | 0.13 U |
| | 21 to 25 | 0.16 U | 0.85 I | 0.2 U | 0.28 U | NA | 0.13 U |
| | 26 to 30 | **8 U** | **480** | **590** | 76 | NA | **83** |
| | 31 to 35 | 0.16 U | 0.22 U | 2.1 | 0.28 U | NA | 0.13 U |
| | 36 to 40 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U |
| | 41 to 45 | **8 U** | **1,400** | **1,300** | **100** | NA | **1,000** |
| | 56 to 60 | 0.16 U | **12** | 23 | 0.28 U | NA | **2.1** |
| | 61 to 70 | 0.16 U | **4.5** | 7.4 | 1.5 | NA | 1.1 |

DPT0074 (Feb-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 02/03/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 36 to 40 | **530 U** | **8,100** | **18,000** | **500 U** | NA | **7,200** |
| | 41 to 45 | **100 U** | **2,900** | **4,000** | 100 U | NA | **1,300** |
| | 46 to 50 | 1.0 U | **4.2** | 3.6 | 1.0 U | NA | 1.0 U |
| | 56 to 60 | 1.0 U | 1.0 U | 2.5 | 2.9 | 1.0 U | NA | 1.0 U |
| | 61 to 65 | 1.0 U | 1.7 | 2.0 | 1.0 U | NA | 1.0 U |

DPT0225 (Mar-13)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 03/29/2013 | 8 to 12 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U |
| | 16 to 20 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U |
| | 21 to 25 | **8 U** | **53** | 10 U | 14 U | NA | **6.2 U** |
| | 26 to 30 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U |
| | 31 to 35 | **16 U** | **57 I** | **980** | 87 I | NA | **210** |
| | 36 to 40 | **160 U** | **37,000** | **45,000** | **800 U** | NA | **4,400** |
| | 41 to 45 | **40 U** | **1,800** | **4,400** | 70 U | NA | **630** |
| | 56 to 60 | 0.16 U | **16** | 14 | 1.7 | NA | **2.6** |
| | 60 to 70 | 0.16 U | **12** | 8.4 | 0.28 U | NA | 0.57 I |

MW0029

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| Mar-12 | 40 to 50 | 0.11 U | **140** | **420** | 13 | 0.13 U | **100** |

DPT0125 (Aug-10 & Oct-12)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 08/05/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **2.1** |
| | 41 to 45 | **11 U J** | **6.6 U J** | **1,300** | 24.0 | NA | **1,710** |
| | 46 to 50 | 1.0 U | 1.0 U | 7.0 | 1.7 | NA | **35.8** |
| 10/16/2012 | 56 to 60 | 1.0 U | 1.0 U | 5.1 | 1.0 U | NA | 1.0 U |

DPT0221 (Mar-13)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 03/28/2013 | 8 to 12 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U |
| | 16 to 20 | 0.16 U | **9.6** | 21 | 0.28 U | NA | 0.13 U |
| | 21 to 25 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U |
| | 26 to 30 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U |
| | 31 to 35 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U |
| | 36 to 40 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U |
| | 41 to 45 | **8 U** | **11 U** | **1,500** | 14 U | NA | **1,300** |
| | 56 to 60 | 0.16 U | 0.22 U | 4.5 | 0.28 U | NA | 1.4 |

DPT0089 (Feb-10 & Oct-12)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 02/26/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 31 to 35 | 1.0 U | 1.0 U | 1.3 | 1.0 U | NA | 1.0 U |
| | 36 to 40 | 1.0 U | 1.0 U | 7.8 | 1.0 U | NA | **180** |
| | 41 to 45 | **200 U** | **520** | **6,200** | 200 U | NA | **8,800** |
| | 46 to 50 | 1.0 U | 1.1 | 15.7 | 1.2 | NA | **37.1** |
| 10/16/2012 | 56 to 60 | 1.0 U | 1.0 U | 4.7 | 1.0 U | NA | **2.0** |

DPT0250 (May-13)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 05/23/2013 | 8 to 12 | 0.23 U | 0.19 U | 0.40 I | 0.29 U | NA | 0.26 U |
| | 16 to 20 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 21 to 25 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 26 to 30 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 31 to 35 | 0.23 U | 0.19 U | 0.66 I | 0.29 U | NA | **2.3** |
| | 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.47 I | NA | **23.8** |
| | 41 to 45 | 0.23 U | 1.1 | **2,100** | 58.8 | NA | **1,200** |
| | 56 to 60 | 0.23 U | 0.19 U | 6.8 | 0.29 U | NA | **3.4** |

DPT0128 (Aug-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 08/06/2010 | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **3.1** |

DPT0095 (Mar-10)

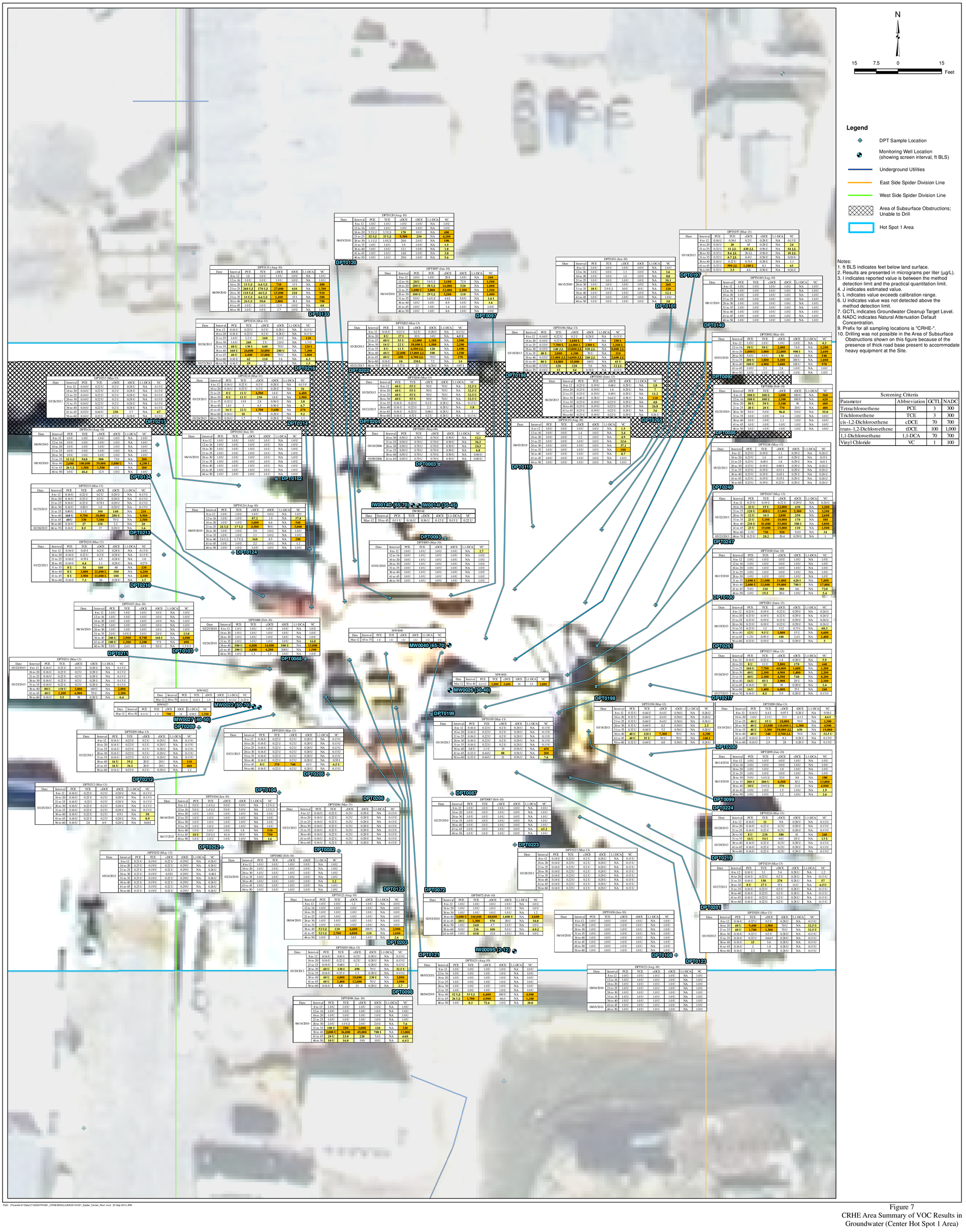
| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 03/02/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **2.6** |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **13.3** |

DPT0091 (Mar-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 03/01/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.1 | NA | **100** |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **11.2** |

Path: (Titusville-01Data)T:\GIS\FIR\681_CRHE\MXDs\JUNE2013\HS1_Spider_West.mxd 03 September 2013 JRB

Figure 6
CRHE Area Summary of VOC Results in Groundwater (West Hot Spot 1 Area)


N
15 7.5 0 15
Feet
Legend
DPT Sample Location
Monitoring Well Location (showing screen interval, ft BLS)
Underground Utilities
East Side Spider Division Line
West Side Spider Division Line
Area of Subsurface Obstructions; Unable to Drill
Hot Spot 1 Area
Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. I indicates reported value is between the method detection limit and the practical quantitation limit.
4. J indicates estimated value.
5. L indicates value exceeds calibration range.
6. U indicates value was not detected above the method detection limit.
7. GCTL indicates Groundwater Cleanup Target Level.
8. NADC indicates Natural Attenuation Default Concentration.
9. Prefix for all sampling locations is "CRHE-".
10. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.
Screening Criteria
Parameter | Abbreviation | GCTL | NADC
Tetrachloroethene | PCE | 3 | 300
Trichloroethene | TCE | 3 | 300
cis-1,2-Dichloroethene | cDCE | 70 | 700
trans-1,2-Dichloroethene | tDCE | 100 | 1,000
1,1-Dichloroethene | 1,1-DCA | 70 | 700
Vinyl Chloride | VC | 1 | 100
DPT0120
DPT0133
DPT0216
DPT0209
DPT0134
DPT0102
DPT0213
DPT0124
DPT0210
DPT0103
DPT0088
DPT0211
DPT0209
DPT0212
DPT0104
DPT0222
DPT0206
DPT0082
DPT0122
DPT0203
DPT0098
DPT0121
IW0009S (2-12)
DPT0123
DPT0108
DPT0201
DPT0219
DPT0224
DPT0092
DPT0099
DPT0200
DPT0140
DPT0197
DPT0101
DPT0097
DPT0198
DPT0199
DPT0087
DPT0072
DPT0223
DPT0139
DPT0265
DPT0088
DPT0119
DPT0003
DPT0093
IW0014D (65-70)
IW0014I (35-45)
MW0040 (65-70)
MW0026 (30-40)
MW0022 (60-70)
MW0027 (40-50)
DPT0246
DPT0247
DPT0261
DPT0217
DPT0100
DPT0120 (Aug-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
08/03/2010 | 8 to 12 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U
12 to 16 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U
16 to 20 | 5.2 J | 3.3 J | 170 | 10 J | NA | 400
21 to 25 | 52 UJ | 33 UJ | 9,300 | 230 | NA | 4,100
26 to 30 | 1.1 UJ | 1.0 UJ | 200 | 2.0 J | NA | 190
31 to 35 | 1.0U | 1.0U | 3.9 | 1.0U | NA | 1.5
36 to 40 | 1.0U | 1.0U | 12 J | 1.0U | NA | 1.8
41 to 45 | 1.0U | 1.0U | 140 | 1.0U | NA | 3.0
46 to 50 | 1.0U | 1.0U | 250 | 1.0U | NA | 5.6
DPT0133 (Aug-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
08/09/2010 | 8 to 12 | 1.6 | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
12 to 16 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
16 to 20 | 11 UJ | 6.6 UJ | 710 | 11 | NA | 400
21 to 25 | 260 UJ | 170 UJ | 27,000 | 610 | NA | 1,700
26 to 30 | 110 UJ | 66 UJ | 15,000 | 210 | NA | 910
31 to 35 | 11 UJ | 6.6 UJ | 1,100 | 15 | NA | 580
36 to 40 | 26 UJ | 50.0 | 2,800 | 50 J | NA | 750
41 to 45 | 1.0 U | 1.0 U | 12.9 | 1.0 U | NA | 4.0
46 to 50 | 1.0 U | 1.0 U | 3.7 | 1.0 U | NA | 1.0 U
DPT0097 (Jun-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
06/14/2010 | 8 to 12 | 1.0 U | 1.0 U | 28.8 | 1.0 U | NA | 160
12 to 16 | 20 U | 58 UJ | 3,100 | 72.0 | NA | 1,500
16 to 20 | 200 U | 58 UJ | 16,000 | 520 | NA | 1,000
21 to 25 | 1,000 U | 3,800 | 52,000 | 2,100 | NA | 1,500
26 to 30 | 100 U | 29 UJ | 3,200 | 110 | NA | 1,400
31 to 35 | 5.0 U | 14 UJ | 4.63 | 5.0 U | NA | 1.6 J
36 to 40 | 1.0 U | 1.0 U | 8.9 | 1.0 U | NA | 1.6
41 to 45 | 1.0 U | 1.0 U | 1.4 | 1.0 U | NA | 1.0 U
46 to 50 | 10 U | 1.0 U | 8.6 | 1.0 U | NA | 1.0 U
DPT0101 (Jun-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
06/15/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
12 to 16 | 1.0 U | 1.0 U | 1.1 | 1.0 U | NA | 1.6
16 to 20 | 1.0 U | 1.0 U | 1.0 | 1.0 U | NA | 8.8
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 30.1
26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 265
31 to 35 | 10 U | 2.9 UJ | 10 U | 10 U | NA | 120
36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 12.1
41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 3.0
DPT0197 (Mar-13)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
03/18/2013 | 8 to 12 | 0.16 U | 0.56 J | 0.2 U | 0.28 U | NA | 0.13 U
16 to 20 | 0.16 U | 20 | 65 | 0.28 U | NA | 24
21 to 25 | 0.32 U | 11 J J | 430 J J | 0.56 U | NA | 54 J J
26 to 30 | 0.32 U | 5.6 J J | 26 J J | 0.56 U | NA | 10 J J
31 to 35 | 0.32 U | 6.7 J J | 0.41 J | 0.56 U | NA | 0.28 U
36 to 40 | 0.16 U | 0.22 U | 0.74 J | 0.28 U | NA | 1.1
41 to 45 | 0.32 U | 380 J J | 1,200 J | 8.3 | NA | 65
46 to 60 | 0.32 U | 3.5 J | 4.6 | 0.56 U | NA | 0.28 U
DPT0140 (Aug-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
08/11/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
12 to 16 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
DPT0092 (Mar-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
03/01/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 4.3
12 to 16 | 50 U | 50 U | 2,400 | 74.0 | NA | 1,200
16 to 20 | 1,000 U | 5,000 | 22,000 | 900 U | NA | 2,600
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 540
31 to 35 | 200 U | 3,800 | 5,100 | 200 U | NA | 1,000
36 to 40 | 100 U | 4,900 | 5,600 | 100 U | NA | 970
41 to 45 | 1.0 U | 2.3 | 2.8 | 1.0 U | NA | 1.0 U
46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
DPT0216 (Mar-13)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
03/26/2013 | 8 to 12 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
16 to 20 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
21 to 25 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
26 to 30 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
31 to 35 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
36 to 40 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
41 to 45 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
46 to 50 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
DPT0209 (Mar-13)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
03/22/2013 | 8 to 12 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
16 to 20 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
21 to 25 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
26 to 30 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
31 to 35 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
36 to 40 | 16 U | 39 J | 20 U | 2.8 U | NA | 110
41 to 45 | 16 U | 36 J | 20 U | 2.8 U | NA | 460
46 to 60 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 1.2
DPT0134 (Aug-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
08/09/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
12 to 16 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
31 to 35 | 11 UJ | 9.4 J | 500 | 73.0 | NA | 200
36 to 40 | 2.6 UJ | 1.0 UJ | 1,000 | 1,000 U | NA | 4,200 J
41 to 45 | 26 UJ | 1,500 | 1,500 | 43 J | NA | 200
46 to 50 | 1.0 U | 46.4 | 12.5 | 1.0 U | NA | 1.0 U
DPT0102 (Jun-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
06/16/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
12 to 16 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
DPT0213 (Mar-13)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
03/25/2013 | 8 to 12 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
16 to 20 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
21 to 25 | 0.16 U | 0.22 U | 0.781 | 0.28 U | NA | 0.13 U
26 to 30 | 0.16 U | 0.85 J | 1.0 | 0.28 U | NA | 0.13 U
31 to 35 | 0.80 U | 1.1 U | 340 | 140 | NA | 210
36 to 40 | 160 U | 9,700 | 30,000 | 280 U | NA | 9,900
41 to 45 | 40 U | 330 | 7,300 | 70 U | NA | 2,500
46 to 60 | 0.16 U | 27 | 150 | 2.2 | NA | 20
03/26/2013 | 60 to 70 | 0.16 U | 8.5 | 37 | 0.28 U | NA | 1.6
DPT0124 (Aug-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
08/05/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
12 to 16 | 1.0 U | 1.0 U | 87.2 | 1.9 | NA | 37.8
16 to 20 | 1.0 U | 1.0 U | 3,600 | 6.6 | NA | 560
21 to 25 | 26 UJ | 17 UJ | 4,300 | 50 U | NA | 1,000
26 to 30 | 1.0 U | 1.0 U | 2.9 | 1.0 U | NA | 1.0 U
31 to 35 | 1.0 U | 1.0 U | 1.1 | 1.0 U | NA | 1.0 U
36 to 40 | 2.6 UJ | 1.7 UJ | 360 | 8.5 | NA | 290
41 to 45 | 1.0 U | 1.0 U | 2.2 | 1.0 U | NA | 1.2
46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
DPT0211 (Mar-13)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
03/22/2013 | 8 to 12 | 0.16 U | 0.43 J | 0.2 U | 0.28 U | NA | 0.13 U
16 to 20 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
21 to 25 | 0.16 U | 0.35 J | 4.5 | 0.28 U | NA | 1.0
26 to 30 | 0.16 U | 4.4 | 1.1 | 0.28 U | NA | 0.27 J
31 to 35 | 8 U | 56 | 160 | 60 | NA | 130
36 to 40 | 8 U | 3,800 | 21,000 J | 300 | NA | 6,200
41 to 45 | 8 U | 3,900 | 11,000 J | 180 | NA | 2,100
46 to 60 | 0.16 U | 7.3 | 26 | 0.28 U | NA | 3.7
DPT0103 (Jun-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
09/16/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
12 to 16 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
36 to 40 | 200 U | 2,900 | 8,700 | 160 U | NA | 4,000
41 to 45 | 100 U | 1,300 | 2,200 | 57 J | NA | 690
46 to 50 | 5.0 U | 2.4 J | 3.0 J | 5.0 U | NA | 1.2 U
DPT0088 (Feb-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
02/25/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
12 to 16 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
36 to 40 | 500 U | 6,000 | 14,000 | 500 U | NA | 13,000
41 to 45 | 200 U | 4,800 | 4,200 | 300 U | NA | 1,500
46 to 50 | 1.0 U | 1.3 | 1.3 | 1.0 U | NA | 1.0 U
DPT0214 (Mar-13)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
03/26/2013 | 8 to 12 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
16 to 20 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
21 to 25 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
26 to 30 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
31 to 35 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
36 to 40 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
41 to 45 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
46 to 50 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
DPT0222 (Mar-13)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
03/21/2013 | 8 to 12 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
16 to 20 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
21 to 25 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
26 to 30 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
31 to 35 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
36 to 40 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
41 to 45 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
46 to 50 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
DPT0104 (Jun-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
06/16/2010 | 8 to 12 | 5.0 U | 1.4 UJ | 5.0 U | 5.0 U | NA | 1.2 UJ
12 to 16 | 5.0 U | 1.4 UJ | 5.0 U | 5.0 U | NA | 1.2 UJ
16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.8 | NA | 5.10
41 to 45 | 10 U | 2.8 UJ | 61.0 | 10 U | NA | 750
46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.6
DPT0206 (Mar-13)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
03/21/2013 | 8 to 12 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
16 to 20 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
21 to 25 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
26 to 30 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
31 to 35 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
36 to 40 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
41 to 45 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
46 to 50 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
DPT0082 (Feb-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
02/24/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
12 to 16 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 2.2
41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
DPT0122 (Aug-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
08/04/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.2 | 1.0 U | NA | 10 U
12 to 16 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
36 to 40 | 52 UJ | 120 | 6,400 | 100 U | NA | 2,900
41 to 45 | 52 UJ | 2,700 | 6,800 | 110 | NA | 1,600
46 to 50 | 1.0 U | 3.1 | 14.5 | 1.0 U | NA | 2.5
DPT0203 (Mar-13)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
03/29/2013 | 8 to 12 | 0.16 U | 0.81 J | 0.2 U | 0.28 U | NA | 0.13 U
16 to 20 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
21 to 25 | 0.16 U | 0.68 J | 2.1 | 0.28 U | NA | 0.13 U
26 to 30 | 40 U | 130 J | 490 | 70 U | NA | 32.5 U
31 to 35 | 0.16 U | 0.22 U | 3.1 | 0.28 U | NA | 0.13 U
36 to 40 | 40 U | 4,000 | 15,000 | 230 J | NA | 5,000
41 to 45 | 40 U | 2,400 | 12,000 | 70 U | NA | 1,900
46 to 60 | 0.16 U | 5.5 | 21 | 0.28 U | NA | 2.7
DPT0098 (Jun-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
06/14/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
12 to 16 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
26 to 30 | 2.0 U | 1.0 UJ | 2.0 U | 2.0 U | NA | 7.6
31 to 35 | 100 U | 580 | 1,000 | 120 | NA | 320
36 to 40 | 2,000 U | 36,000 | 49,000 | 700 J | NA | 13,000
41 to 45 | 20 U | 23.0 | 220 | 5.4 J | NA | 64.0
46 to 50 | 10 U | 16.0 | 190 | 10 U | NA | 6.4 J
DPT0121 (Aug-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
08/03/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
12 to 16 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
36 to 40 | 52 UJ | 33 UJ | 6,400 | 100 U | NA | 4,900
41 to 45 | 26 UJ | 1,700 | 4,000 | 66.0 | NA | 2,200
46 to 50 | 1.0 U | 8.3 | 72.6 | 1.0 U | NA | 28.0
IW0009S (2-12)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
Mar-12 | 2 to 12 | 0.11 U | 0.16 U | 0.12 U | 0.13 U | 0.22 U
DPT0123 (Aug-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
08/04/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
12 to 16 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
DPT0108 (Jun-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
09/05/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
12 to 16 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
DPT0201 (June-13)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
06/19/2013 | 8 to 12 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U
16 to 20 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U
21 to 25 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U
26 to 30 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U
31 to 35 | 0.23 U | 0.19 U | 1.2 | 0.29 U | NA | 0.26 U
36 to 40 | 12 U | 9.5 U | 1,000 | 15 U | NA | 4,600
41 to 45 | 1.2 U | 0.95 U | 180 | 2.4 J | NA | 1,400
46 to 60 | 0.23 U | 0.19 U | 1.6 | 0.29 U | NA | 5
DPT0139 (Mar-13)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
03/18/2013 | 8 to 12 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U
16 to 20 | 0.16 U | 0.22 U | 1,600 J | 77 | NA | 290 J
21 to 25 | 0.32 U | 7,700 J | 24,000 J | 2,300 J | NA | 1,300 J
26 to 30 | 0.32 U | 1.0 J J | 15,000 J J | 520 J J | NA | 9,000 J J
31 to 35 | 40 U | 2,000 | 4,300 | 30 U | NA | 310
36 to 40 | 0.32 U | 15,000 J J | 14,000 J J | 560 J J | NA | 2,600 J J
41 to 45 | 80 U | 14,000 | 15,000 | 140 U | NA | 65 U
46 to 60 | 0.32 U | 120 | 220 | 5.6 | NA | 12 J J
60 to 70 | 0.16 U | 33 | 84 | 0.28 U | NA | 0.13 U
DPT0265 (Feb-13)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
06/20/2013 | 8 to 12 | 0.23 U | 0.19 U | 0.66 J | 0.29 U | NA | 1.8
16 to 20 | 0.23 U | 0.19 U | 1.6 | 0.29 U | NA | 7
21 to 25 | 0.23 U | 0.19 U | 0.49 J | 0.29 U | NA | 11.7
26 to 30 | 0.46 U | 0.38 U | 0.44 U | 0.58 U | NA | 3.10
31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 4.8
36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 24.5
41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 3.6
46 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U
DPT0088 (Feb-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
02/25/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
12 to 16 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
DPT0119 (Aug-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
08/03/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
12 to 16 | 1.0 U | 1.0 U | 1.4 | 1.0 U | NA | 3.4
16 to 20 | 1.0 U | 1.0 U | 1.2 | 1.0 U | NA | 4.9
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 12.6
26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 37.1
31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 130
36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 8.7
41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
DPT0003 (May-05)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
05/10/2006 | 16 to 20 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | NA | 12.1
21 to 25 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | NA | 36.3
26 to 30 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | NA | 24.3
31 to 35 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | NA | 6.8
36 to 40 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | NA | 0.80 U
05/09/2006 | 41 to 45 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | NA | 0.80 U
DPT0093 (Jun-10)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
03/01/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 2.7
12 to 16 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U
46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.03
IW0014D (65-70)
IW0014I (35-45)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
Mar-12 | 35 to 45 | 0.11 U | 0.16 U | 0.30 U | 0.13 U | 0.22 U
MW0040 (65-70)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
Mar-12 | 65 to 75 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U
MW0026 (30-40)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC
Mar-12 | 30 to 40 | 1.0 U | 1.000 | 3.000 | 3.6 | 3.5 | 2.000
MW0022 (60-70)
Date | Interval | PCE | TCE | cDCE | tDCE | 1,1

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. I indicates reported value is between the method detection limit and the practical quantitation limit.
4. J indicates estimated value.
5. L indicates value exceeds calibration range.
6. U indicates value was not detected above the method detection limit.
7. GCTL indicates Groundwater Cleanup Target Level.
8. NADC indicates Natural Attenuation Default Concentration.
9. Prefix for all sampling locations is "CRHE-".

| Screening Criteria | | | |
|---|---|---|---|
| Parameter | Abbreviation | GCTL | NADC |
| Tetrachloroethene | PCE | 3 | 300 |
| Trichloroethene | TCE | 3 | 300 |
| cis-1,2-Dichloroethene | cDCE | 70 | 700 |
| trans-1,2-Dichloroethene | tDCE | 100 | 1,000 |
| 1,1-Dichloroethane | 1,1-DCA | 70 | 700 |
| Vinyl Chloride | VC | 1 | 100 |

DPT0266 (June-13)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 06/20/2013 | 8 to 12 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 16 to 20 | 0.23 U | 0.19 U | 1.0 | 0.29 U | NA | 1.0 |
| | 21 to 25 | 0.23 U | 0.19 U | 0.31 I | 0.29 U | NA | **12.2** |
| | 26 to 30 | 1.2 U | 0.95 U | 1.1 U | 1.5 U | NA | **18** |
| 06/21/2013 | 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | **29.2** |
| | 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | **14.1** |
| | 41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | **5.6** |
| | 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |

DPT0107 (Jun-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 06/18/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **21.8** |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **15.8** |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **3.9** |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **1.5** |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0262 (June-13)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 06/19/2013 | 8 to 12 | 0.23 U | 0.19 U | 0.70 I | 0.29 U | NA | 0.26 U |
| | 16 to 20 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | **1.7** |
| | 21 to 25 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | **11.5** |
| | 26 to 30 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | **97.1** |
| | 31 to 35 | 1.2 U | 0.95 U | 1.1 U | 1.5 U | NA | **120** |
| | 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | **2.1** |
| | 41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |

DPT0106 (Jun-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 06/17/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0142 (Oct-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 10/11/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0207 (Mar-13)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 03/21/2013 | 8 to 12 | 1.6 U | **79** | **120 J.L** | 2.8 U | NA | **28 J.L** |
| | 16 to 20 | **40 U** | **760** | **10,000** | 70 U | NA | **1,100** |
| | 21 to 25 | 0.16 U | 2.5 | **5,900 L** | **320 L** | NA | **5,700 L** |
| | 26 to 30 | **40 U** | **55 U** | **510 J.L** | 70 U | NA | **960 J.L** |
| | 31 to 35 | **40 U** | **55 U** | **4,400 J.L** | 70 U | NA | **5,300 J.L** |
| | 36 to 40 | 1.6 U | 2.2 U | 47 J.L | 2.8 U | NA | **290 J.L** |
| | 41 to 45 | 0.16 U | 0.22 U | 3.6 | 0.28 U | NA | **2.9** |
| | 56 to 60 | 0.16 U | 0.22 U | 6.4 | 0.28 U | NA | **3.5** |

DPT0096 (Mar-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 03/02/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 5.0 U | 5.0 U | **93** | 5.0 | NA | **510** |
| | 26 to 30 | **2,000 U** | **2,000 U** | **34,000** | **2,000 U** | NA | **7,700** |
| | 31 to 35 | **100 U** | **100 U** | **14,000** | **500 U** | NA | **12,000** |
| | 36 to 40 | 1.0 U | 1.0 U | 12.1 | 1.0 U | NA | **490** |
| | 41 to 45 | 1.0 U | 1.0 U | 3.8 | 1.0 U | NA | **1.5** |
| | 46 to 50 | 1.0 U | 1.0 U | 1.6 | 1.0 U | NA | 1.0 U |

MW0024

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| Mar-12 | 5 to 15 | 0.11 U | 0.741 | 11 | 0.12 U | 0.13 U | **13** |

MW0025

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| Mar-12 | 25 to 35 | 0.11 U | 0.61 | **9,700** | 75 | 2.2 | **7,600** |

DPT0218 (Mar-13)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 03/27/2013 | 8 to 12 | 0.16 U | 0.22 U | 1.1 | 0.28 U | NA | 0.13 U |
| | 16 to 20 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 1.1 |
| | 21 to 25 | 0.16 U | 2 | 13 | 1.9 | NA | **18** |
| | 26 to 30 | **8 U** | **11 U** | 10 U | 14 U | NA | **1,100** |
| | 31 to 35 | **8 U** | **23 J** | **120** | 14 U | NA | **6.4 U** |
| | 36 to 40 | **8 U** | **290** | **330** | 14 U | NA | **110** |
| | 41 to 45 | 0.16 U | **6.1** | **88** | 2.3 | NA | **12** |
| | 56 to 60 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | 0.13 U |

DPT0240 (May-13)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 05/20/2013 | 8 to 12 | 0.23 U | 0.19 U | 0.23 U | 0.29 U | NA | 0.26 U |
| | 16 to 20 | 0.23 U | 0.19 U | 0.41 I | 0.29 U | NA | 0.45 I |
| | 21 to 25 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 1.0 |
| | 26 to 30 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.31 I |
| | 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 I |

DPT0241 (May-13)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 05/20/2013 | 8 to 12 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 16 to 20 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 21 to 25 | 0.23 U | 0.19 U | 0.23 U | 0.29 U | NA | 0.26 U |
| | 26 to 30 | 0.23 U | 0.19 U | 0.23 U | 0.29 U | NA | 0.26 U |
| | 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |

DPT0203 (Mar-13)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 03/21/2013 | 8 to 12 | 0.16 U | 0.22 U | 13 | 0.28 U | NA | 0.13 U |
| | 16 to 20 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA | **10** |
| | 21 to 25 | **8 U** | **11 U** | 10 U | 14 U | NA | **2,400** |
| | 26 to 30 | 0.8 U | 1.1 U | 1 U | 9.6 | NA | **1,000** |
| | 31 to 35 | 0.8 U | 1.1 U | 1 U | 1.4 U | NA | **1,600 L** |
| | 36 to 40 | 1.6 U | **13** | 21 | 2.8 U | NA | **7.5 I** |
| 03/22/2013 | 41 to 45 | 0.16 U | 0.22 U | 2.8 | 0.28 U | NA | **24** |
| | 56 to 60 | 0.16 U | 2.3 | 5 | 0.28 U | NA | **3.5** |

DPT0073 (Feb-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 02/03/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **2.6** |
| | 36 to 40 | 1.0 U | 1.6 | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 56 to 60 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0112 (Jun-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 06/21/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 21 to 25 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0113 (Jun-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 6/22/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **2.9** |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **6.8** |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **3.8** |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **2.4** |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0249 (May-13)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 05/23/2013 | 8 to 12 | 0.23 U | 0.19 U | 0.63 I | 0.29 U | NA | 0.45 I |
| | 16 to 20 | 0.23 U | 0.55 I | 3.4 | 0.29 U | NA | **23.5** |
| | 21 to 25 | 0.23 U | 0.53 I | 2.3 | 0.29 U | NA | 0.26 U |
| | 26 to 30 | 0.23 U | 0.66 I | 0.22 U | 0.29 U | NA | 0.26 U |
| | 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |

DPT0267 (June-13)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 06/21/2013 | 16 to 20 | 0.23 U | 0.19 U | 8.9 | 0.29 U | NA | **1.40** |
| | 21 to 25 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 26 to 30 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| | 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |

DPT0141 (Oct-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 10/11/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0084 (Feb-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 02/24/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0085 (Feb-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 02/25/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.3 |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0114 (Jun-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 06/22/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **3.6** |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **1.9** |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0111 (Jun-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 06/21/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 56 to 60 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0126 (Aug-10)

| Date | Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|---|
| 08/05/2010 | 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 16 to 20 | 1.0 U | 1.0 U | 2.3 | 1.0 U | NA | 1.0 U |
| | 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| | 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 08/06/2010 | 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

Figure 8
CRHE Area Summary of VOC Results in Groundwater (East Hot Spot 1 Area)

N

50 25 0 50
Feet

**Legend**

- DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest TCE Concentration)**

- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)

**Monitoring Well Location showing (screen interval (ft BLS) and [TCE Concentration])**

- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)
- 3 µg/L TCE Isopleth based on elevated U values
- 3 µg/L TCE Isopleth
- Wetlands
- Area of Subsurface Obstructions; Unable to Drill
- Utility Corridor; Unable to Drill
- Hot Spot 1 Area
- Cleared Paths
- Underground Utility

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. TCE indicates trichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. GCTL indicates Groundwater Cleanup Target Level.
7. NADC indicates Natural Attenuation Default Concentration.
8. Prefix for all sampling locations is "CRHE-".
9. Only monitoring wells that were sampled in March 2012 are shown on this map.
10. If result was qualified with a "U", half of the detection limit was used to generate isopleths.
11. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.

Contractor's Road

Path: J:\Jacobs-01\Data\71002\PPT\061_CRHE\MXD\JUNE2013-TCE_E_bnl4_Rev_JUNE2013.mxd - 03 Sep 2013 JRB

Figure 9
CRHE Area Summary of TCE Results in Groundwater 8 to 16 ft BLS

N

50 25 0 50 Feet

## Legend

- DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest TCE Concentration)**

- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)
- TCE concentration greater than 3,000 µg/L (10xNADC)
- TCE concentration greater than 11,000 µg/L (TCE 1% Solubility)

**Monitoring Well Location showing (screen interval (ft BLS) and [TCE Concentration])**

- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)
- 3 µg/L TCE Isopleth based on elevated U values
- 3 µg/L TCE Isopleth
- 300 µg/L TCE Isopleth
- 3,000 µg/L TCE Isopleth
- 11,000 µg/L 1% TCE Solubility Isopleth (SZ)
- Wetlands
- Area of Subsurface Obstructions; Unable to Drill
- Utility Corridor; Unable to Drill
- Hot Spot 1 Area
- Cleared Paths
- Underground Utilities

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. TCE indicates trichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. L indicates value exceeds calibration range.
7. GCTL indicates Groundwater Cleanup Target Level.
8. NADC indicates Natural Attenuation Default Concentration.
9. Prefix for all sampling locations is "CRHE-".
10. Only monitoring wells that were sampled in March 2012 are shown on this map.
11. If result was qualified with a "U", half of the detection limit was used to generate isopleths.
12. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.
13. " indicates data not used to generate contours.

Contractor's Road

Path: I:\Tauvella-01\Data\TIGGS\FR1681_CRHE\MXDs\JUNE2013\TCE_16_to30_ftbls_JUNE2013.mxd 05 Sep 2013 JRB

Figure 10
CRHE Area Summary of TCE Results in Groundwater 16 to 30 ft BLS

N

50 25 0 50 Feet

## Legend

- DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest TCE Concentration)**

- TCE concentration less than or equal to 3 µg/L (Only locations with results > 1.0 U are labeled)
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)
- TCE concentration greater than 3,000 µg/L (10xNADC)
- TCE concentration greater than 11,000 µg/L (TCE 1% Solubility)

**Monitoring Well Location showing (screen interval (ft BLS) and [TCE Concentration])**

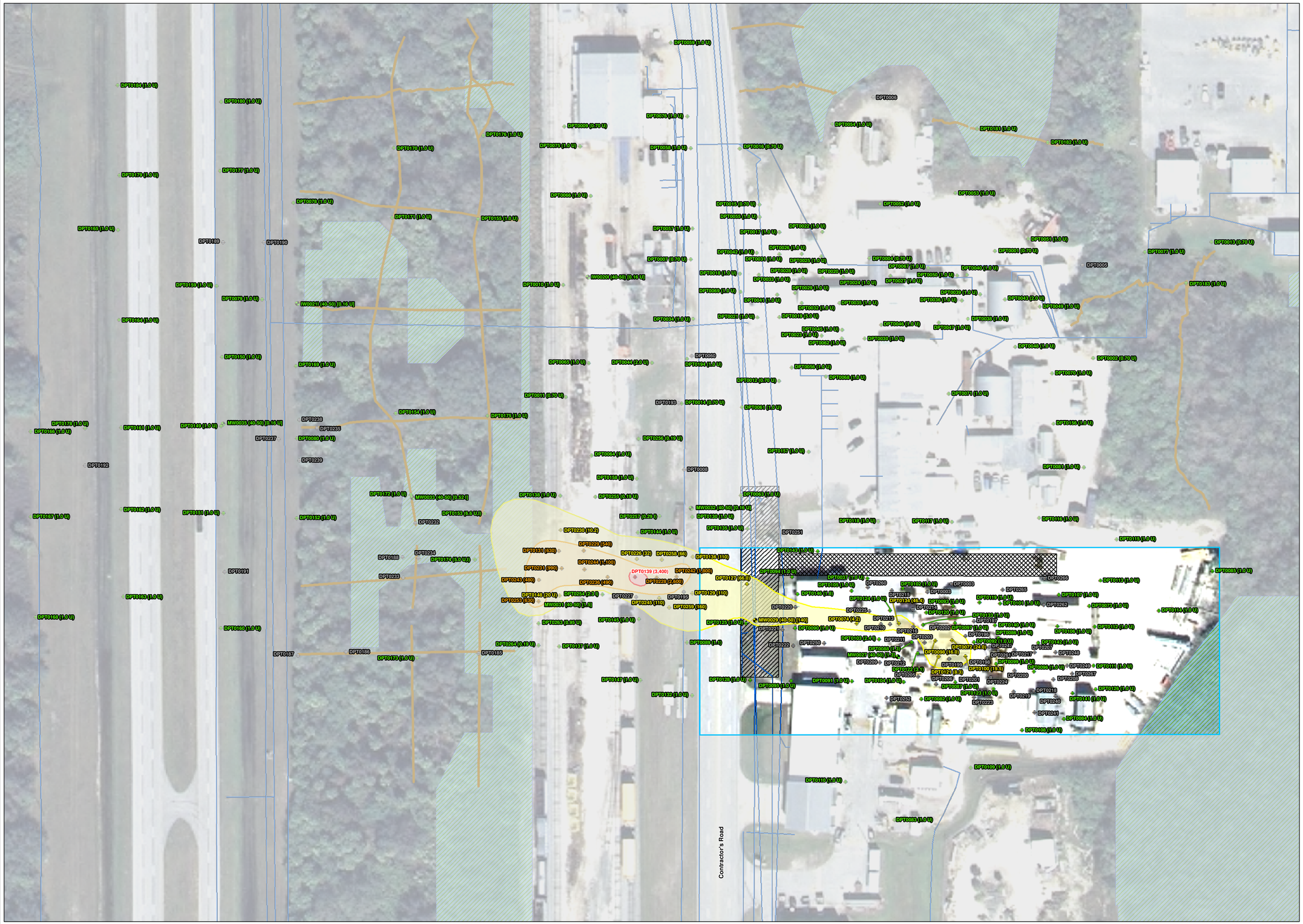
- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)
- 3 µg/L TCE Isopleth (based on elevated U values)
- 3 µg/L TCE Isopleth
- 300 µg/L TCE Isopleth
- 3,000 µg/L TCE Isopleth
- 11,000 µg/L 1% Solubility TCE Isopleth (SZ)
- Wetlands
- Area of Subsurface Obstructions; Unable to Drill
- Utility Corridor; Unable to Drill
- Hot Spot 1 Area
- Cleared Paths
- Underground Utilities

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. TCE indicates trichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. J indicates estimated value.
7. L indicates value exceeds calibration range.
8. * indicates data not used to generate contours.
9. GCTL indicates Groundwater Cleanup Target Level.
10. NADC indicates Natural Attenuation Default Concentration.
11. Prefix for all sampling locations is "CRHE-".
12. Only monitoring wells that were sampled in March 2012 are shown on this map.
13. If result was qualified with a "U", half of the detection limit was used to generate isopleths.
14. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.

Contractor's Road

Path: (Tbaustin-fil1\Data\TI\GIS\FFR1681_CRHE\MXDs\JUNE2013\TCE_31_to46_bls_JUNE2013.mxd 05 Sep 2013 JRB

Figure 11
CRHE Area Summary of TCE Results in Groundwater 31 to 46 ft BLS




Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. TCE indicates trichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. GCTL indicates Groundwater Cleanup Target Level.
7. NADC indicates Natural Attenuation Default Concentration.
8. Prefix for all sampling locations is "CRHE-".
9. Only monitoring wells that were sampled in November 2009 are shown on this map.
10. If result was qualified with a "U", half of the detection limit was used to generate isopleths.
11. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.



Figure 12
CRHE Area Summary of TCE Results in Groundwater 46 to 56 ft BLS

N

50 25 0 50 Feet

## Legend

- DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest TCE Concentration)**

- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)
- TCE concentration greater than 3,000 µg/L (10xNADC)

**Monitoring Well Location showing (screen interval (ft BLS) and [TCE Concentration])**

- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)
- 3 µg/L TCE Isopleth
- Wetlands
- Area of Subsurface Obstructions; Unable to Drill
- Utility Corridor; Unable to Drill
- Hot Spot 1 Area
- Cleared Paths
- Underground Utilities

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. TCE indicates trichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. GCTL indicates Groundwater Cleanup Target Level.
7. NADC indicates Natural Attenuation Default Concentration.
8. Prefix for all sampling locations is "CRHE-".
9. Data presented is from the deepest depth interval for each location.
10. If result was qualified with a "U", half of the detection limit was used to generate isopleths.
11. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.
12. * indicates data not used for contouring.

Contractor's Road

Path: C:\Surdis-01\Data\77-GGS\FY1601_CRHE\MXDs\JUNE2013\TCE_greater_than_56_fbls_JUNE2013.mxd 03 September 2013 JRB

Figure 13
CRHE Area Summary of TCE Results in Groundwater Greater than 56 ft BLS

N

50 25 0 50 Feet

## Legend

- DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest cDCE Concentration)**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)

**Monitoring Well Location showing (screen interval (ft BLS) and [cDCE Concentration])**

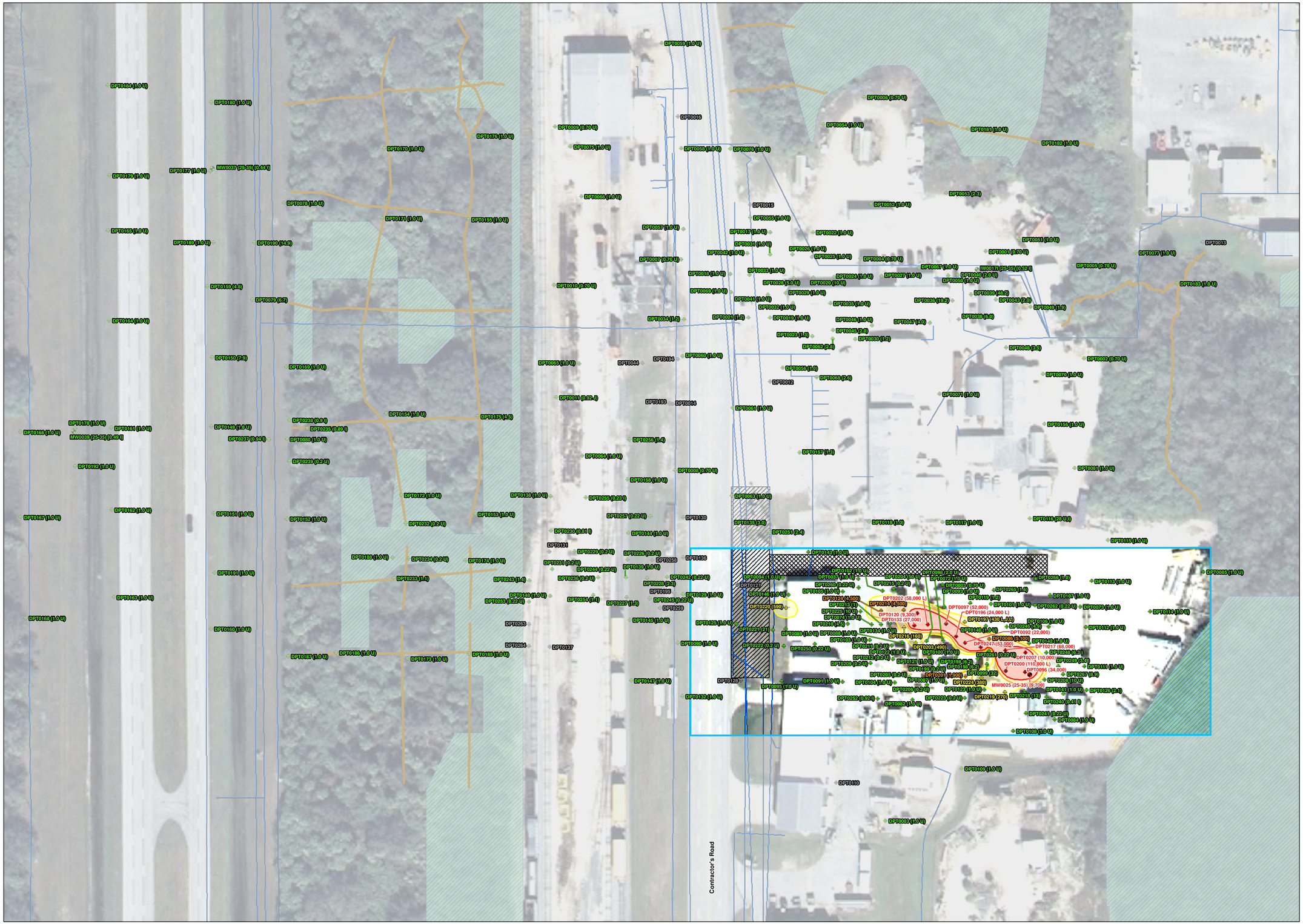
- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)
- 70 µg/L cDCE Isopleth
- 700 µg/L cDCE Isopleth
- Wetlands
- Area of Subsurface Obstructions; Unable to Drill
- Utility Corridor; Unable to Drill
- Hot Spot 1 Area
- Cleared Paths
- Underground Utilities

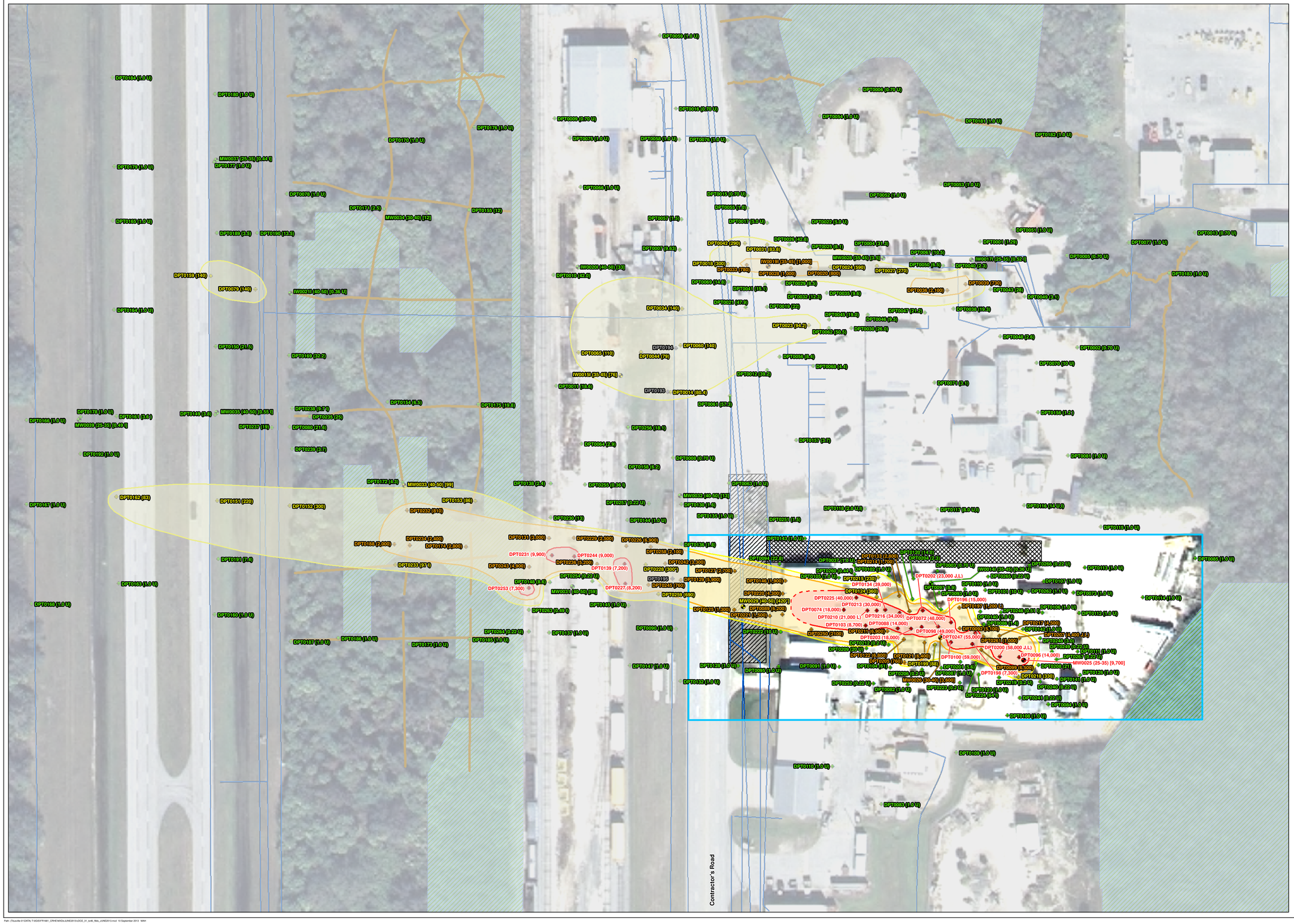
Notes:
1. Results are presented in micrograms per liter (µg/L).
2. ft BLS indicates feet below land surface.
3. I indicates reported value is between the method detection limit and the practical quantitation limit.
4. J indicates estimated value.
5. L indicates value exceeds calibration range.
6. U indicates value was not detected above the method detection limit.
7. cDCE indicates cis-1,2-dichloroethene.
8. GCTL indicates Groundwater Cleanup Target Level.
9. NADC indicates Natural Attenuation Default Concentration.
10. Prefix for all sampling locations is "CRHE-".
11. Only monitoring wells that were sampled in March 2012 are shown on this map.
12. If result was qualified with a "U", half of the detection limit was used to generate isopleths.
13. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.

Contractor's Road

Path: (T:\auto\le-01\data\T-DGS\FPI\581_CRHE\MXDs\JUNE2013\DCE_8_to16_fbls_JUNE2013.mxd 05 Sep 2013 JRB

Figure 14
CRHE Area Summary of cDCE Results in Groundwater 8 to 16 ft BLS


DPT0184 (1.0 U)
DPT0188 (1.0 U)
DPT0170 (1.0 U)
DPT0177 (1.0 U)
MW0037 (25-35) [0.44 I]
DPT0179 (1.0 U)
DPT0176 (1.0 U)
DPT0188 (1.0 U)
DPT0189 (1.0 U)
DPT0190 (14.9)
DPT0171 (1.0 U)
DPT0155 (1.0 U)
DPT0189 (1.8)
DPT0076 (9.5)
DPT0184 (1.0 U)
DPT0159 (7.5)
DPT0189 (1.0 U)
DPT0176 (1.0 U)
DPT0161 (1.0 U)
DPT0186 (1.0 U)
MW0039 (25-35) [0.43 I]
DPT0148 (1.0 U)
DPT0237 (0.94 I)
DPT0080 (1.0 U)
DPT0192 (1.0 U)
DPT0230 (0.2 U)
DPT0182 (1.0 U)
DPT0187 (1.0 U)
DPT0151 (1.0 U)
DPT0192 (1.0 U)
DPT0232 (0.2 U)
DPT0189 (1.0 U)
DPT0234 (0.2 U)
DPT0174 (1.0 U)
DPT0151 (1.0 U)
DPT0233 (1.1)
DPT0189 (1.0 U)
DPT0190 (1.0 U)
DPT0187 (1.0 U)
DPT0186 (1.0 U)
DPT0175 (1.0 U)
DPT0154 (1.0 U)
DPT0175 (1.5)
DPT0235 (0.9 I)
DPT0235 (0.89 I)
DPT0230 (0.2 U)
DPT0231 (0.2 U)
DPT0239 (0.70 U)
DPT0018
DPT0076 (1.0 U)
DPT0075 (1.0 U)
DPT0035 (1.0 U)
DPT0070 (1.0 U)
DPT0066 (1.0 U)
DPT0015
DPT0065 (1.0 U)
DPT0067 (1.0 U)
DPT0017 (1.0 U)
DPT0031 (1.0 U)
DPT0042 (1.0 U)
DPT0007 (0.70 U)
DPT0018 (1.0 U)
DPT0016 (0.70 U)
DPT0029 (1.0 U)
DPT0041 (1.0 U)
DPT0032 (1.0 U)
DPT0034 (1.5)
DPT0221 (1.5)
DPT0044 (1.0 U)
DPT0184
DPT0030 (1.0 U)
DPT0044
DPT0011 (0.62 J)
DPT0193
DPT0014
DPT0154 (1.0 U)
DPT0175 (1.5)
DPT0236 (1.4)
DPT0064 (1.0 U)
DPT0159 (1.0 U)
DPT0172 (1.0 U)
DPT0139 (1.0 U)
DPT0255 (0.23 I)
DPT0257 (0.22 U)
DPT0153 (1.0 U)
DPT0130
DPT0230 (0.51 I)
DPT0141 (1.0 U)
DPT0131
DPT0220 (0.2 U)
DPT0229 (0.2 U)
DPT0228
DPT0136
DPT0231 (0.2 U)
DPT0244 (0.22 U)
DPT0133 (1.0 U)
DPT0236 (0.21 I)
DPT0243 (1.4)
DPT0245 (0.22 U)
DPT0148 (1.0 U)
DPT0253 (0.22 U)
DPT0254 (1.4)
DPT0227 (1.5)
DPT0135 (1.0 U)
DPT0226 (2.1)
DPT0185
DPT0139 (1.0 U)
DPT0229
DPT0145 (1.0 U)
DPT0225 (1.0 U)
DPT0203
DPT0204
DPT0137
DPT0099 (1.0 U)
DPT0187 (1.0 U)
DPT0186 (1.0 U)
DPT0175 (1.0 U)
DPT0185 (1.0 U)
DPT0147 (1.0 U)
DPT0132 (1.0 U)
DPT0123
DPT0095 (110 U)
DPT0091 (1.0 U)
DPT0088 (1.0 U)
DPT0090 (1.0 U)
DPT0221 (21)
DPT0232 (0.2 U)
DPT0250 (0.22 U)
DPT0088 (1.0 U)
DPT0135 (1.0 U)
DPT0211 (0.2 U)
DPT0222 (1.0 U)
DPT0212 (1.2 U)
DPT0121 (1.0 U)
DPT0206 (0.2 U)
DPT0189 (0.2 U)
DPT0205 (0.2 U)
DPT0200 (0.2 U)
DPT0204 (1.0 U)
DPT0229 (0.23 U)
DPT0232 (1.0 U)
DPT0222 (0.2 U)
DPT0110
DPT0089 (1.0 U)
Contractor's Road
DPT0222 (1.0 U)
DPT0224 (1.0 U)
DPT0228 (3.0 U)
DPT0220 (10 U)
DPT0225 (1.0 U)
DPT0032 (1.0 U)
DPT0045 (1.0 U)
DPT0045 (2.0)
DPT0033 (2.0)
DPT0030 (1.4)
DPT0035 (1.4)
DPT0035 (2.4)
DPT0012
DPT0091 (1.0 U)
DPT0093 (2.4)
DPT0181 (1.0 U)
DPT0182 (1.0 U)
DPT0083 (2.4)
DPT0081 (1.0 U)
DPT0077 (1.0 U)
DPT0013
DPT0085 (0.70 U)
DPT0188 (1.0 U)
DPT0114 (1.0 U)
DPT0115 (1.0 U)
DPT0085 (1.0 U)
DPT0087 (1.0 U)
DPT0027 (1.0 U)
DPT0050 (1.0 U)
DPT0035 (19.2)
DPT0045 (2.0)
DPT0049 (1.4)
DPT0038 (3.4)
DPT0047 (1.4)
DPT0048 (3.4)
DPT0092 (0.50 U)
DPT0070 (1.0 U)
DPT0071 (1.0 U)
DPT0155 (1.0 U)
DPT0157 (1.5)
DPT0081 (1.0 U)
DPT0115 (1.0 U)
DPT0116 (1.4)
DPT0117 (1.0 U)
DPT0116 (20 U)
DPT0251 (2.4)
DPT0135 (3.0)
DPT0083 (1.0 U)
DPT0123 (1.0 U)
DPT0124 (1.0 U)
DPT0125 (1.0 U)
DPT0127
DPT0114 (1.0 U)
DPT0037 (1.0 U)
DPT0072 (1.0 U)
DPT0250 (3.5)
DPT0215 (0.2 U)
DPT0209 (0.22 U)
DPT0115 (1.0 U)
DPT0124 (1.5)
DPT0214 (1.5)
DPT0220 (500)
DPT0225 (10 U)
DPT0074 (1.0 U)
DPT0210 (1.5)
DPT0221 (21)
DPT0216 (160)
DPT0232 (0.2 U)
DPT0212 (1.2 U)
DPT0206 (0.2 U)
DPT0189 (0.2 U)
DPT0205 (0.2 U)
DPT0200 (1.5)
DPT0204 (1.0 U)
DPT0229 (0.23 U)
DPT0232 (1.0 U)
DPT0222 (0.2 U)
DPT0224 (1.0 U)
DPT0228 (3.0 U)
DPT0220 (10 U)
DPT0225 (1.0 U)
DPT0032 (1.0 U)
DPT0045 (1.0 U)
DPT0045 (2.0)
DPT0033 (2.0)
DPT0030




Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. cDCE indicates cis-1,2-dichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. J indicates estimated value.
6. L indicates value exceeds calibration range.
7. U indicates value was not detected above the method detection limit.
8. * indicates value was not used for contouring.
9. GCTL indicates Groundwater Cleanup Target Level.
10. NADC indicates Natural Attenuation Default Concentration.
11. Prefix for all sampling locations is "CRHE-".
12. Only monitoring wells that were sampled in March 2012 are shown on this map.
13. If result was qualified with a "U", half of the detection limit was used to generate isopleths.
14. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.



Figure 16
CRHE Area Summary of cDCE Results in Groundwater 31 to 46 ft BLS

N

50 25 0 50 Feet

## Legend

DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest cDCE Concentration)**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)
- cDCE concentration greater than 7,000 µg/L (10xNADC)

**Monitoring Well Location showing (screen interval (ft BLS) and [cDCE Concentration])**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)

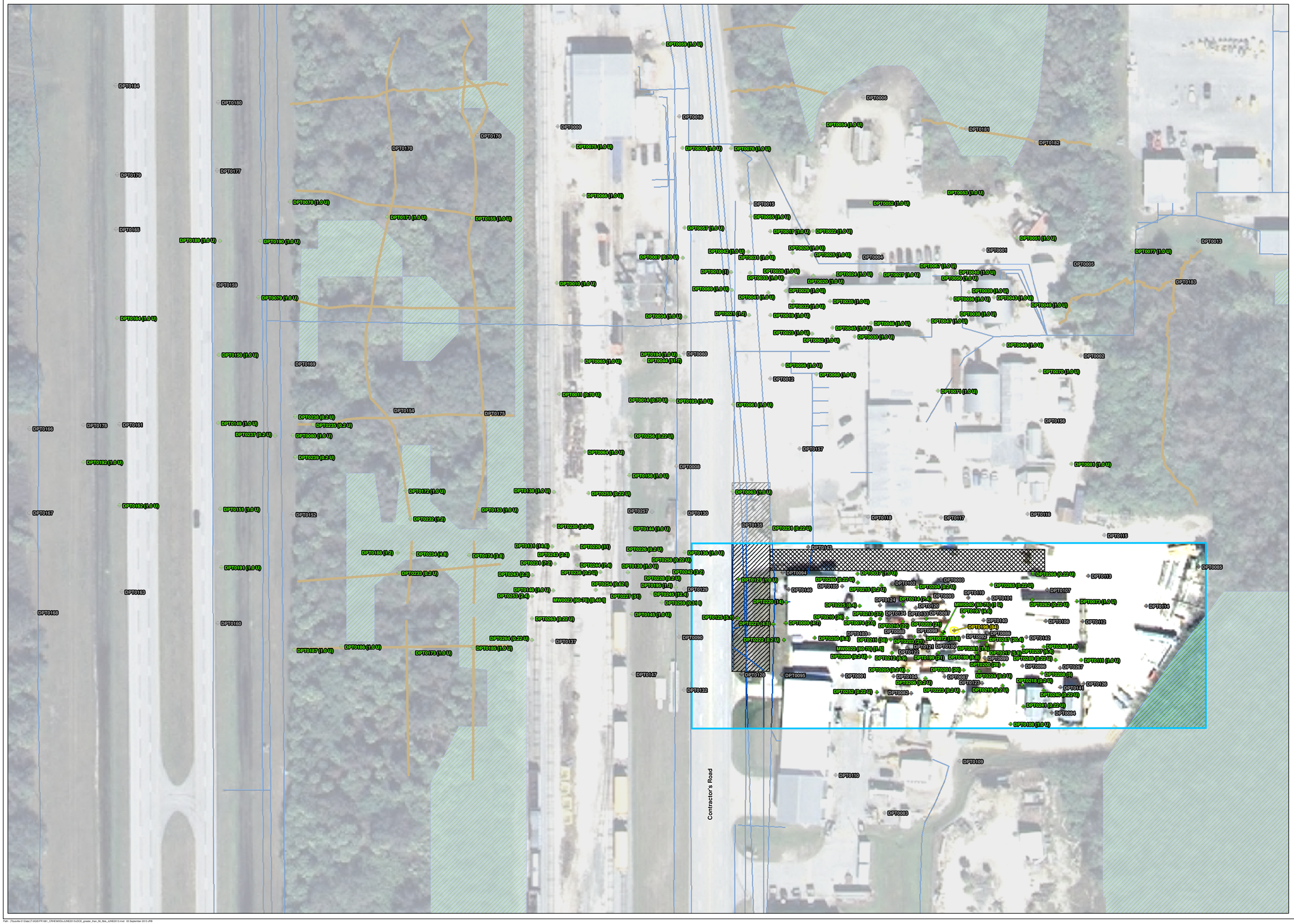
- 70 µg/L cDCE Isopleth
- 700 µg/L cDCE Isopleth
- 7,000 µg/L cDCE Isopleth
- Wetlands
- Area of Subsurface Obstructions; Unable to Drill
- Utility Corridor; Unable to Drill
- Hot Spot 1 Area
- Cleared Paths
- Underground Utilities

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. cDCE indicates cis-1,2-dichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. J indicates estimated value.
6. U indicates value was not detected above the method detection limit.
7. GCTL indicates Groundwater Cleanup Target Level.
8. NADC indicates Natural Attenuation Default Concentration.
9. Prefix for all sampling locations is "CRHE-".
10. Only monitoring wells that were sampled in March 2012 are shown on this map.
11. If result was qualified with a "U", half of the detection limit was used to generate isopleths.
12. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.

Contractor's Road

Path: I:\Tauvella-01\DATA\TGOSS\FY1681_CRHE\MXDs\JUNE2013\cDCE_46_to_56_fbls_JUNE2013.mxd 05 September 2013 MAH

Figure 17
CRHE Area Summary of cDCE Results in Groundwater 46 to 56 ft BLS




## Legend

- DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest cDCE Concentration)**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)

**Monitoring Well Location showing (screen interval (ft BLS) and [cDCE Concentration])**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)
- 70 µg/L cDCE Isopleth
- Wetlands
- Area of Subsurface Obstructions; Unable to Drill
- Utility Corridor; Unable to Drill
- Hot Spot 1 Area
- Cleared Paths
- Underground Utilities

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. cDCE indicates cis-1,2-dichloroethene.
4. U indicates value was not detected above the method detection limit.
5. GCTL indicates Groundwater Cleanup Target Level.
6. NADC indicates Natural Attenuation Default Concentration.
7. Prefix for all sampling locations is "CRHE-".
8. Data presented is from the bottom depth interval for each location.
9. Only monitoring wells that were sampled in November 2012 are shown on this map.
10. If result was qualified with a "U", half of the detection limit was used to generate isopleths.
11. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.



Figure 18
CRHE Area Summary of cDCE Results in Groundwater Greater than 56 ft BLS

N

50 25 0 50
Feet

## Legend

DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest VC Concentration)**

- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)
- VC concentration greater than 1,000 µg/L (10xNADC)

**Monitoring Well Location showing (screen interval (ft BLS) and [VC Concentration])**

- VC concentration less than or equal to 3 µg/L
- VC concentration greater than 3 µg/L (GCTL)
- VC concentration greater than 300 µg/L (NADC)
- 1 µg/L VC Isopleth
- 100 µg/L VC Isopleth
- 1,000 µg/L VC Isopleth
- Wetlands
- Area of Subsurface Obstructions; Unable to Drill
- Utility Corridor; Unable to Drill
- Hot Spot 1 Area
- Cleared Paths
- Underground Utilities

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. VC indicates vinyl chloride.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. J indicates estimated value.
6. L indicates value exceeds calibration range.
7. U indicates value was not detected above the method detection limit.
8. GCTL indicates Groundwater Cleanup Target Level.
9. NADC indicates Natural Attenuation Default Concentration.
10. Prefix for all sampling locations is "CRHE-".
11. Only monitoring wells that were sampled in March 2012 are shown on this map.
12. If result was qualified with a "U", half of the detection limit was used to generate isopleths.
13. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.

Contractor's Road

Path: I:\Auto\tkr-01\Data\71\GIS\FR1661_CRHE\MXDs\JUNE2013\VC_8_to16_fbls_JUNE2013.mxd 03 Sep 2013 JRB

Figure 19
CRHE Area Summary of VC Results in Groundwater 8 to 16 ft BLS

N

50 25 0 50 Feet

## Legend

DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest VC Concentration)**

- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)
- VC concentration greater than 1,000 µg/L (10xNADC)

**Monitoring Well Location showing (screen interval (ft BLS) and [VC Concentration])**

- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)

1 µg/L VC Isopleth Sink

Inferred 1 µg/L VC Isopleth

1 µg/L VC Isopleth

100 µg/L VC Isopleth

1,000 µg/L VC Isopleth

Wetlands

Area of Subsurface Obstructions; Unable to Drill

Utility Corridor; Unable to Drill

Hot Spot 1 Area

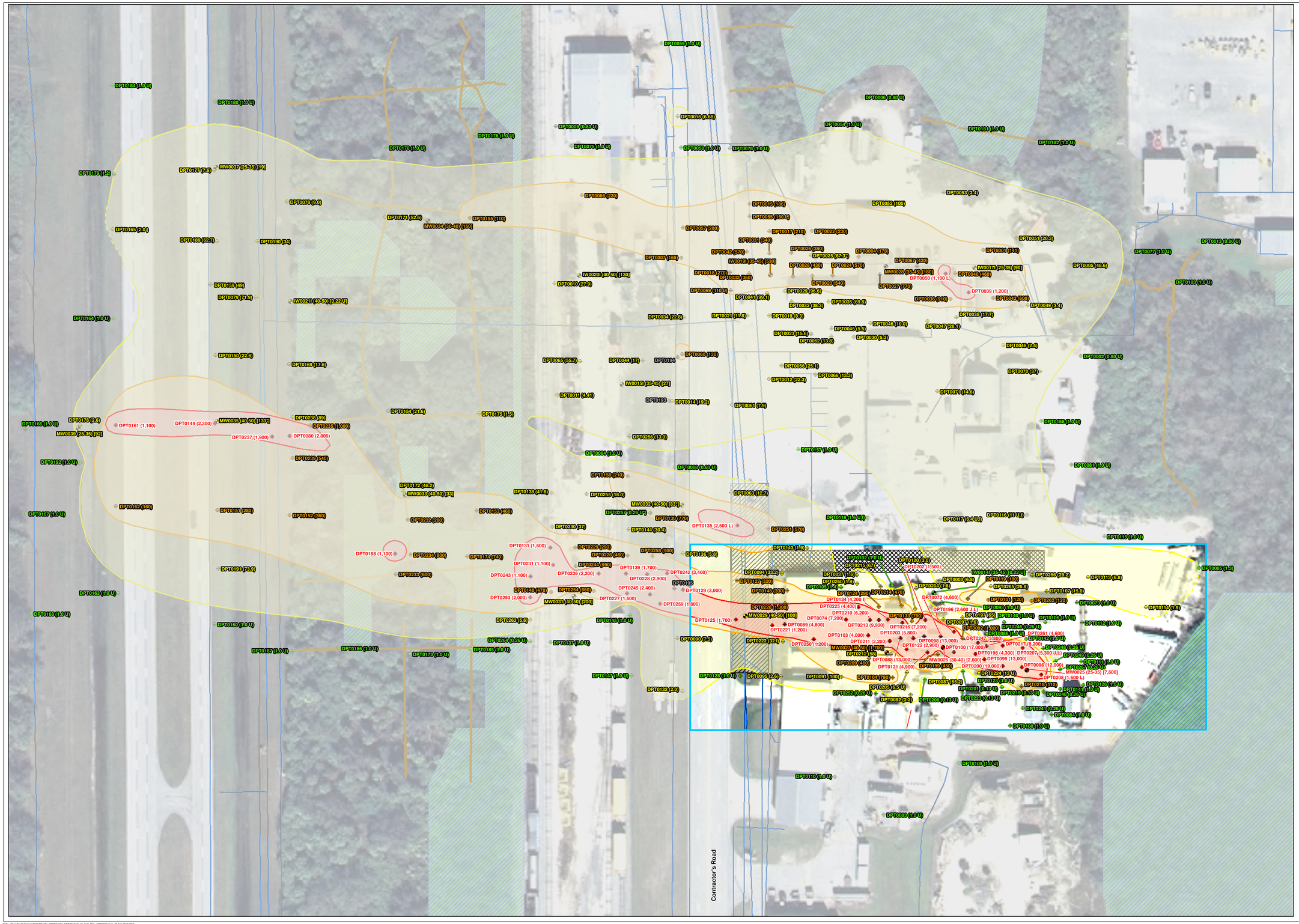
Cleared Paths

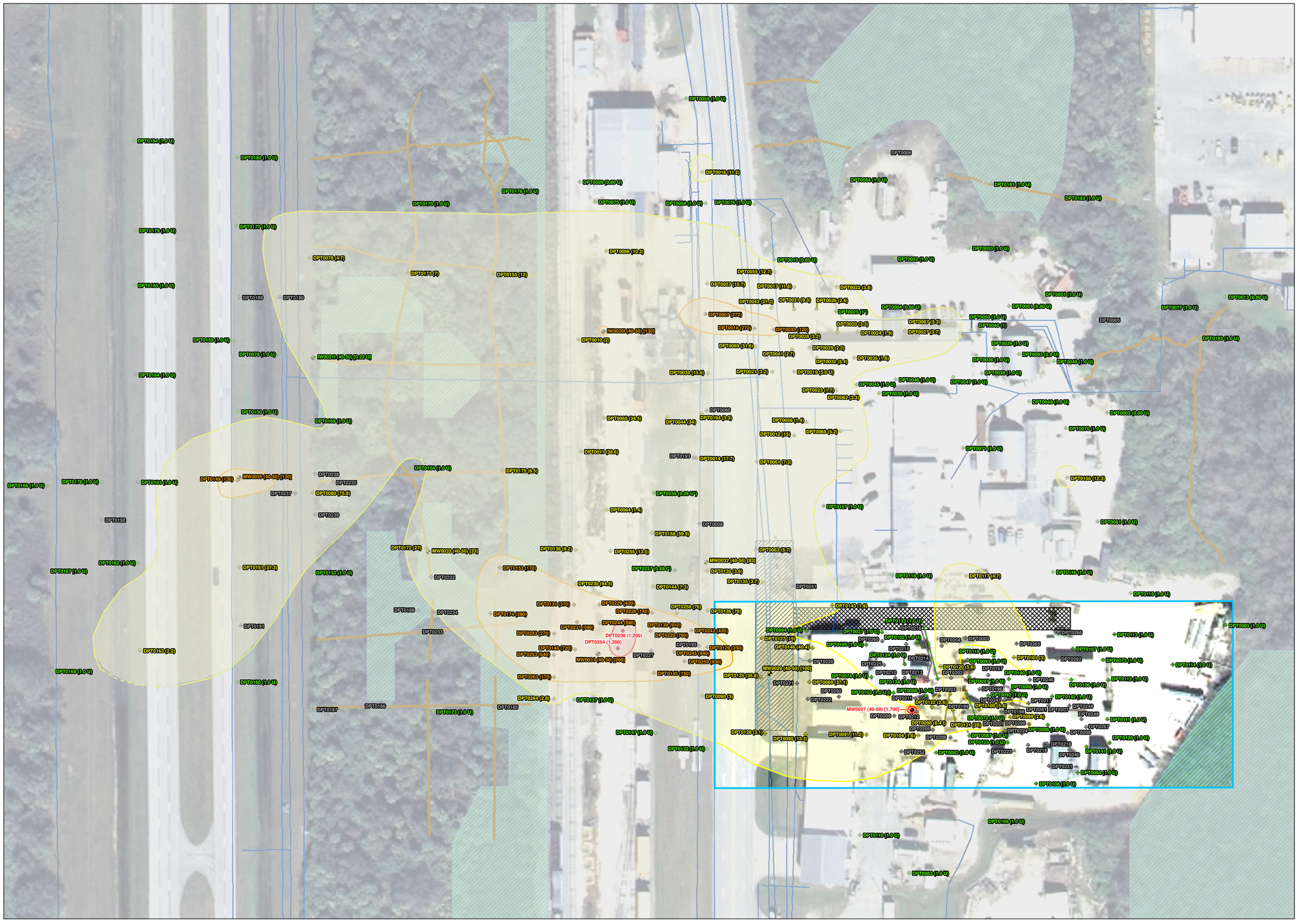
Underground Utilities

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. VC indicates vinyl chloride.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. L indicates value exceeds calibration range.
6. U indicates value was not detected above the method detection limit.
7. J indicates estimated value.
8. GCTL indicates Groundwater Cleanup Target Level.
9. NADC indicates Natural Attenuation Default Concentration.
10. Prefix for all sampling locations is "CRHE-".
11. * indicates data not used to generate contours.
12. Only monitoring wells that were sampled in March 2012 are shown on this map.
13. If result was qualified with a "U", half of the detection limit was used to generate isopleths.
14. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.

Path: \\Tauvfile-01\DATA\ TUGGS\FY16\01_CRHE MW\[mJUNE2013 VC_16_to30_fbls_JUNE2013.mxd 05 September 2013 MAH

Figure 20
CRHE Area Summary of VC Results in Groundwater 16 to 30 ft BLS


DPT0184 (1.0 U)
DPT0180 (1.0 U)
DPT0176 (1.0 U)
DPT0170 (1.0 U)
DPT0179 (1.2)
DPT0177 (2.4)
MW0037 (25-35) [19]
DPT0078 (9.9)
DPT0165 (2.0 J)
DPT0171 (53.6)
DPT0155 (110)
MW0034 (30-40) [150]
DPT0189 (22.7)
DPT0180 (34)
DPT0189 (49)
DPT0079 (71.9)
IW0021I (40-50) (0.22 U)
DPT0184 (1.0 U)
DPT0150 (22.9)
DPT0169 (17.6)
DPT0178 (2.9)
DPT0166 (1.0 U)
DPT0161 (1,100)
DPT0149 (2,300)
MW0035 (40-50) [320]
DPT0235 (89)
DPT0235 (1,000)
MW0039 (25-35) [92]
DPT0237 (1,900)
DPT0080 (2,800)
DPT0192 (1.0 U)
DPT0238 (340)
DPT0184 (21.6)
DPT0175 (1.5)
DPT0182 (160)
DPT0187 (1.0 U)
DPT0151 (280)
DPT0152 (360)
DPT0172 (48.2)
MW0033 (40-50) [53]
DPT0232 (280)
DPT0188 (1,100)
DPT0234 (800)
DPT0174 (700)
DPT0191 (79.9)
DPT0233 (800)
DPT0185 (1.0 U)
DPT0160 (1.0 U)
DPT0187 (1.0 U)
DPT0186 (1.0 U)
DPT0172 (1.0 U)
DPT0147 (1.0 U)
DPT0132 (2.0)
DPT0158 (210)
DPT0138 (41.8)
DPT0255 (16.0)
MW0032 (40-50) [57]
DPT0257 (0.20 U*)
DPT0130 (770)
DPT0135 (2,500 L)
DPT0220 (37)
DPT0141 (30.4)
DPT0131 (1,600)
DPT0229 (280)
DPT0236 (380)
DPT0231 (1,100)
DPT0244 (300)
DPT0139 (1,700)
DPT0236 (2,200)
DPT0243 (1,100)
DPT0228 (2,900)
DPT0245 (2,400)
DPT0253 (2,000)
DPT0227 (1,600)
DPT0259 (1,900)
DPT0129 (3,000)
DPT0242 (3,400)
DPT0185
DPT0269 (3.6)
DPT0260 (1.20 U)
DPT0137 (1.0 U)
DPT0145 (1.0 U)
DPT0099 (75)
DPT0222 (32)
DPT0250 (12000)
DPT0125 (1,700)
DPT0221 (1,200)
DPT0089 (4,800)
DPT0103 (4,000)
DPT0211 (2,200)
DPT0212 (3.6)
DPT0088 (13,000)
DPT0121 (4,900)
DPT0104 (700)
DPT0225 (1.20 U)
DPT0082 (2.2)
DPT0123 (1.0 U)
DPT0095 (2.6)
DPT0091 (100)
DPT0087 (33.2)
DPT0201 (0.43 U)
DPT0200 (1.13 U)
DPT0223 (0.43 U)
DPT0210 (0.43 U)
DPT0208 (1,600 L)
DPT0241 (1.25 U)
DPT0084 (1.0 U)
DPT0188 (1.0 U)
DPT0110 (1.0 U)
DPT0085 (1.0 U)
DPT0102 (1.0 U)
DPT0070 (37)
DPT0071 (14.6)
DPT0155 (1.0 U)
DPT0081 (1.0 U)
DPT0085 (1.5)
DPT0114 (1.0)
DPT0113 (1.0 U)
DPT0183 (1.0 U)
DPT0077 (1.0 U)
DPT0013 (0.20 U)
DPT0048 (2.4)
DPT0002 (0.20 U)
DPT0005 (48.0)
DPT0051 (20.2)
DPT0091 (141)
DPT0177 (25-35) [90]
DPT0040 (400)
DPT0039 (1,200)
DPT0049 (800)
DPT0038 (127)
DPT0047 (28.1)
DPT0046 (10.4)
DPT0045 (3.6)
DPT0030 (3.6)
DPT0050 (1,100 L)
DPT0027 (770)
DPT0035 (310)
DPT0004 (170)
DPT0087 (420)
DPT0028 (430)
DPT0024 (570)
DPT0020 (640)
DPT0025 (57.5*)
DPT0029 (330)
DPT0042 (570)
IW0019I (35-45) [310]
DPT0007 (185)
DPT0018 (570)
DPT0033 (600)
DPT0010 (27.6)
IW0020I (40-50) [130]
DPT0017 (210)
DPT0022 (230)
DPT0031 (340)
DPT0015 (184)
DPT0035 (150 L)
DPT0092 (100)
DPT0063 (2.4)
DPT0086 (220)
DPT0057 (280)
DPT0181 (1.0 U)
DPT0182 (1.0 U)
DPT0176 (1.0 U)
DPT0170 (1.0 U)
DPT0178 (1.0 U)
DPT0158 (1.0 U)
DPT0156 (1.0 U)
DPT0159 (1.0 U)
DPT0157 (1.0 U)
DPT0083 (12.7)
DPT0256 (13.0)
DPT0264 (1.0 U)
DPT0093 (0.20 U)
DPT0012 (22.9)
DPT0028 (13.5)
DPT0011 (4.41)
DPT0193
DPT0014 (19.2)
DPT0091 (2.9)
DPT0256 (13.0)
DPT0157 (1.0 U)
DPT0093 (0.20 U)
DPT0158 (210)
DPT0135 (2,500 L)
DPT0251 (570)
DPT0143 (1.0)
DPT0142 (1.0 U)
DPT0141 (1.0)
DPT0015 (57)
DPT0022 (1,500)
DPT0084 (32.2)
DPT0127 (320)
DPT0037 (180)
DPT0260 (1.0)
DPT0105 (1.0)
DPT0146 (330)
DPT0134 (200)
DPT0214 (370)
DPT0134 (4,200 I)
DPT0225 (4,400)
DPT0210 (6,200)
DPT0074 (7,200)
DPT0213 (9,900)
DPT0216 (7,200)
DPT0203 (5,800)
DPT0103 (4,000)
DPT0211 (2,200)
DPT0098 (13,000)
DPT0122 (2,900)
DPT0212 (3.6)
DPT0088 (13,000)
DPT0121 (4,900)
DPT0222 (32)
DPT0250 (12000)
DPT0099 (75)
DPT0147 (1.0 U)
DPT0132 (2.0)
DPT0123 (1.0 U)
DPT0095 (2.6)
DPT0091 (100)
DPT0104 (700)
DPT0225 (1.20 U)
DPT0082 (2.2


DPT0184 (1.0 U)
DPT0180 (1.0 U)
DPT0170 (1.0 U)
DPT0177 (1.0 U)
DPT0179 (1.0 U)
DPT0178 (1.0 U)
DPT0176 (1.0 U)
DPT0175 (1.0 U)
DPT0174 (1.0 U)
DPT0173 (1.0 U)
DPT0172 (27)
DPT0171 (7)
DPT0155 (12)
DPT0070 (15)
DPT0185 (1.0 U)
DPT0189
DPT0190
DPT0159 (1.0 U)
DPT0070 (1.0 U)
IW0020R (40-50) [130]
IW0021R (40-50) [0.22 U]
DPT0184 (1.0 U)
DPT0180 (1.0 U)
DPT0186 (1.0 U)
DPT0161 (1.0 U)
DPT0173 (1.0 U)
DPT0145 (130)
MW0035 (40-50) [130]
DPT0238
DPT0235
DPT0237
DPT0080 (75.8)
DPT0239
DPT0192
DPT0182 (1.0 U)
DPT0167 (1.0 U)
DPT0151 (37.5)
DPT0185 (1.0 U)
DPT0232
DPT0186
DPT0234
DPT0191
DPT0233
DPT0183 (2.2)
DPT0188 (1.0 U)
DPT0180 (1.0 U)
DPT0157
DPT0186
DPT0173 (1.0 U)
DPT0188
DPT0009 (1.0 U)
DPT0016 (11.2)
DPT0009 (3.40 U)
DPT0175 (1.0 U)
DPT0176 (1.0 U)
DPT0175 (1.0 U)
DPT0176 (1.0 U)
DPT0066 (10.3)
DPT0155 (12)
DPT0171 (7)
DPT0189
DPT0190
DPT0159 (1.0 U)
DPT0070 (1.0 U)
DPT0184 (1.0 U)
DPT0180 (1.0 U)
DPT0186 (1.0 U)
DPT0161 (1.0 U)
DPT0175 (9.5)
DPT0184 (1.0 U)
DPT0065 (34.5)
DPT0044 (34)
DPT0000
DPT0184 (9.5)
DPT0011 (38.4)
DPT0199
DPT0144 (17.7)
DPT0061 (7.2)
DPT0056 (1.4)
DPT0012 (15)
DPT0069 (5.2)
DPT0084 (1.4)
DPT0003
DPT0158 (59.9)
DPT0172 (27)
MW0033 (40-50) [33]
DPT0138 (9.2)
DPT0285 (13.5)
DPT0182 (1.0 U)
DPT0167 (1.0 U)
DPT0151 (37.5)
DPT0185 (1.0 U)
DPT0232
DPT0183 (170)
DPT0287 (1.60 F)
DPT0230 (94.5)
DPT0144 (7.2)
DPT0135 (37)
DPT0251
DPT0191 (370)
DPT0220 (120)
DPT0220 (140)
DPT0174 (280)
DPT0259 (73)
DPT0138 (76)
DPT0244 (590)
DPT0231 (590)
DPT0139 (910)
DPT0242 (420)
DPT0243 (270)
DPT0236 (1,200)
DPT0254 (1,200)
DPT0228 (700)
DPT0145 (720)
DPT0165
DPT0129 (290)
DPT0255 (300)
DPT0227
DPT0245 (940)
MW0031 (40-50) [200]
DPT0253 (930)
DPT0233 (170)
DPT0145 (150)
DPT0264 (2.8)
DPT0137 (1.0 U)
DPT0090 (3)
DPT0147 (1.0 U)
DPT0122 (1.2)
DPT0003
DPT0022 (3.4)
DPT0057 (157)
DPT0017 (11.6)
DPT0042 (21.2)
DPT0031 (3.3)
DPT0026 (2.6)
DPT0007 (272)
DPT0018 (270)
DPT0033 (120)
DPT0023 (3.2)
DPT0010 (2)
DPT0089 (31.4)
DPT0041 (27)
DPT0034 (15.6)
DPT0021 (3.2)
DPT0001D (3.0 U)
DPT0223 (17)
DPT0062 (3.4)
DPT0000
DPT0184 (9.5)
DPT0044 (34)
DPT0056 (1.4)
DPT0012 (15)
DPT0069 (5.2)
DPT0011 (38.4)
DPT0199
DPT0144 (17.7)
DPT0061 (7.2)
DPT0175 (9.5)
DPT0238
DPT0235
DPT0237
DPT0080 (75.8)
DPT0239
DPT0192
DPT0182 (1.0 U)
DPT0167 (1.0 U)
DPT0151 (37.5)
DPT0185 (1.0 U)
DPT0232
DPT0186
DPT0234
DPT0191
DPT0233
DPT0183 (2.2)
DPT0188 (1.0 U)
DPT0180 (1.0 U)
DPT0157
DPT0186
DPT0173 (1.0 U)
DPT0188
DPT0147 (1.0 U)
DPT0122 (1.0 U)

N

50 25 0 50 Feet

## Legend

DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest VC Concentration)**

VC concentration less than or equal to 1 µg/L

VC concentration greater than 1 µg/L (GCTL)

VC concentration greater than 100 µg/L (NADC)

**Monitoring Well Location showing (screen interval (ft BLS) and [VC Concentration])**

VC concentration less than or equal to 3 µg/L

VC concentration greater than 3 µg/L (GCTL)

VC concentration greater than 300 µg/L (NADC)

1 µg/L VC Isopleth

Wetlands

Area of Subsurface Obstructions; Unable to Drill

Utility Corridor; Unable to Drill

Hot Spot 1 Area

Cleared Paths

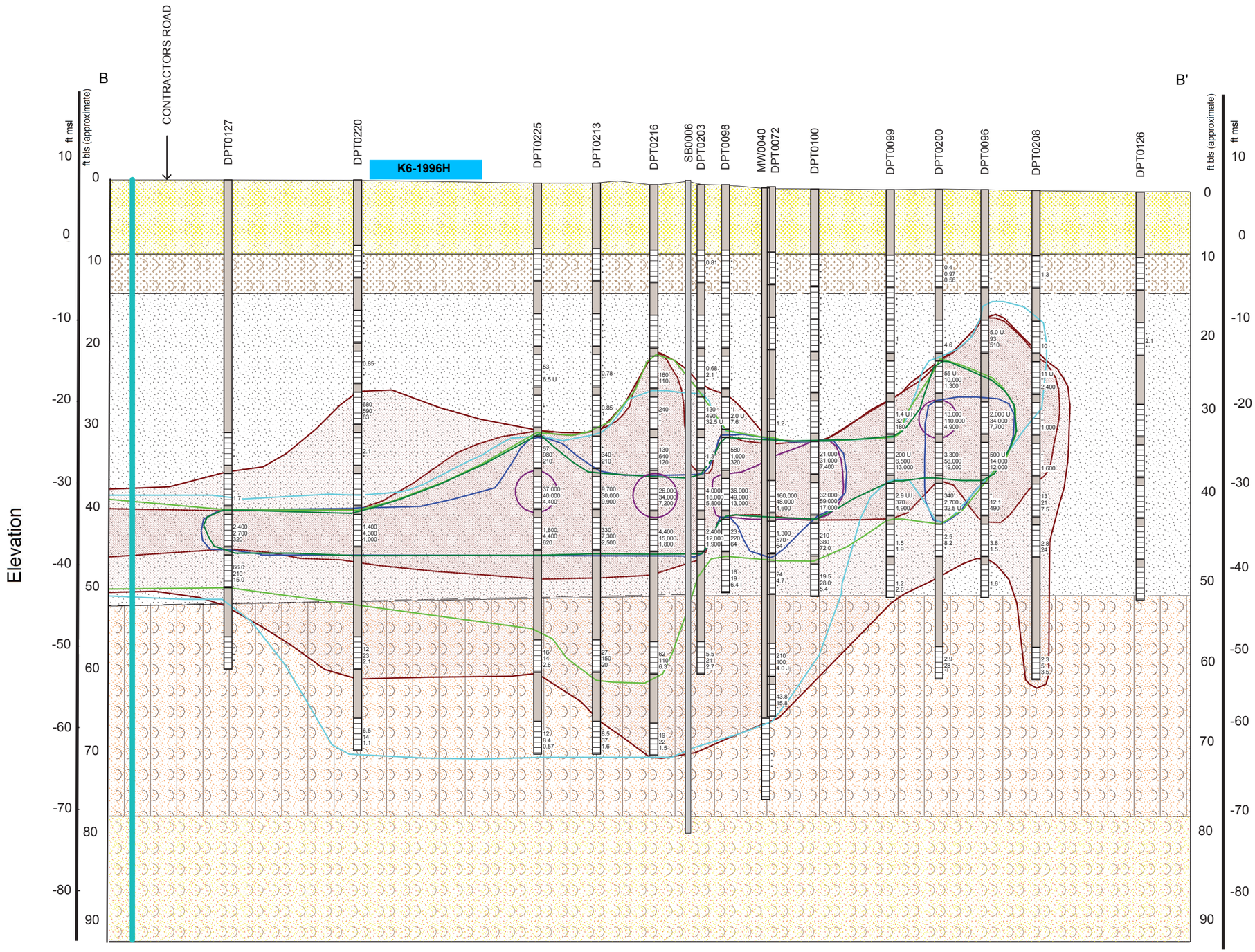
Underground Utilities

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. VC indicates vinyl chloride.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. * indicates data for DPT0193 was used for this location.
7. GCTL indicates Groundwater Cleanup Target Level.
8. NADC indicates Natural Attenuation Default Concentration.
9. Prefix for all sampling locations is "CRHE-".
10. Data presented is from the bottom depth interval for each location.
11. If result was qualified with a "U", half of the detection limit was used to generate isopleths.
12. Drilling was not possible in the Area of Subsurface Obstructions shown on this figure because of the presence of thick road base present to accommodate heavy equipment at the Site.

Contractor's Road

Path: I:\Tsundis-01\Data\T-0026\FP\161_CRHE\MXD\JUNE2013\VC_greater_than_56_fbls_JUNE2013.mxd 05 September 2013 JRB

Figure 23
CRHE Area Summary of VC Results in Groundwater Greater than 56 ft BLS




1 µg/L VC (GCTL)
100 µg/L VC (NADC)
70 µg/L cDCE (GCTL)
700 µg/L cDCE (NADC)
3 µg/L TCE (GCTL)
300 µg/L TCE (NADC)
11,000 µg/L TCE (1% Solubility)

50 25 0 50 Feet

Horizontal 1" = 50'
Vertical exaggeration is 4

## Legend

Lithology Boring

Direct Push Technology (DPT) Location

DPT Groundwater Sample Location

### Lithology

Medium SANDS (SP) and silty SANDS (SM) of varying color

Fine to medium SAND (SP/SW)/tan shell hash

SAND (SP) fine-grained with shell 30 - 50%

Silty SAND with varying amounts of clay and up to 10% shells

Fine silty SAND (SM) with 20 - 30% shell fragments

Inferred lithology

Hot Spot 1 Area

Approximate Building Footprint

Notes:

1. Results presented in micrograms per liter (µg/L).
2. * indicates result value is less than or equal to detection limit.
3. ft indicates feet.
4. ft msl indicates feet mean sea level.
5. GCTL indicates Florida Department of Environmental Protection Groundwater Cleanup Target Levels.
6. I indicates reported value is between the method detection limit (MDL) and the practical quantitation limit.
7. L indicates value exceeds calibration range.
8. NADC indicates Florida Department of Environmental Protection Natural Attenuation Default Concentration.
9. U indicates not detected above the MDL.
10. Soil boring locations were projected onto the transect.
11. All location IDs are abbreviated, full location IDs include "CRHE" prefix.

Trichloroethene (TCE) (µg/L)
cis-1,2-dichloroethene (cDCE) (µg/L)
Vinyl Chloride (VC) (µg/L)

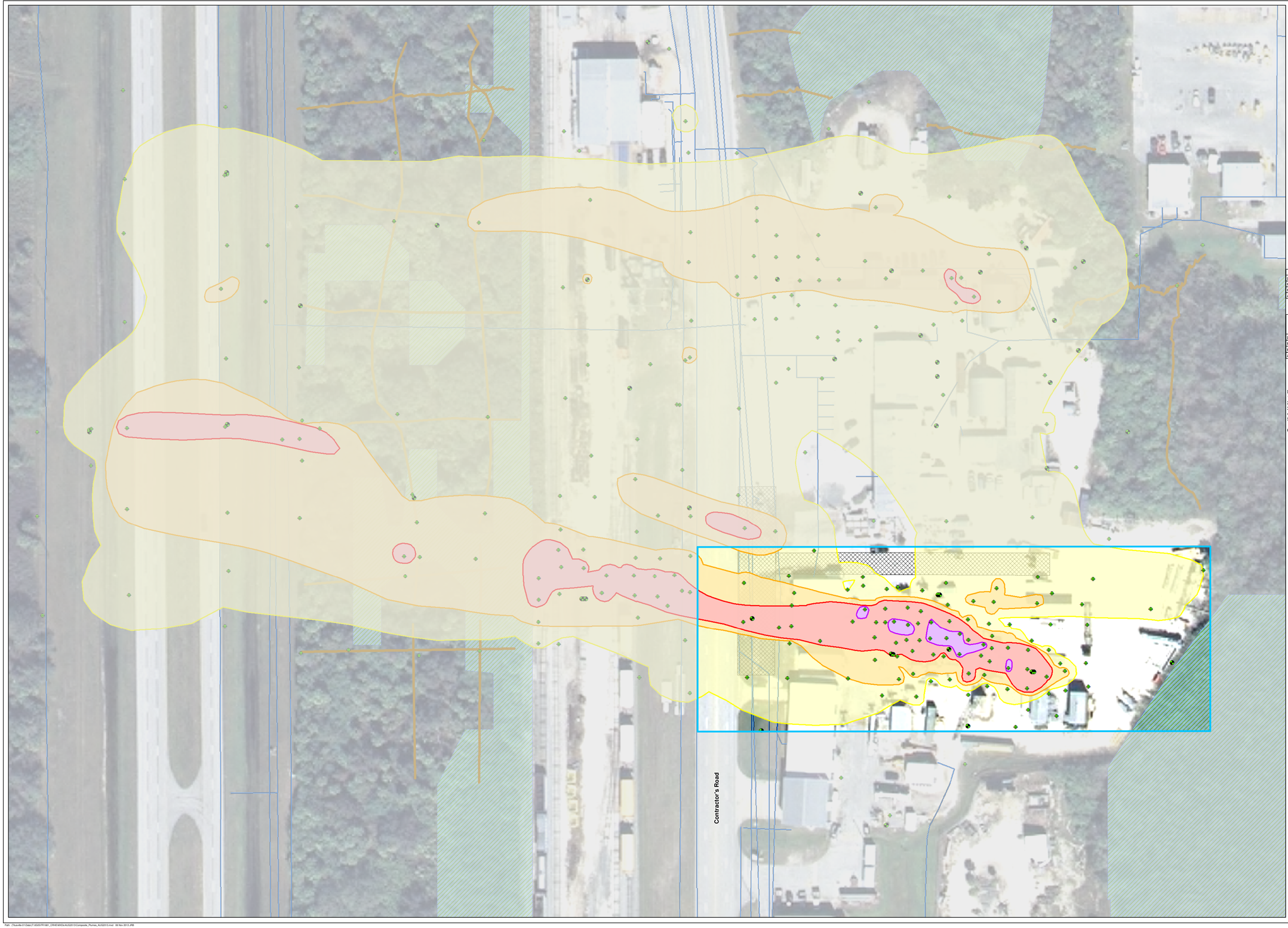
**Legend**

Soil Boring Location
DPT Sampling Location
Monitoring Well Location
A-A' Transect
B-B' Transect
Hot Spot 1 Area

N

90 45 0 90 Feet

Figure 24
Lithologic Cross Section B to B' and CVOC Isocontours




N

50 25 0 50 Feet

**Legend**

- DPT Sampling Location
- Monitoring Well Location
- Low Concentration Plume
- High Concentration Plume
- Hot Spot
- 1% TCE Solubility Plume
- Wetlands
- No Drill Area
- Hot Spot 1 Area
- Cleared Paths
- Utility Line

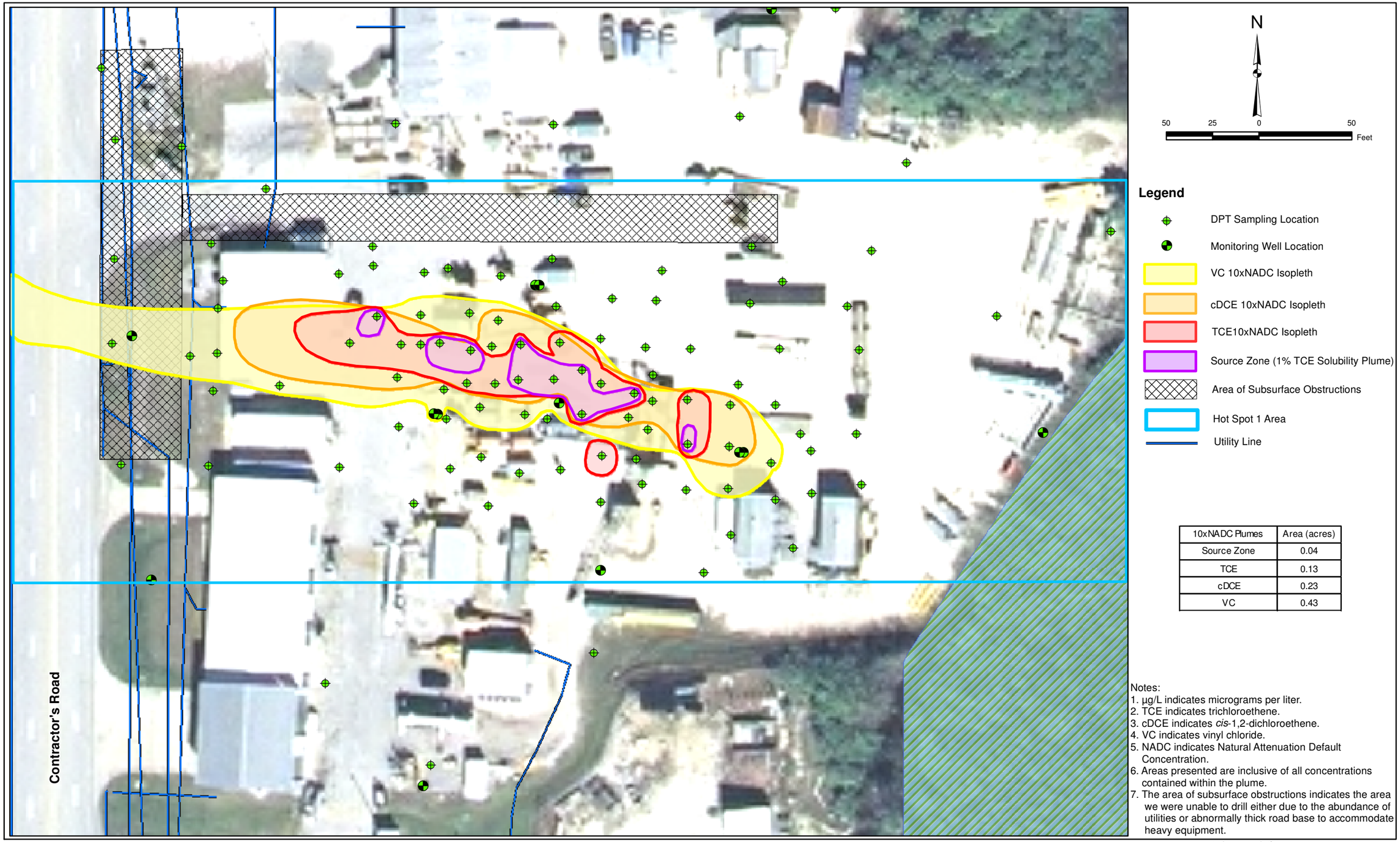
| Plume | Area (acres) |
|---|---|
| Low Concentration Plume (Concentrations Greater than GCTL) | 15.67 |
| High Concentration Plume (Concentrations Greater than NADC) | 4.46 |
| Hot Spot (Concentrations Greater than 10X NADC) | 0.87 |
| Approximate 1% TCE Solubility (TCE Concentrations Greater than 11,000 µg/L) | 0.04 |

| Hot Spot 1 Plumes | Hot Spot 1 Area (acres) |
|---|---|
| Low Concentration Plume (Concentrations Greater than GCTL) | 1.99 |
| High Concentration Plume (Concentrations Greater than NADC) | 0.78 |
| Hot Spot (Concentrations Greater than 10X NADC) | 0.41 |
| Approximate 1% TCE Solubility (TCE Concentrations Greater than 11,000 µg/L) | 0.04 |

Notes:
1. µg/L indicates micrograms per liter.
2. TCE indicates trichloroethene.
3. GCTL indicates Groundwater Cleanup Target Level.
4. NADC indicates Natural Attenuation Default Concentration.
5. Areas presented are inclusive of all concentrations contained within the plume.
6. The no drill area indicates the area we were unable to drill either due to the abundance of utilities or abnormally thick road base to accommodate heavy equipment

Path: (Tbaustle-01\Data)\TGIS\FPR1681_CRHE\MXDs\AUG2013\Composite_Plumes_AUG2013.mxd 06 Nov 2013 JRB

Figure 25
CRHE Area Overall VOC Plumes

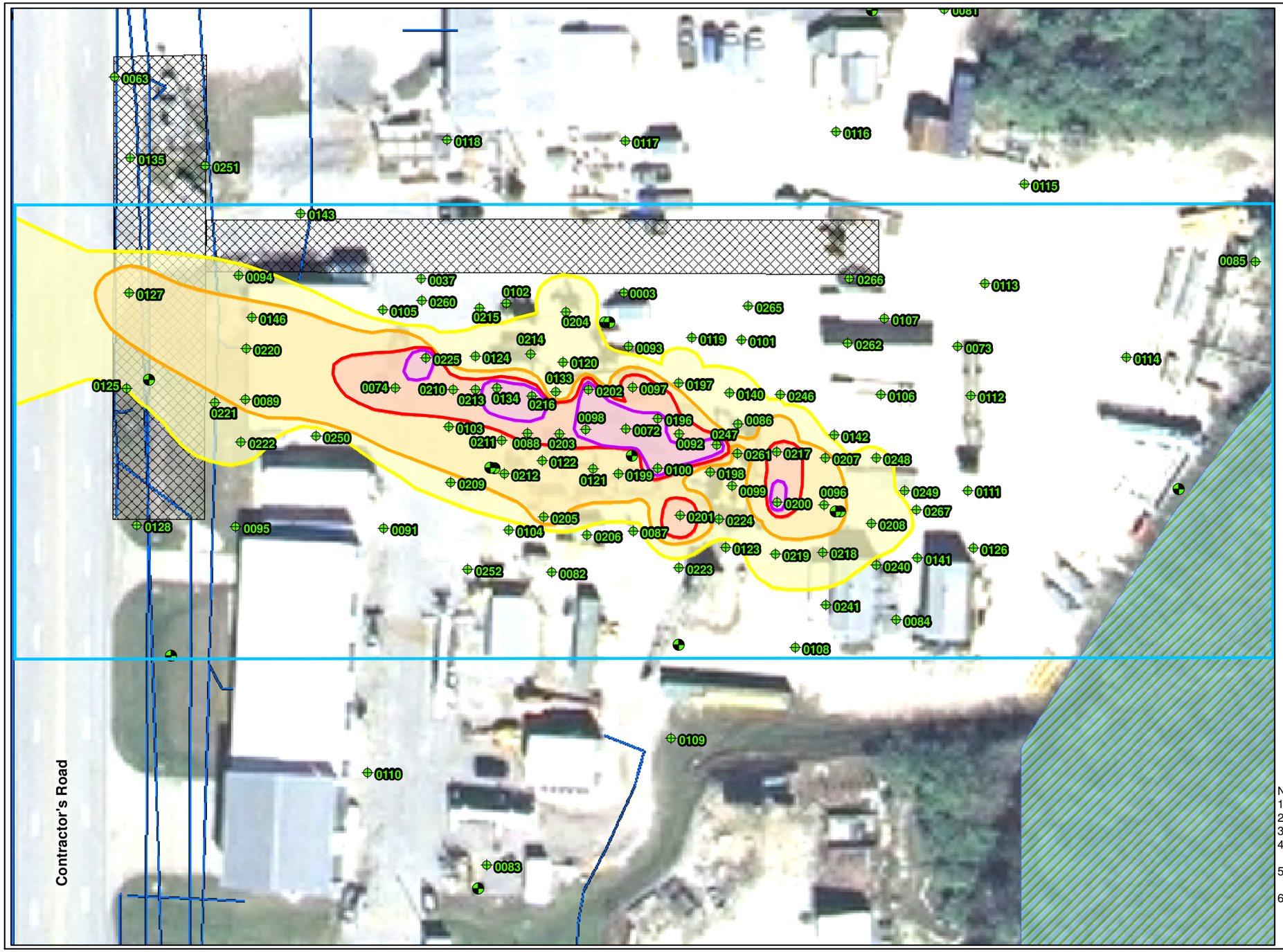



| 10xNADC Plumes | Area (acres) |
|---|---|
| Source Zone | 0.04 |
| TCE | 0.13 |
| cDCE | 0.23 |
| VC | 0.43 |

Notes:
1. µg/L indicates micrograms per liter.
2. TCE indicates trichloroethene.
3. cDCE indicates *cis*-1,2-dichloroethene.
4. VC indicates vinyl chloride.
5. NADC indicates Natural Attenuation Default Concentration.
6. Areas presented are inclusive of all concentrations contained within the plume.
7. The area of subsurface obstructions indicates the area we were unable to drill either due to the abundance of utilities or abnormally thick road base to accommodate heavy equipment.

Path: (Titusville-01\Data\)P:\0GIS\FR1681_CRHE\MXDs\JUNE2013\Overall_10xNADC_Plume_HS1.mxd 06 Sep 2013 MAH

Figure 26
CRHE Area Hot Spot 1 Overall 10xNADC Plume




| TCE Plume | Area (acres) |
|---|---|
| Low Concentration Plume (Concentrations Greater than GCTL) | 0.79 |
| High Concentration Plume (Concentrations Greater than NADC) | 0.41 |
| Hot Spot (Concentrations Greater than 10xNADC) | 0.13 |
| Approximate 1% TCE Solubility (TCE Concentrations Greater than 11,000 µg/L) | 0.04 |

Notes:
1. µg/L indicates micrograms per liter.
2. TCE indicates trichloroethene.
3. GCTL indicates Groundwater Cleanup Target Level.
4. NADC indicates Natural Attenuation Default Concentration.
5. Areas presented are inclusive of all concentrations contained within the plume.
6. The area of subsurface obstructions indicates the area we were unable to drill either due to the abundance of utilities or abnormally thick road base to accommodate heavy equipment.

Path: (Titusville-01\Data\P:\0GIS\FR1681_CRHE\MXDs\JUNE2013\Overall_TCE_Plume_HS1.mxd 05 Sep 2013 MAH

Figure 27
CRHE Area Hot Spot 1 Overall TCE Plume

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# MEMORANDUM

| | |
|---|---|
| Date: | 3 December 2013 |
| To: | Anne Chrest |
| Copies to: | NASA Remediation Team |
| From: | Jill Johnson, P.G. and Rebecca Daprato, Ph.D., P.E. |
| Subject: | Contractor's Road Heavy Equipment Area (CHRE) (SWMU055) Step 1 Engineering Evaluation – Hot Spot 1 – Response to Comments |

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Comments on the October 2013 Step 1 Engineering Evaluation – Hot Spot 1 ADP have been reviewed and responses, where applicable, have been provided for reference below. The comment is listed first and Geosyntec's responses are listed in italics below the comment.

**Tetra Tech Comments:**

Tetra Tech generally concurs with the information presented in the Contractor's Road Heavy Equipment (CRHE) Area Step 1 Engineering Evaluation – Hot Spot 1 ADP, except where noted within the following comments:

Section A

1. Slide 16 – The water level MW0024 does not appear to be consistent with the expected potentiometric surface nor do the plumes appear to mimic the easterly directional divide. Is there a suspected cause for the groundwater divide in the region of this well to result in the significant easterly component? Please confirm if this is an anomaly and if MW0025 may be hydraulically communicating with MW0024.

   *Response: Historically we have observed the shallow groundwater to be influenced by the wetlands that are to the north, east, and west of the site. Therefore, the easterly groundwater flow in the shallow zone is not unexpected.*

   *Based on the lithology, it is possible that there is a hydraulic connection between monitoring wells MW0025 and MW0024. Monitoring well MW0024 is partially screened in the same unit as monitoring well MW0025 (fine grained sand with shell unit).*

*During evaluation of this comment, it was discovered that some of the groundwater elevations referenced NGVD29 and some NAVD88. The groundwater elevations have been updated to all reference NAVD88 and updated groundwater elevation maps are included.*

2. Slide 22 – TCE mass consistently seems concentrated from 36 to 45 feet bls. Are there any lithologic or geotechnical variations in this zone that resulted in the majority of mass in this depth interval? Discussion of the site conceptual model from a mass and lithologic standpoint would be a beneficial addition to the CHRE Step 1 EE and downstream remedial decision making.

   *Response: The conceptual site model will be discussed from this perspective during the ADP presentation. The lithology borings and MIP log correlate and show a change in lithology at approximately 50 ft BLS. The FID, ECD, and PID results from the MIP log and the DPT sampling results show a majority of the mass is present from 36 to 45 ft BLS. Reviewing the soil boring logs shows that between 30 and 40 ft BLS at the site, the lithology transitions from a sand with ~30% shell to sand with ~50% or more shell. Similar to other sites, the primary high concentration interval maybe associated with an interval of silty sand that is not visible to the eye.*

3. Slide 27 – Elevated TCE results are present in DPT0196, 0202, 0225, and 0247 within the 41 to 45 feet bls sampling interval, and these locations were not sampled within the 46 to 50 feet bls interval. Please confirm if this is a vertical data gap since a sampling point is not present between 45 to 56 feet bls with moderate detections from 56 to 60 feet bls.

   *Response: We do not feel that this is a data gap. There is a high density of data in each depth zone in HS1, although, as identified, toward the end of the sampling effort, sampling intervals were focused based on the previous results. Also, sampling at depth in these locations was discontinued because of the concern for dragdown and with the understanding that a vertical delineation well would be installed and sampled (MW40).*

4. Slide 41 (EVS) – When viewing the plume intervals, it is difficult to interpret the internal zones (e.g., Hot Spot and Source Zone) due to the large thickness of the data points. Suggest minimizing or showing as a discrete point within the middle of the sample interval. Review of the Source Zone in EVS was not completed due to this interference. Additionally, the deep interval bottom does not appear to be vertically delineated via EVS visual inspection.

*Response: The EVS models were revised several times with this concern in mind. The EVS model was provided for each constituent of concern with the focus on the hot spot area 1 area only, and then with the entire site shown. The locations with the concentrations less than the GCTL were made transparent in order to make the area with high concentrations easier to view. We do not feel it is necessary to revise the EVS model. Additionally, the source zone was delineated with a permanent deep well (MW40) near the highest observed TCE concentrations at the site.*

5. Slide 43/44 – Tetra Tech does not agree with the methodology used for the mass calculation and the interpretation of the site conceptual model. The mass is also not in agreement to the previous Step 1A EE presented for the site. Applying an average concentration over the entirety of the plume area and not within specific isoconcentration intervals does not seem appropriate. The averaging methods used appear to have resulted in a misrepresentation of an average concentration and mass that is skewed low. Based on the information provided within the Step 1 EE, we would anticipate the TCE mass to be higher. Please revisit the mass calculation and revise the Part B technology screening as a result of the revision, where appropriate.

   *Response: The mass calculation was performed using two different methods, both of which used the average concentrations for the specific isoconcentrations e.g., NADC >COC>GCTL, 10XNADC>COC>NADC. One was performed by depth interval and one for the overall plume (as concentric rings not averaged over the entirety of the plume). The average concentrations presented were calculated by hand and by EVS. The mass calculations consistently documented a similar mass estimate within the same order of magnitude. We believe the multiple approaches used and similarity in results provides a reasonable estimate of mass. No revisions are warranted.*

6. Slide 47 – The VC Hot Spots generally do not appear adequately delineated. Please discuss in additional detail.

   *Response: This comment has been resolved and retracted because the focus of this ADP is limited to HS1.*

7. General Comment – Was 1,4-dioxane sampled at CRHE? If so, please include in ADP.

   *Response: Select site monitoring wells were sampled and analyzed for 1,4-dioxane in 1997. The sample results were all non-detect (500 U and 2,500 U µg/L), but with detection limits greater than the FDEP GCTL (3.2 µg/L). It is proposed that samples collected from the wells that will be sampled to collect additional data to evaluate*

*bioremediation (MW0025, MW0029, MW0035 and MW0019I) will be analyzed for 1,4-dioxane.*

Section B

1. Slide 58 – Given the suspected under allocation of mass at CRHE, we do not concur to the Source Zone remedial technologies retained until the contaminant mass calculation and distribution is revised and redistributed to the team.

   *Response: See response above, additional information was provided regarding the mass calculations. We believe that the information presented is certainly adequate to make a decision regarding retained remedial technologies.*

**Jacobs-CORE**

The Step 2 Engineering Evaluation advance data package (ADP) for the Contractors Road Heavy Equipment Area (CRHE) Hot Spot 1 (HS1) meets the requirements of the Remediation Team's Engineering Evaluation Process document. Based on review of the ADP, the Jacobs-CORE team concurs with the information and evaluation presented in the CRHE Step 1 (A and B) Engineering Evaluation ADP. The following specific comments were presented for consideration:

Section A

1. Slides 13 and 14 – There are three soil borings used to generally describe the lithology across the southern portion of the plume (which includes HS1). Only one of these soil borings is within HS1, and it is primarily down gradient (west) of the highest levels of TCE. Consider adding at least one soil boring east of SB0006 and DPT0072 to ensure the entire area where DNAPL could be present is adequately characterized from a lithology perspective. It would be advantageous to understand in more specific detail the interval between 35 and 50 ft, particularly in evaluating source area treatment technologies.

   *Response: Although it is true that only one soil boring is within the HS1 area, there were a total of seven lithology borings advanced across the entire site to characterize subsurface lithology. The lithology collected at the site to date and presented in the HS1 ADP was generally consisted and is adequate for meeting the objectives of the Step 1 EE; however, we agree that potentially collecting additional, focused lithology data in the selected remedial area depending on the selected remedy may be useful. This additional data can be gathered before the remedy is implemented.*

2. Slides 13, 14, 24, and 42 – The lithology description shows a fairly consistent fine-grained sand and shell layer from approximately 12 to 50 ft bls; however, the highest levels of TCE are shown in the 36 to 40 ft bls depth range. This indicates something pertinent in or just below this zone, which could be holding DNAPL, and that is discussed on Slide 42. Should that be shown on the lithology drawing (Slide 14)? Again, more detail of this interval would be beneficial in planning and executing any technology which targets the source zone.

   *Response: The lithology presented on the cross section (Figure 1) is generalized and the surfaces for lithology transitions were correlated. See response to Tetra Tech comment #2. In SB0006, there are changes in the ratios of sand, shell and clay at 35, 41, and 51 ft BLS. As discussed in a previous response, depending on the selected remedial options, it may be useful to collect additional, focused lithology information in this zone.*

3. Slide 17 – The shape of the plume generally provides good confirmation of the gradient and gradient trends at a site. The CRHE intermediate groundwater flow map shows a fairly strong southerly component that does not correlate well with the plume configuration. Could the MW0029 measurement be incorrect (possibly a damaged well)?

   *Response: It does appear that monitoring well MW0029 is controlling the groundwater flow direction, but we feel this is based on the limited number of water levels that were collected, since this effort was focused on Hot Spot 1. There was no damage observed to the well during the water level collection.*

4. Slides 26 and 44 to 46 – Minor comment, but from a remediation perspective it seems prudent to assume that the area between DPT0098 and DPT0216 is above 1% solubility (contoured purple). The same could be considered for the area between DPT0247 and DPT0196, along with the area between DPT0134 and DPT0225. Again, this is just from a remediation perspective based upon the potential error in sampling in these high concentration areas, but it affects the SZ area shown on Slides 44 – 46, and also would affect the size and planning of any SZ remediation alternative.

   *Response: We concur that the 1% solubility areas could be combined into one area for the purposes of the Step 2 and Step 3 EE.*

5. Slides 43 and 44 – Both slides note that DNAPL mass was not considered in estimating contaminant mass. What is the rationale for excluding DNAPL from the mass estimate? Consider developing mass estimates for the SZ and HS independently (including DNAPL mass), then adding those to the gross average of the remaining HCP and LCP.

*Response: The note on the slide was intended to indicate that a specific quantity of DNAPL product at a 12.2 lb/gallon density was not considered to occupy some assumed fraction of pore spaces over some assumed area and assumed thickness (consistent with other mass estimates conducted at KSC). We considered the sorbed mass partitioned fraction to account for DNAPL (ganglia and/or limited sorbed form present). Estimating the DNAPL mass at a site is difficult, even with high resolution soil and groundwater sampling data (no soil sampling has been performed at this site). If it is assumed that the DNAPL occupies 0.01 to 0.1% of pore space (of 1% solubility area), there would be approximately 0.45 to 4.5 gallons of TCE DNAPL, which is approximately 5.5 to 55 lbs of DNAPL. Regardless of the absence/presence and/or form the DNAPL is in at the Site, the overall mass estimate provides a reasonable order of magnitude estimate of mass likely present at the Site.*

Section B

1. Slide 53 (SZ Technology Screening) – Regarding elimination of LDA as an alternative. True that the SZ area is small which could make it cost prohibitive for LDA, but this area is totally accessible and, considering the performance of LDA projects locally that have shown >95% efficiency over time, it may be worth considering since the likelihood of enhanced effectiveness could out-weigh the negative aspect of a higher cost. At a minimum, it would be nice to understand the costs associated with LDA compared to other technologies, especially considering the performance.

   *Response: We do not feel that LDA is an appropriate technology for this site based on the following: (i) the technology is better suited for source zones with significant DNAPL mass and mass stored in low permeability zones; (ii) access at the site is difficult due to buildings and storage of large pieces of equipment and conex boxes; and (iii) settling at the site after LDA implementation could result in damage to buildings or loss of storage area for the facility.*

2. Slide 53 (SZ Technology Screening) – Air Sparge Retained: It is evident that there is a low permeable zone somewhere around 40 ft bls which is possibly holding DNAPL. Will Air Sparging be able to effectively permeate through this zone and access the source mass that may be dispersed in diffusion limited zones? This has historically been an issue with sites that rebound following the use of pump and treat and air sparge technologies. If you have already compared the CRHE lithology to other sites where Air Sparging is effective and found that the CRHE lithology is favorable, a statement to that effect would be helpful. If not, the additional lithologic boring suggested above would be helpful, or consider whether a pilot test is needed.

*<u>Response</u>: The lithology borings collected at CRHE did not indicate any low permeability zone above approximately 50 ft BLS. We do believe that air sparging will effectively treat the mass at this site, if the system is installed and operated properly. Additional soil borings can be collected as part of the Step 3 EE to assure the sparge screens are set in the appropriate locations.*

3. Slide 58 – Air Sparge and Bioremediation are listed as scalable to larger treatment areas. Please confirm that other combined technologies, such as EZVI and Bioremediation, will also be looked at for scaling to larger zones.

*<u>Response</u>: EZVI was only going to be evaluated in the area with TCE concentrations greater than 1% solubility EZVI will not be considered for scaling to larger zones due to the elevated cost which would be anticipated in a larger area.*

* * * * * *

# APPENDIX D

# STEP 2 FOR HS1
# ENGINEERING EVALUATION ADP
# (electronic copy only)

Geosyntec consultants

# Contractor's Road Heavy Equipment (CRHE) Area (SWMU055)

## Step 2 Engineering Evaluation – Hot Spot 1

February 2014

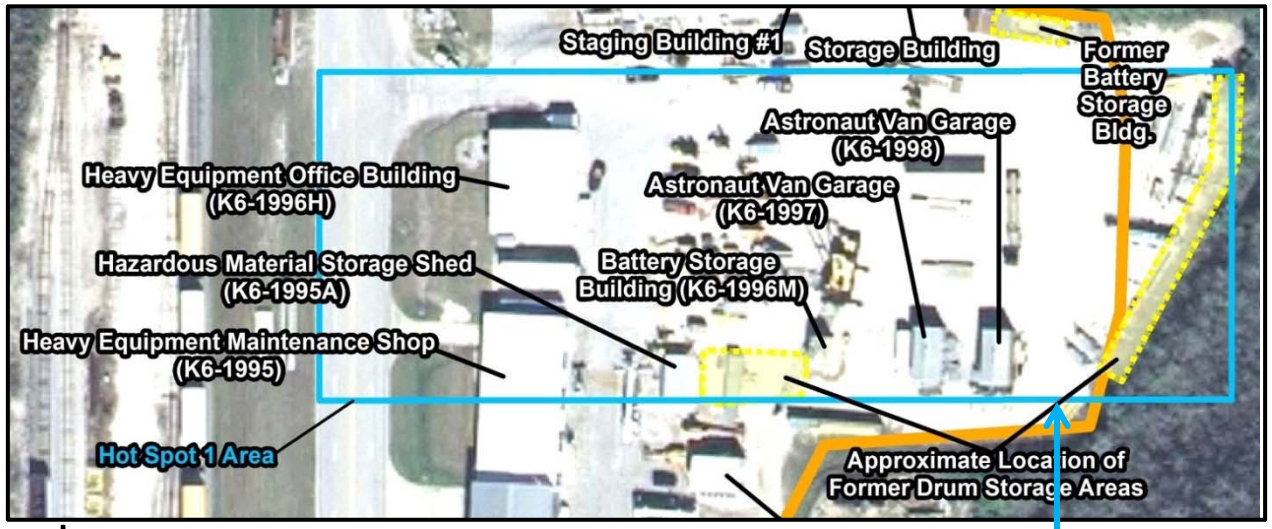
# Presentation Outline

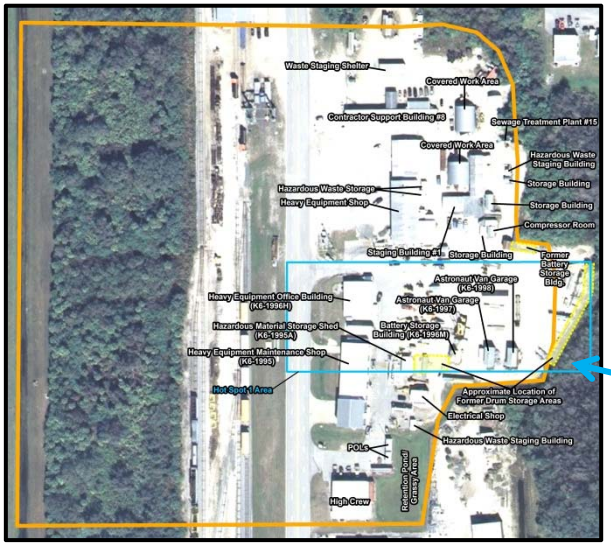
- Site history and background
- Summary of Step 1 Engineering Evaluation (EE)
- Data gaps
- Technology evaluations
- Recommendations and proposed path forward

# Site History and Background
## Site Location

# Site History and Background
## Site Overview

- HS1 features:
  - About 3 acres
  - Paved and gravel
  - Underground utility corridor east of Contractor's Road
  - Thick road base in northern part of HS1
  - Overall 10xNADC Plume runs beneath K6-1996H and Contractor's Road
  - Heavy equipment (up to 300,000 lbs) transported and stored in the area



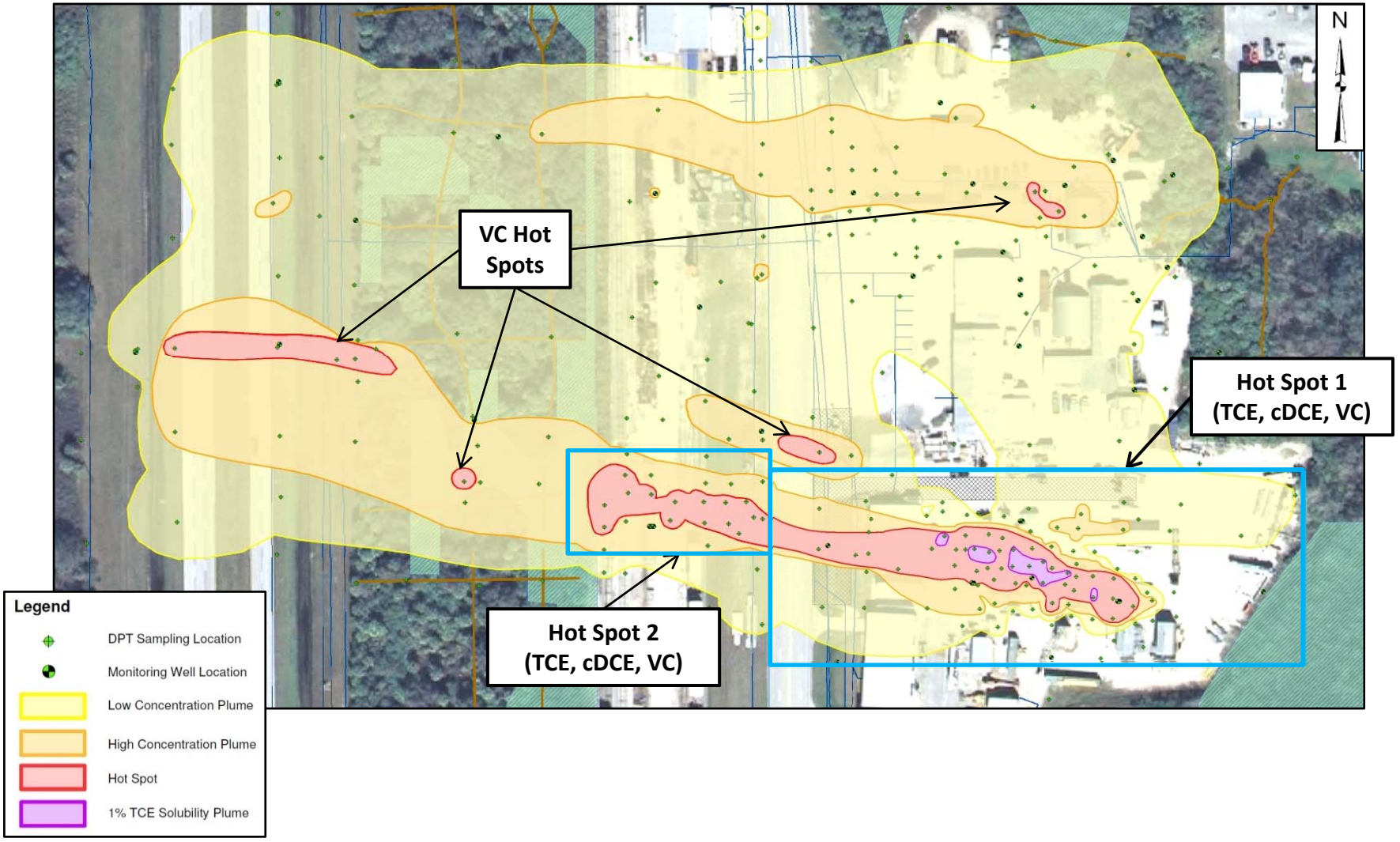



Hot Spot 1 Area

# Site History and Background

- 1994: Preliminary assessment (EG&G, Inc.)
- 1997-1999: RFI (HSW, Inc.)
- 2000: Corrective Measures Study (CMS) (HSW, Inc.)
- 2000 – 2005: Semi-annual groundwater sampling in 7 wells
- 2005 – 2009: Site incorporated into VAB LTM program
- 2010 May: Discontinued LTM until assessment is complete
- 2009 – 2013: Supplemental site assessment
- 2012 June: Site-wide Step 1 EE
  - Additional sampling recommended and is on-going
- 2013 December: Hot Spot 1 Step 1 EE
  - Source Zone (TCE greater than 11,000 µg/L – 1% solubility): recommended evaluation of bioremediation, emulsified zero valent iron (EZVI), and air sparge/soil vapor extraction (AS/SVE)
  - Overall CVOC 10xNADC Plume: recommended evaluation of Bio, EZVI with Bio, and AS/SVE

# Site History and Background
## Overall Site and Identification of Hot Spots



# Goals of Presentation

- Goals of Presentation
  - Present Step 2 Engineering Evaluation
  - Obtain team consensus on treatment area (Overall 10xNADC or Source Zone) and technology for Interim Measures (IM)

# Hot Spot 1 Step 1 EE Summary
# Lithology Cross Section

Approximate location of western portion of HS1

A

A'

SB0005

SB0007

SB0006

Elevation

Medium sand (SP) and silty sand (SM)

Fine to medium sand (SP/SW) with shell hash

Fine-grained sand (SP) with 30 to 50% shell

Silty sand (SM) with clay and up to 10% shells

Fine silty sand (SM) with 20 to 30% shell fragments

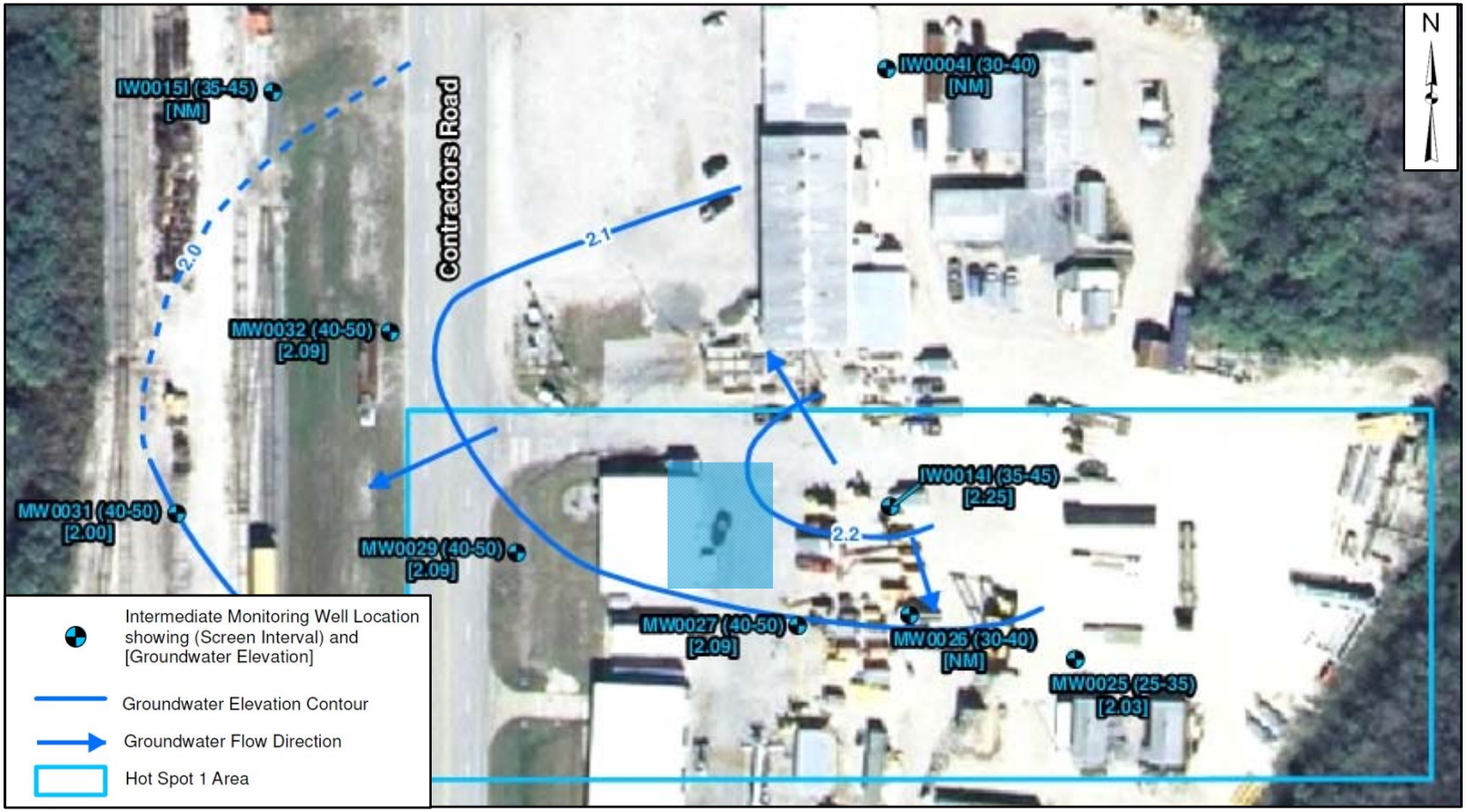
# Hot Spot 1 Step 1 EE Summary
# Groundwater Flow and Hydraulic Conductivity

- Groundwater flow in the intermediate zone is generally to the west
- Depth to groundwater ranges from 2 to 6 ft BLS
- Hydraulic conductivity (K) is 7.6 ft/d (2,774 ft/yr) - from specific capacity tests on shallow and intermediate wells during RFI

| GW Zone | Approximate Depth (ft BLS) | Average Gradient (ft/ft) | Estimated GW Flow Velocity (ft/y) |
|---|---|---|---|
| Shallow | <15 | 0.002 | 28 ft/y* |
| Intermediate | 15 to 55 | 0.005 | 69 ft/y* |
| Deep | >60 | 0.002 | -- |

* Actual groundwater flow velocity is likely highly variable with higher K plume transport intervals and lower K mass storage intervals.

# Hot Spot 1 Step 1 EE Summary
# Groundwater Flow and Hydraulic Conductivity




Note:

1. Screen interval is presented in feet below land surface (ft BLS).
2. Elevation is presented in ft and is referenced to the North American Datum of 1988.

# Hot Spot 1 Step 1 EE Summary Delineation Summary

- Impacts generally from 8 to 50 ft BLS
- Max concentrations (µg/L)
  - TCE = 160,000 (DPT72, 36 to 40 ft BLS)
  - cDCE = 110,000 L (DPT200, 26 to 30 ft BLS)
    - L indicates the value exceeded the calibration range
  - VC = 19,000 (DPT200, 31 to 35 ft BLS)
- SZ contaminant mass is mainly 30 to 46 ft BLS (60% of mass in that zone within 36 to 40 ft BLS)
- Lithology
  - primarily sand until ~45 to 50 ft BLS (based on visual observations, MIP data, and DPT data)
  - below ~45 to 50 ft BLS, lithology is silty sand, with varying amounts of clay (semi-confining layer)
- Summary maps presented in ADP – Step 1 EE attached as reference which includes all CVOC interval maps

# Hot Spot 1 Step 1 EE Summary
# TCE Plume

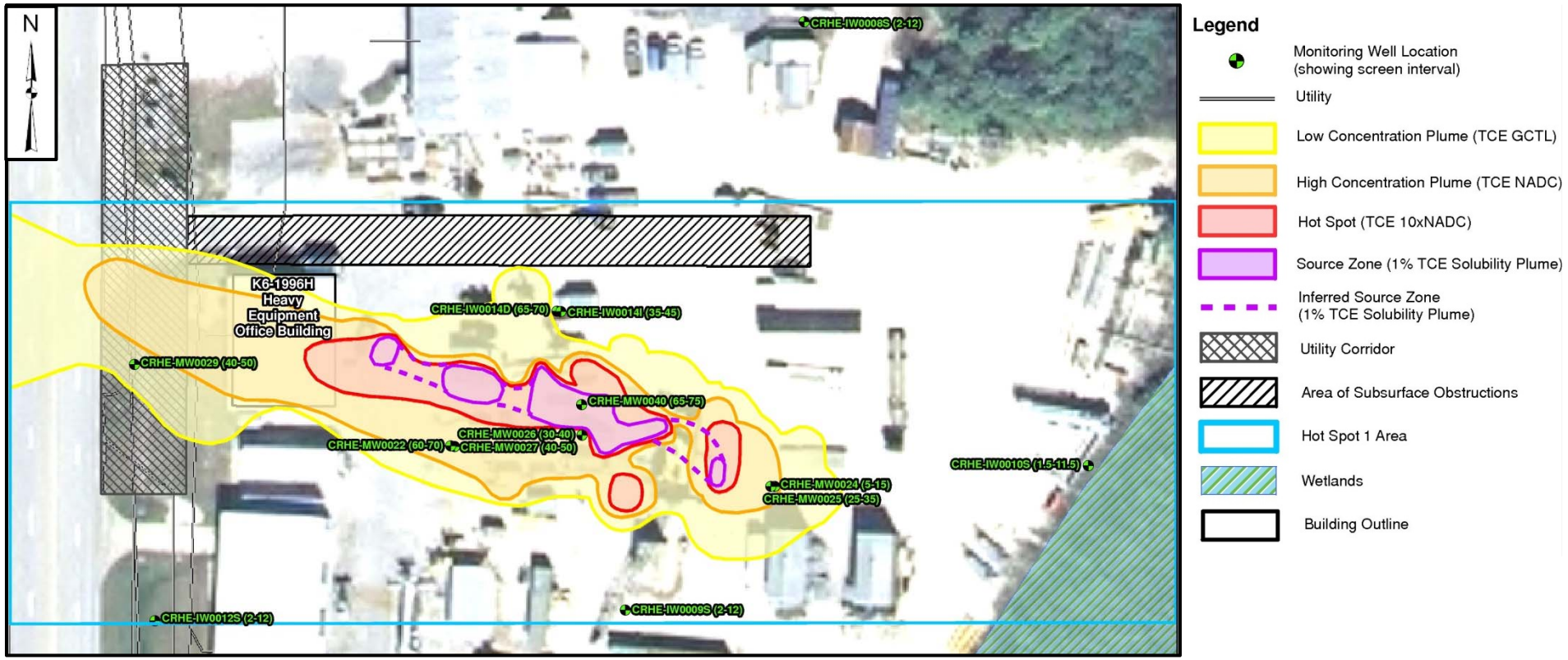



Figure 1

- The Source Zone (SZ) is defined as the area with TCE greater than 1% solubility (11,000 µg/L)
- Inferred SZ contour creates a single, more conservative SZ evaluated for treatment in consideration of likely subsurface distribution

# Hot Spot 1 Step 1 EE Summary
# 10xNADC Plumes

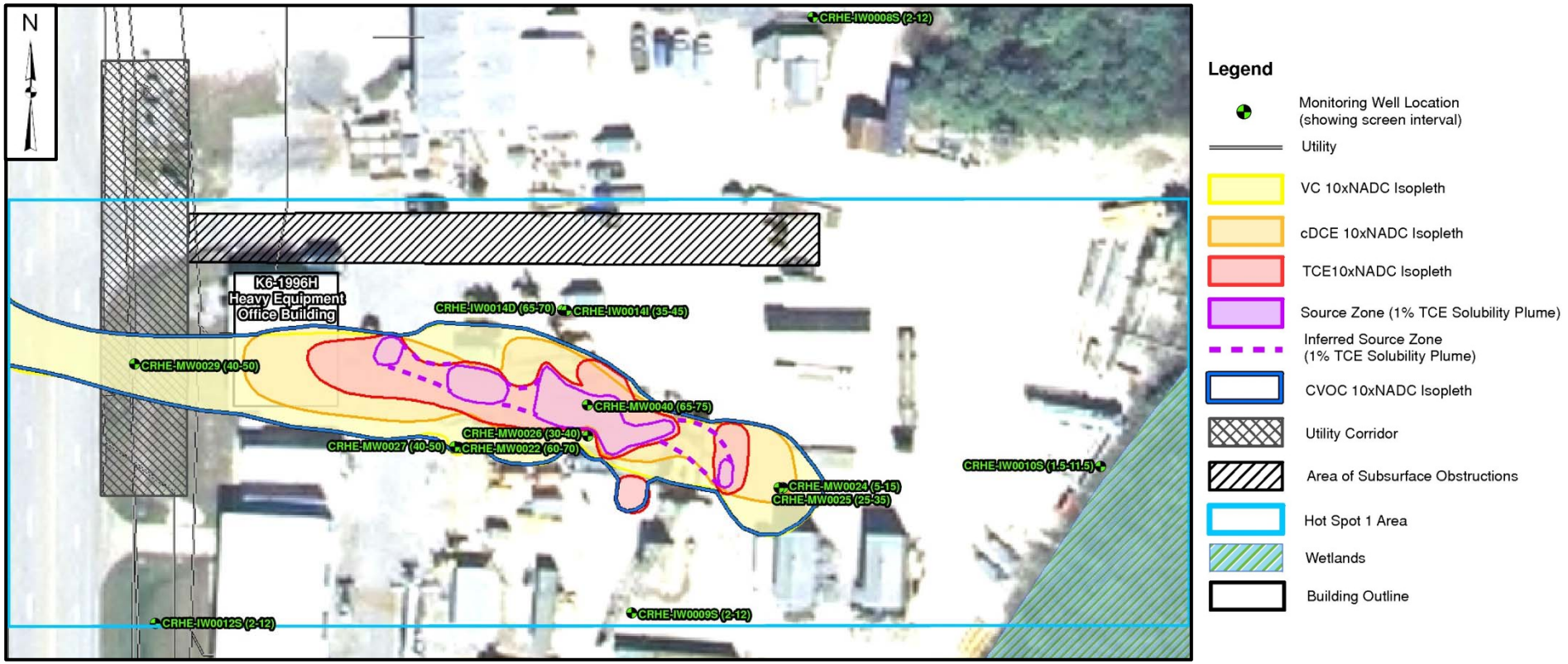
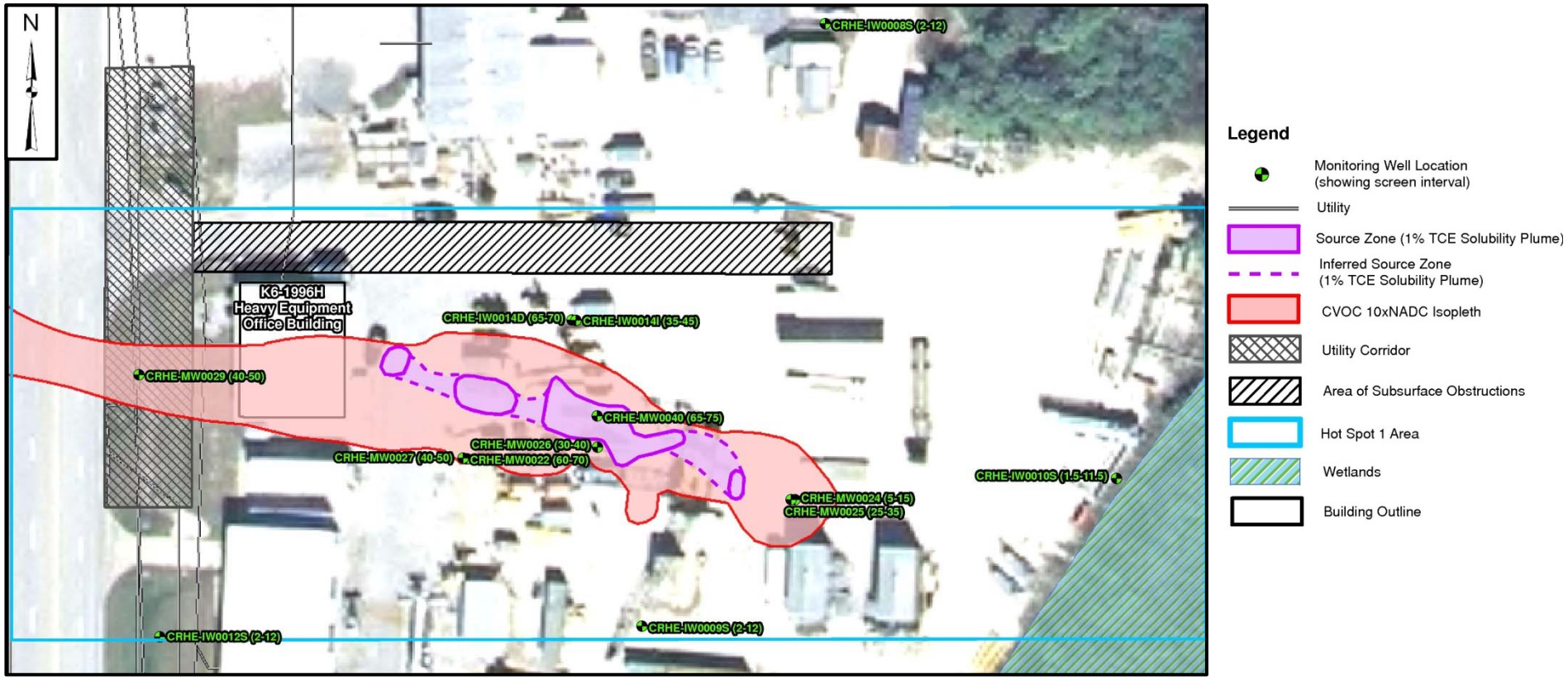



Figure 2

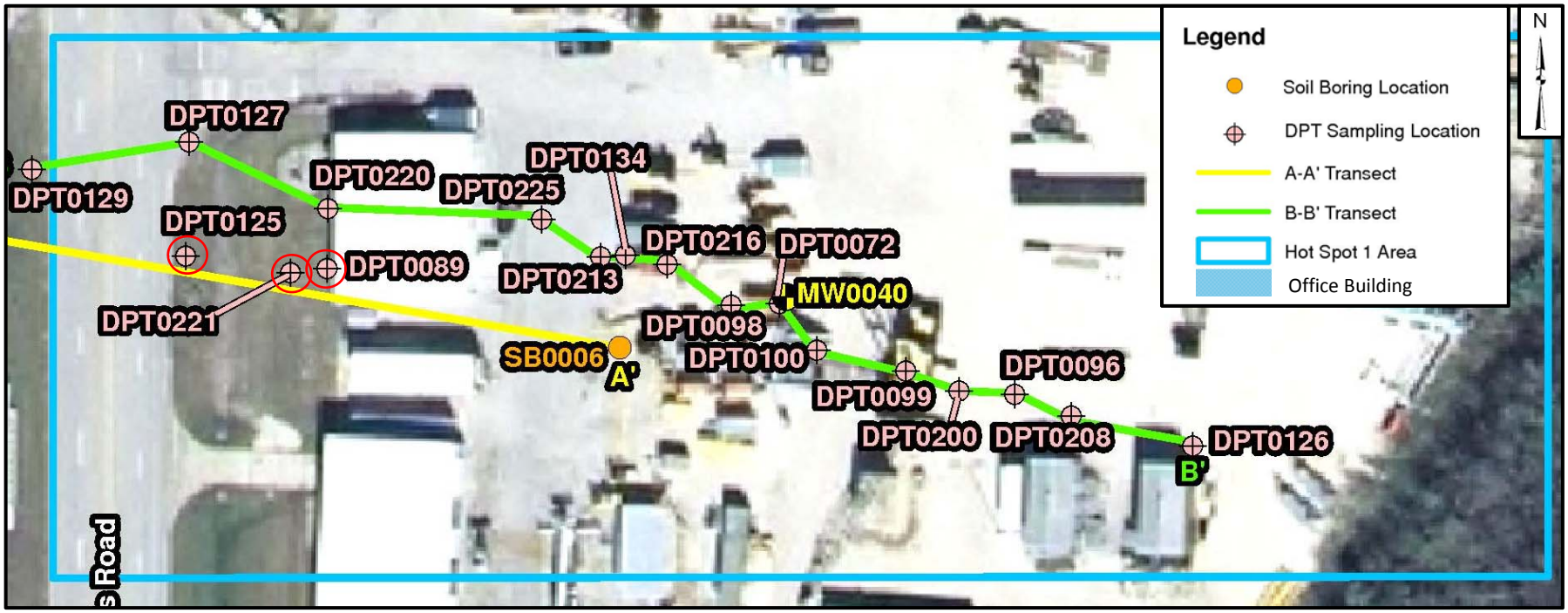
# Hot Spot 1 Step 1 EE Summary
# Overall 10xNADC Plume and Source Zone




- 10xNADC Plume is the area with TCE, cDCE, and VC greater than 10xNADC

Figure 3

# Hot Spot 1 Step 1 EE Summary
# Cross Section Plan View



# Hot Spot 1 Step 1 EE Summary
# CVOC Cross Section

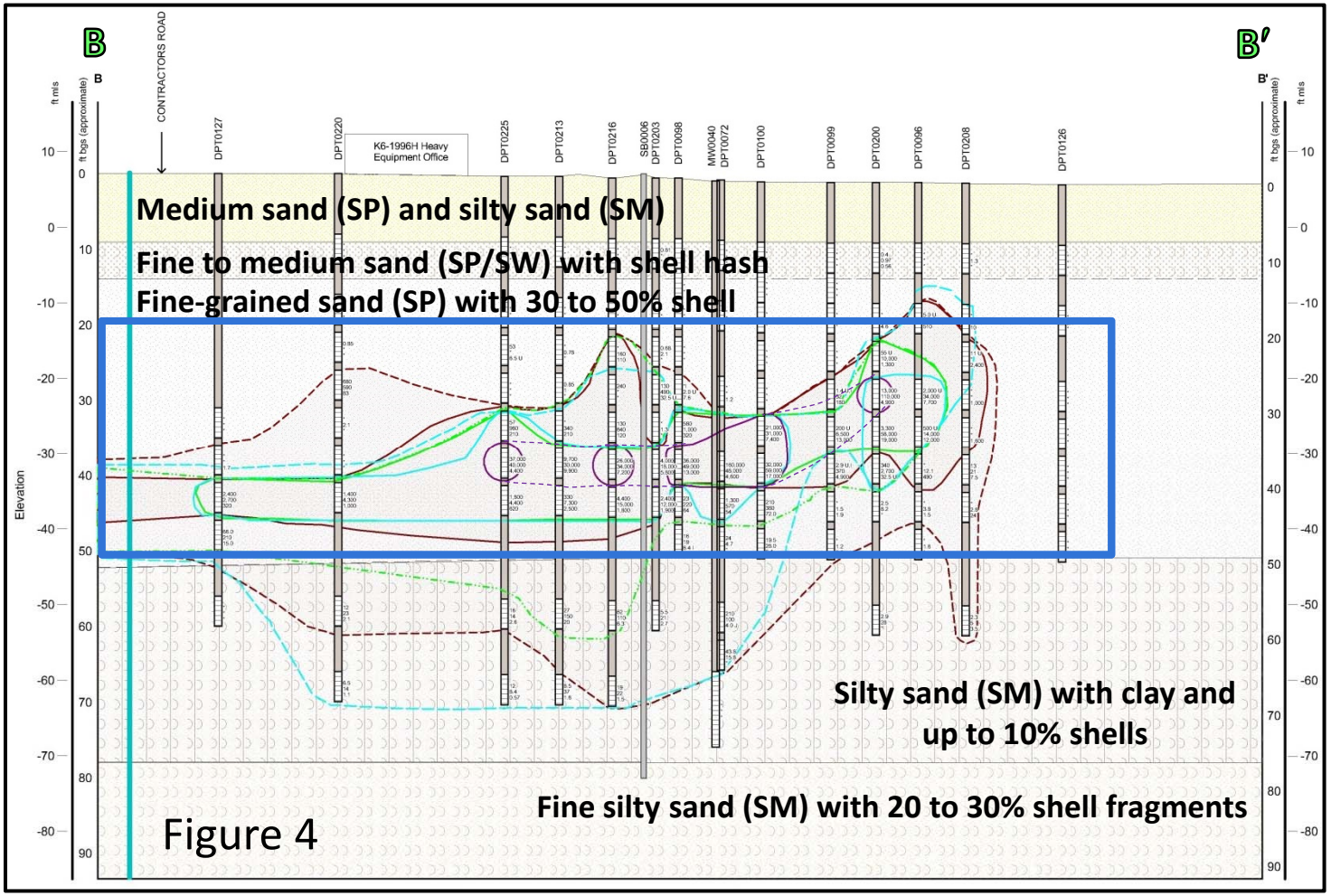



Figure 4

1 µg/L VC (GCTL)
100 µg/L VC (NADC)
Source Zone (1% TCE Solubility Plume)
70 µg/L cDCE (GCTL)
700 µg/L cDCE (NADC)
3 µg/L TCE (GCTL)
300 µg/L TCE (NADC)
Inferred SZ Plume

Approximate treatment interval

# Hot Spot 1 Step 1 EE Summary – Cross Section
# Overall 10xNADC Plume and Source Zone

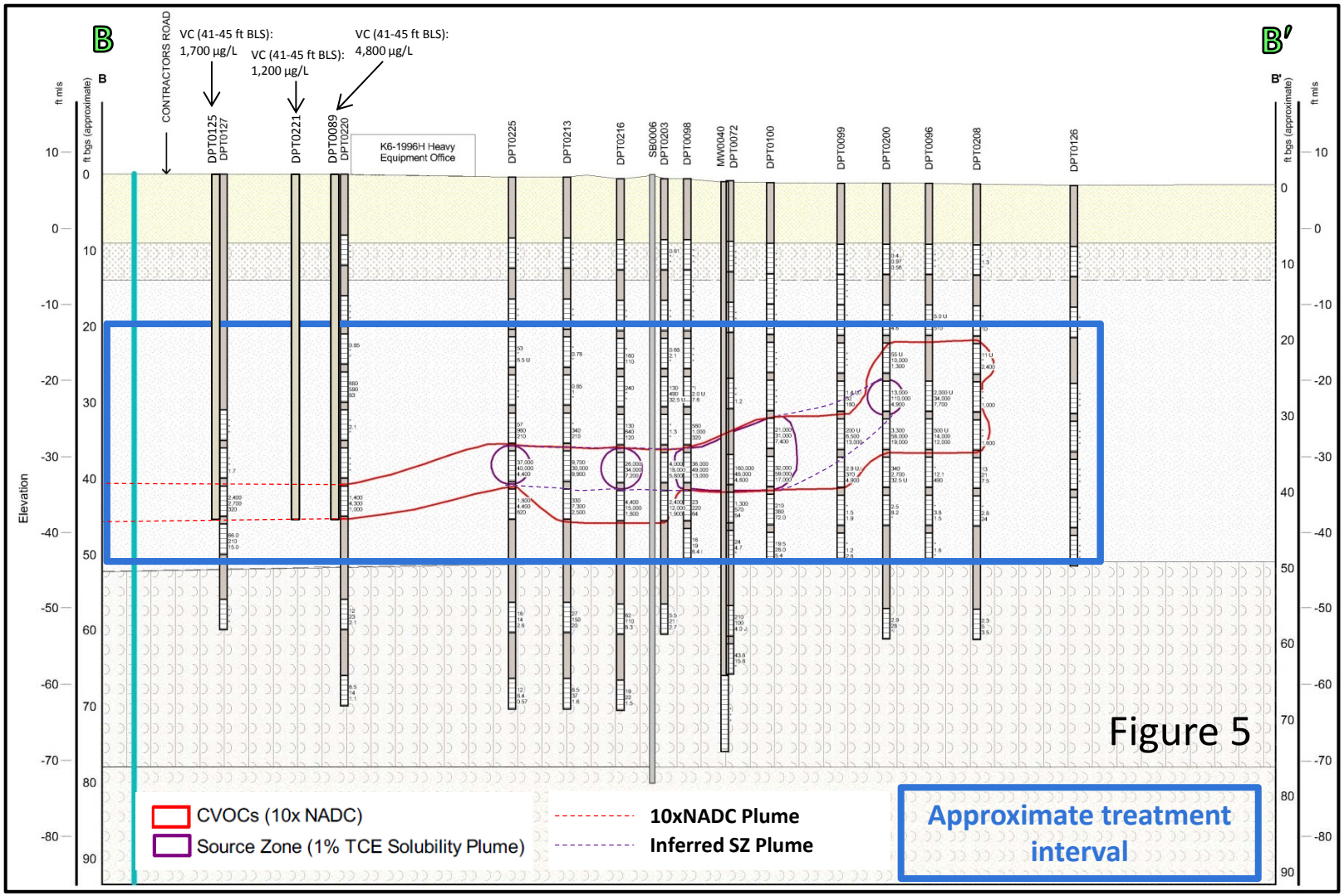



Figure 5

# Response to Comments

TT Comment #1: Slide 16,17 – The inferred source zone is not indicated on the cross section, as it is on the plan view drawings. We suggest that the source zone interpretation also be applied to the cross sections within the Step 2 EE.

*Response: The inferred source zone was added to the cross section in the ADP (Figures 4 and 5).*

Geosyntec consultants

# Hot Spot 1 Step 1 EE Summary Mass Calculations

| | Average Concentration (µg/L) | Source of Average Concentration | Area ($ft^2$) | Thickness (ft) | Pore Volume (L) | Dissolved Mass (lbs) | Equilibrium Soil Concentration (mg/kg) | Sorbed Mass (lbs) | Total Mass (lbs) |
|---|---|---|---|---|---|---|---|---|---|
| 300 µg/L > TCE > 3 µg/L | 52 | Hand Calculated | 34,412 | 25 | 6.09E+06 | 0.7 | 0.02 | 2.1 | 2.8 |
| | 27 | EVS Estimate | --- | --- | 4.17E+06 | 0.2 | 0.01 | 0.8 | 1.0 |
| 3,000 µg/L > TCE > 300 µg/L | 1,314 | Hand Calculated | 17,860 | 10 | 1.26E+06 | 3.7 | 0.63 | 11.3 | 15 |
| | 995 | EVS Estimate | --- | --- | 3.12E+05 | 0.7 | 0.48 | 2.1 | 2.8 |
| 11,000 µg/L > TCE > 3,000 µg/L | 5,947 | Hand Calculated | 5,663 | 10 | 4.01E+05 | 5.3 | 2.9 | 16.2 | 21 |
| | 5,047 | EVS Estimate | --- | --- | 5.01E+04 | 0.6 | 2.4 | 1.7 | 2.3 |
| TCE > 11,000 µg/L | 46,750 | Hand Calculated | 1,742 | 5 | 6.17E+04 | 6.4 | 22 | 19.5 | 26 |
| | 19,701 | EVS Estimate | --- | --- | 4.45E+03 | 0.2 | 9.5 | 0.6 | 0.8 |
| | | | | | Total Dissolved Mass | 1.7 to 16 lbs | Total Sorbed Mass | 5.2 to 49 lbs | |
| | | | | | | | Total TCE Mass | 6.9 to 65 lbs | |
| 700 µg/L > cDCE > 70 µg/L | 236 | Hand Calculated | 31,799 | 25 | 5.63E+06 | 2.9 | 0.03 | 2.5 | 5.4 |
| | 246 | EVS Estimate | --- | --- | 1.24E+06 | 0.7 | 0.03 | 0.6 | 1.2 |
| 7,000 µg/L > cDCE > 700 µg/L | 3,153 | Hand Calculated | 24,829 | 20 | 3.52E+06 | 24 | 0.4 | 21 | 45 |
| | 2,184 | EVS Estimate | --- | --- | 5.81E+05 | 2.8 | 0.3 | 2.4 | 5.2 |
| cDCE > 7,000 µg/L | 26,443 | Hand Calculated | 10,019 | 10 | 7.09E+05 | 41 | 3.5 | 35 | 76 |
| | 14,386 | EVS Estimate | --- | --- | 1.36E+05 | 4.3 | 1.9 | 3.7 | 8.0 |
| | | | | | Total Dissolved Mass | 7.8 to 69 lbs | Total Sorbed Mass | 6.6 to 58 lbs | |
| | | | | | | | Total cDCE Mass | 14 to 127 lbs | |
| 100 µg/L > VC > 1 µg/L | 18 | Hand Calculated | 86,249 | 30 | 1.83E+07 | 0.7 | 0.001 | 0.3 | 1.1 |
| | 10 | EVS Estimate | --- | --- | 1.18E+07 | 0.2 | 0.001 | 0.1 | 0.4 |
| 1,000 µg/L> VC > 100 µg/L | 387 | Hand Calculated | 33,977 | 20 | 4.81E+06 | 4.1 | 0.03 | 2.0 | 6.1 |
| | 321 | EVS Estimate | --- | --- | 1.13E+06 | 0.8 | 0.02 | 0.4 | 1.2 |
| VC > 1,000 µg/L | 3,672 | Hand Calculated | 18,731 | 15 | 1.99E+06 | 16 | 0.28 | 7.8 | 24 |
| | 2,375 | EVS Estimate | --- | --- | 5.99E+05 | 3.1 | 0.18 | 1.5 | 4.7 |
| | | | | | Total Dissolved Mass | 4.2 to 21 lbs | Total Sorbed Mass | 2 to 10 lbs | |
| | | | | | | | Total VC Mass | 6.2 to 31.1 lbs | |
| | | | | | | | Total Mass | 27 to 223 lbs | |

**Notes:**

1. Pore volume for EVS calculations was estimated via EVS and for the hand calculations was estimated using area and depth provided assuming a porosity of 0.25.
2. Soil density assumed to be 100 $lb/ft^3$.
3. Foc assumed to be 0.003 which was taken from estimate provided by Tetra tech in Step 1 ADP for Hot Spot 2 for a sand with shell.
4. Koc data calculated from Sawyer, McCarty and Parkin, 5th Edition (2002); TCE = 165.7 L/kg, cDCE = 45.6 L/kg and VC = 26.3 L/kg.

# Hot Spot 1 Step 1 EE Summary
# Estimated Source Zone CVOC Mass

| SZ CVOC | Average Concentration (µg/L) | GIS Area ($ft^2$) | Thickness (ft) | Volume ($ft^3$) | Pore Volume (L) | Dissolved Mass (lbs) | Equilibrium Soil Concentration (mg/kg) | Sorbed Mass (lbs) | Total Mass (lbs) |
|---|---|---|---|---|---|---|---|---|---|
| TCE | 46,750 | 3,049 | 5 | 15,246 | 1.08E+05 | 11.1 | 22.5 | 34.2 | 45.3 |
| cDCE | 26,443 | 3,049 | 5 | 15,246 | 1.08E+05 | 6.2 | 3.5 | 5.3 | 11.6 |
| VC | 3,672 | 3,049 | 5 | 15,246 | 1.08E+05 | 0.86 | 0.28 | 0.43 | 1.3 |
| | | | | | **Total Dissolved Mass :** | **18 lbs** | **Total Sorbed Mass:** | **40 lbs** | |
| | | | | | | | | **Total SZ Mass:** | **58 lbs** |

1. Porosity assumed to be 0.25.
2. Area is the Source Zone area , which includes the inferred area (total of 0.07 acres). This area is larger than what was presented in the mass calculations for the Step 1 EE ADP.
3. Soil density assumed to be 100 $lb/ft^3$ .
4. $F_{oc}$ assumed to be 0.003 which was taken from an estimate provided by Tetra Tech in Step 1 ADP for Hot Spot 2 for a sand with shell.
5. $K_{oc}$ data calculated from Sawyer, McCarty and Parking, $5^{th}$ Edition (2002): TCE = 165.7 L/kg, cDCE = 45.6 L/kg and VC = 25.3 L/kg.
6. Volume calculated from GIS area of TCE source zone impacts and inferred depth based on sampling results.
7. Average groundwater concentrations calculated from DPT groundwater sampling results.
8. Total mass is rounded to nearest whole number.

# Hot Spot 1 Step 1 EE Summary
# Estimated 10xNADC Plume CVOC Mass

| SZ CVOC | Average Concentration (µg/L) | GIS Area ($ft^2$) | Thickness (ft) | Volume ($ft^3$) | Pore Volume (L) | Dissolved Mass (lbs) | Equilibrium Soil Concentration (mg/kg) | Sorbed Mass (lbs) | Total Mass (lbs) |
|---|---|---|---|---|---|---|---|---|---|
| TCE (SZ) | 46,750 | 3,049 | 5 | 15,246 | 1.08E+05 | 11.1 | 22.5 | 34.2 | 45.3 |
| TCE (no SZ)* | 5,947 | 2,614 | 10 | 26,136 | 1.85E+05 | 2.4 | 2.9 | 7.5 | 9.9 |
| cDCE | 26,443 | 10,019 | 10 | 100,188 | 7.09E+05 | 41.3 | 3.5 | 35.0 | 76.4 |
| VC | 3,672 | 18,731 | 15 | 280,962 | 1.99E+06 | 16.1 | 0.28 | 7.8 | 24.0 |
| | | | | | **Total Dissolved Mass :** | **71 lbs** | **Total Sorbed Mass:** | **85 lbs** | |
| | | | | | | | | **Total 10xNADC Plume Mass:** | **156 lbs** |

1. Porosity assumed to be 0.25.
2. Soil density assumed to be 100 lb/$ft^3$.
3. Areas are the area of 10xNADC for each constituent and are presented on Figure 2.
4. $F_{oc}$ assumed to be 0.003 which was taken from an estimate provided by Tetra Tech in Step 1 ADP for Hot Spot 2 for a sand with shell.
5. $K_{oc}$ data calculated from Sawyer, McCarty and Parking, 5th Edition (2002): TCE = 165.7 L/kg, cDCE = 45.6 L/kg and VC = 25.3 L/kg.
6. Volume calculated from GIS area and inferred depth based on sampling results.
7. * indicates that the TCE area is the 10X NADC area minus the SZ area (5,663 $ft^2$ – 1,742 $ft^2$).
8. Average groundwater concentrations calculated from DPT groundwater sampling results.
9. Total mass is rounded to nearest whole number.

# Response to Comments

TT Comment #2: Slide 18/19 (new slide 20/21) – The mass values deviate significantly from what was presented in the Step 1 EE. We suggest providing information to what influenced the increase in calculated mass from the Step 1 to 2 EE, the Geosyntec presentation response to Tetra Tech's Step 1 EE comment regarding mass does not parallel what is provided in the Step 2 EE.

*Response: The mass estimates from the Step 1 ADP have been added to the ADP. For the source zone, the TCE mass estimate was modified from what was presented in the Step 1 because the area increased (see note 2 of the table – increase from 1,742 sq ft to 3,049 sq ft). The mass of TCE in the source zone from the Step 1 was approximately 26 lbs (using the hand calculated values to be conservative) and the revised mass of TCE presented in the Step 2 is 45 lbs. The cDCE and VC mass estimates were not presented for the source area in the Step 1 ADP.*

*The mass estimate presented for the 10XNADC area is the same as the mass estimate that was presented in the revised Step 1 for cDCE and VC (using the hand calculated values, which are the most conservative). The TCE mass estimate for the 10XNADC area was modified because the area of the source zone increased. In the Step 1, the mass estimates were presented as "rings" and not totals for the areas, so the 10XNADC estimate did not include the source zone TCE mass.*

# Data Gaps
## Geochemical Parameters

- Geochemical parameters for Source Zone and 10xNADC Plume
  - DO generally from 0.13 to 0.40 mg/L
  - ORP generally from negative 70 to negative 29 mV
  - pH generally ranged from 6.8 to 7.3 SU
- Parameters from data gap sampling (December 2013; CRHE-MW0025 and CRHE-MW0029)
  - *Dehalococcoides:* $1x10^7$ and $2x10^7$ gene copies per liter
  - *Vinyl chloride reductase*: $3x10^6$ and $8x10^6$ gene copies per liter
  - Methane: 1,180 and 1,260 µg/L
  - Ethene: 31.5 and 672 µg/L
  - Ethane: 15.5 and 382 µg/L
  - Sulfate: non-detect and 7.8 mg/L
  - Sulfide: non-detect and 0.48 mg/L
- Strong evidence that biologically mediated reductive dechlorination is occurring at the site

# Data Gaps
## 1,4-Dioxane Results

- 1,4-dioxane is not an issue for remedial decision making
- Will include 1,4-dioxane in monitoring program

- MW25 (25 to 35 ft BLS)
  - 14.5 µg/L
  - Exceeds GCTL (3.2 µg/L)
- MW29 (40 to 50 ft BLS)
  - 1.3 I µg/L
- IW19I (35 to 45 ft BLS)
  - 1 U µg/L
- MW35 (40 to 50 ft BLS)
  - 3.9 µg/L
  - Exceeds GCTL (3.2 µg/L)

# Data Gaps
## Facility Conditions

- Transformer identified north of the Heavy Equipment Office Building
  - Requested information from URS Electrical SE – looking into transformer condition and availability of space for AS/SVE systems
- Contacted NASA's utility locators about working in utility corridor
  - Will be allowed to drill and trench
  - Must hand auger to water table before drilling
  - Trenches must be hand dug
- Contacted with NASA about working in the road way
  - Will have to develop an MOT to temporarily shut down roadway for installation of wells or DPT injection (only for 10xNADC treatment area)
- Facility manager provided information that maximum weight of equipment onsite is approximately 300,000 lbs
  - Load per axle could be as high 65,000 pounds per axle
  - Vault boxes meet DOT H-20 requirements (8,000 lb front axle and 32,000 lb rear axle)

# Data Gaps
## Supplemental Sampling

- Supplemental DPT groundwater sampling will be performed in 2014 as part of HCP and LCP delineation
  - Samples will be collected from under the Heavy Equipment Office Building and from within the roadway (Contractor's Road)
  - This data will be incorporated into the design
    - IM Design Report or the Implementation Work Plan

# Hot Spot 1 Corrective Action Objective

- CAO: Reduce CVOC concentrations within the treatment area to less than NADCs or concentrations which will support Long Term Monitoring
- Treatment areas
  - Overall 10xNADC
  - Source Zone
- NASA may elect to continue IM to GCTLs and/or some alternative asymptotic level based upon performance

# Response to Comments

Jacobs Comment #1: Slide 24 (new slide 27) – For the CAO, please clarify what is meant by "concentrations which will support Long Term Monitoring." Since the CAO applies to a hot spot and source zone, it seems an HCP action would be a potential follow-on step as overall site cleanup progresses.

*Response: With the existing CAO, NASA, the KSC Remediation Team, and the A&E have the flexibility to evaluate performance and base a recommendation for follow-up action (if necessary) on the performance. If the CAO is to progress the site to an HCP action, it does not provide the same level of flexibility and decision making based on implementation results*.

# Alternatives Evaluated

- Source Zone
  - 1A – Air sparge and soil vapor extraction (AS/SVE)
  - 2A – Bioremediation using emulsified oil (EOS)
  - 3A – Emulsified zero valent iron (EZVI)

- 10xNADC Plume
  - 1B – AS/SVE
  - 2B – Bioremediation using EOS with groundwater recirculation and passive venting beneath the building
  - 3B – EZVI in SZ and bioremediation (10X NADC) using EOS with groundwater recirculation and passive venting beneath the building

- All alternatives include institutional controls

# 1A – Air Sparge and SVE SZ

# SZ Air Sparge and SVE Conceptual Design

- Installation of 13 air sparge (AS) wells via HSA
  - Screened from ~48 to 50 ft BLS
  - Spacing between wells of approximately 20 ft with an assumed ~20 ft ROI
    - Conservative conceptual spacing with robust overlap since in area of probable DNAPL
  - 25-hp AS system operating one of two zones at a time
  - Use mobile air sparge trailer #3 (conservative 25 hp compressor)
    - Assumes electrical hookup available on site (transformer SS/USS-1103)
    - Capable of 190 scfm and 31.9 psi (estimated need ~ 30 psi to most distal well)
  - Anticipated flow rate of 5 to 10 scfm per well
- Purchase of SVE system – 11 SVE chambers installed to capture vapors in treatment area
  - 10-hp SVE system operating one of two zones at a time
  - Anticipated flow rate of 20 to 30 scfm per chamber
  - Granular activated carbon (GAC) treatment of recovered vapors
  - SVE chambers (to maximize air flow) branch off central line through SZ

Geosyntec consultants

# Response to Comments

TT Comment #5: Slide 27/32/35 (new slide 31/39/46) – Is there an assumed vacuum to be applied at the horizontal SVE points that was used for SVE sizing? We also suggest including a variable frequency drive on the blower/fan in order to dial in the blower to site conditions and/or perform SVE pilot testing, if alternatives with SVE are selected. Additionally, it is not clear in the details if the chambers shown on Slide 32 contain valve boxes/vaults in order to individually control the chambers. Please clarify.

*Response: It is anticipated that the SVE system will include a blower capable of greater than 360 scfm and operate at approximately 20-inches of water to minimize the extraction of water (likely a 15 Hp Ametek Rotron Regenerative Blower). We agree that a variable frequency drive blower should be considered during the design phase. A typical detail is provided for an SVE chamber; the details about operation of the chambers will be decided during the design, if AS/SVE is selected. Geosyntec has designed SVE chambers with remote valving (typical at drycleaners where the chambers are installed beneath the drycleaner slab) and with valving within vault boxes. The specifics of the valving orientation associated with the SVE chambers is a design detail.*

# SZ Air Sparge and SVE Conceptual Design

- DPT groundwater sampling included (3 days)
  - To evaluate system optimization or shut down
- Minimum monthly O&M (daily for first three days, weekly first month, monthly thereafter)
- Performance monitoring
  - Installation of 10 monitoring wells
  - Quarterly monitoring for VOCs

# Response to Comments

TT Comments #3: Slide 28 (new slide 33) – Due to the nature of air sparging (AS) near occupied buildings, an ambient and soil vapor extraction (SVE) air sampling program should be integrated into the conceptual design (this comment is relevant for all AS alternatives). Please include this consideration and costs into the Step 2 EE.

*Response: We agree that an ambient air sparging program should be implemented, if AS/SVE is selected and implemented. A detailed description of the sampling plan will be provided in the Step 3 and costs are minimal and are considered to be included in the O&M cost provided.*

# SZ Air Sparge and SVE Conceptual Design Layout

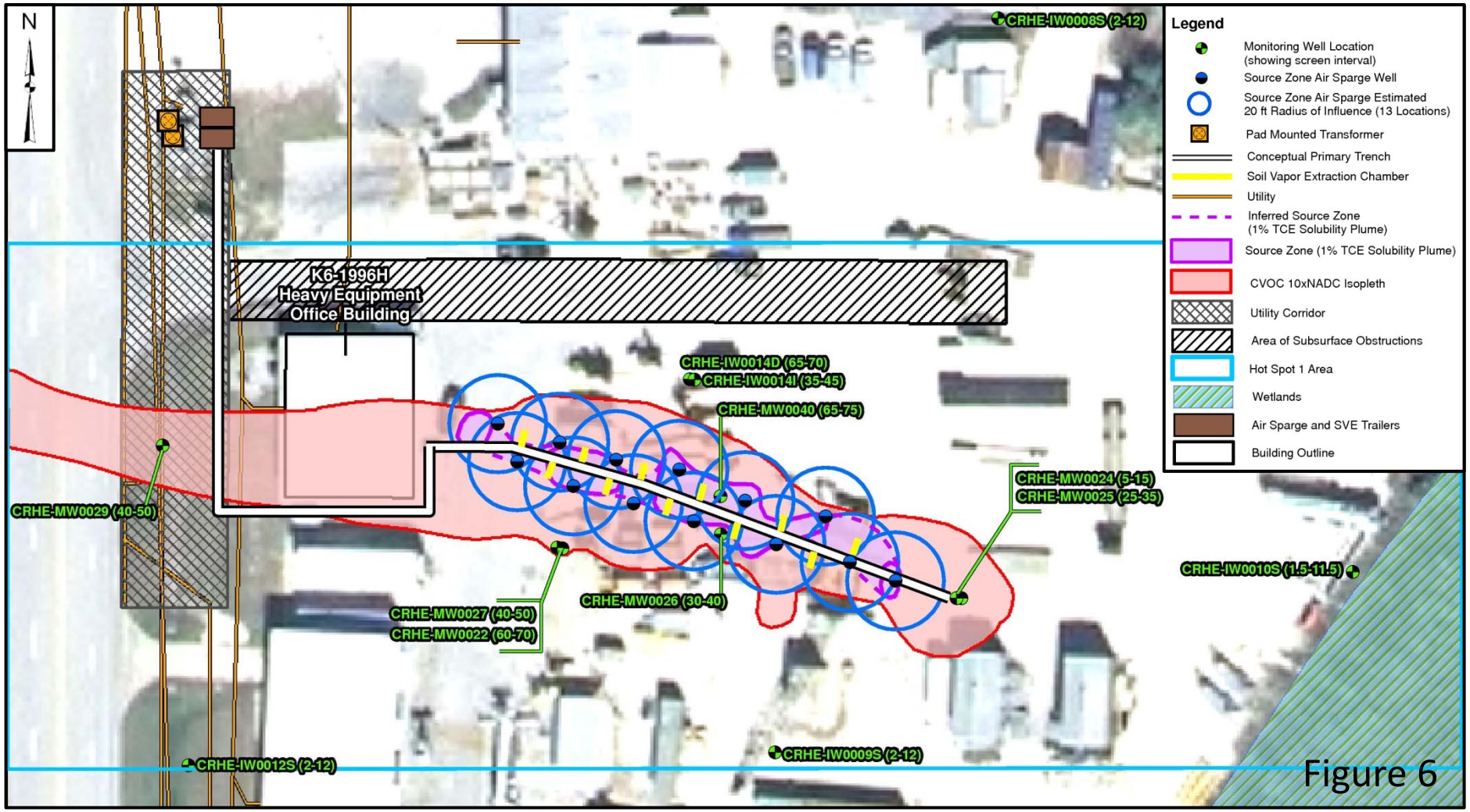
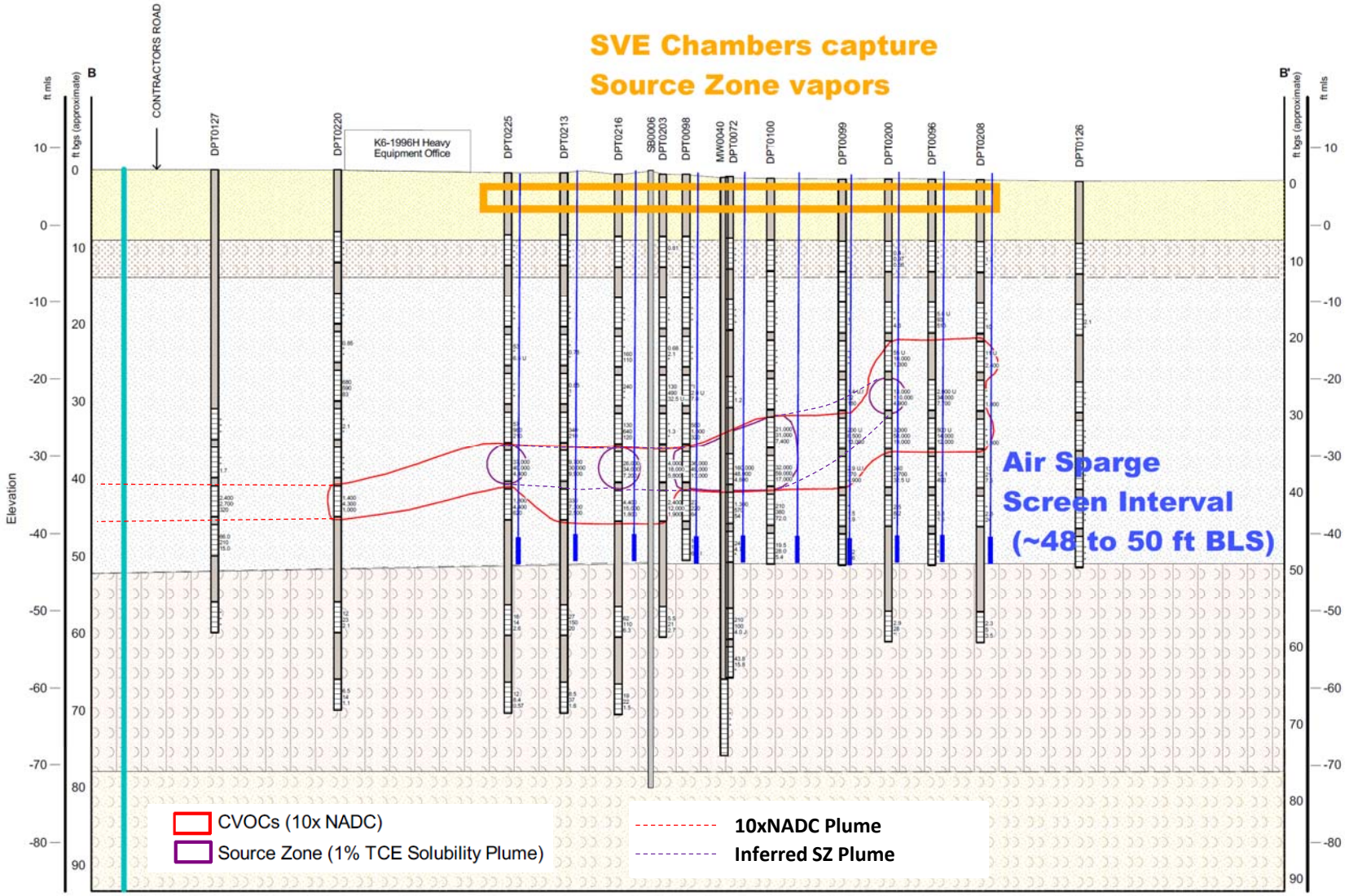



Figure 6

# SZ Air Sparge Conceptual Design Layout

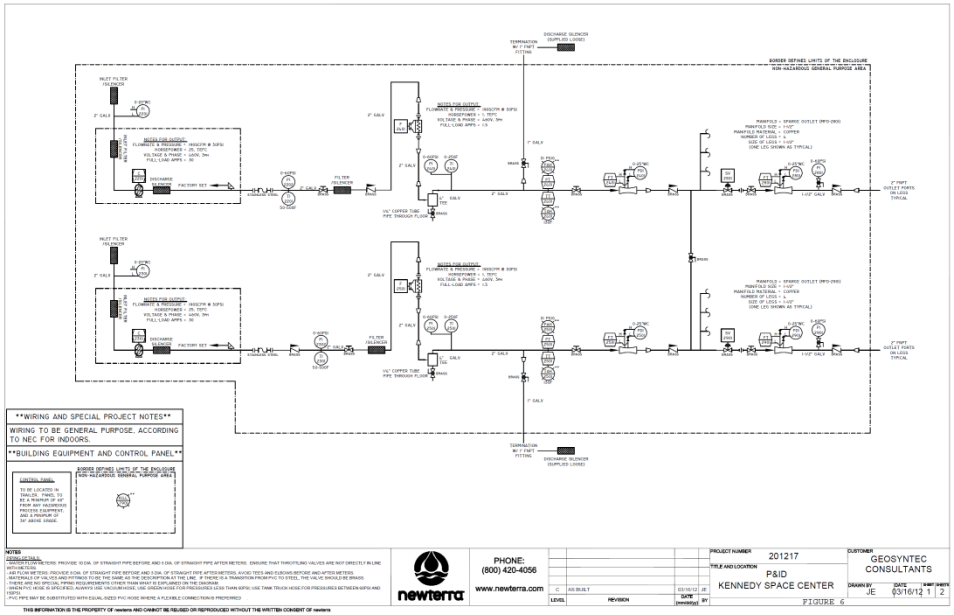


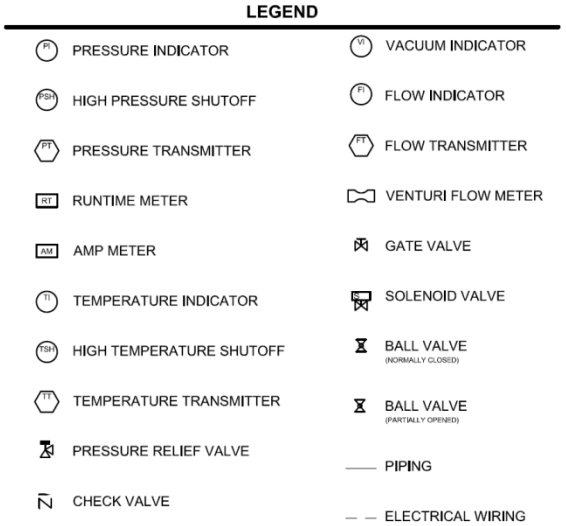
# Response to Comments

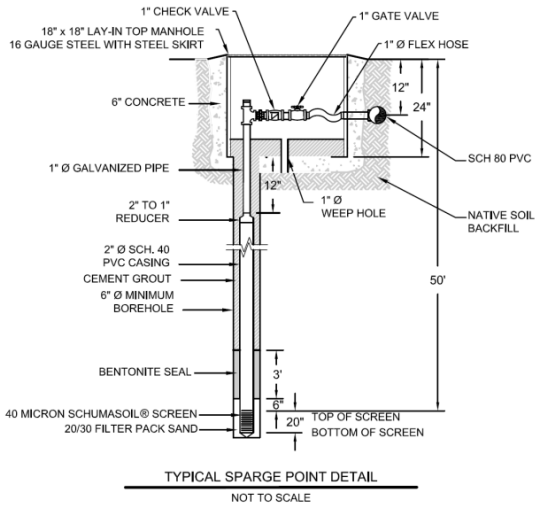
TT Comment #4: Slide 30/36 – While the horizontal layout for the AS network is very conservative, it does not appear the vertical distribution of AS points is tailored to site conditions. In the source zone area near DPT0200, we suggest installing shallower AS wells or nesting wells to address the source zone at least 20 feet above the proposed screen intervals in order to provide a more focused approach (this comment is relevant for all source zone AS alternatives).

*Response: We feel that the current vertical layout is adequate for a conceptual design and the use of nested wells would be considered as part of the design, if AS/SVE is selected.*

# SZ Air Sparge and SVE Conceptual Process Flow Diagram



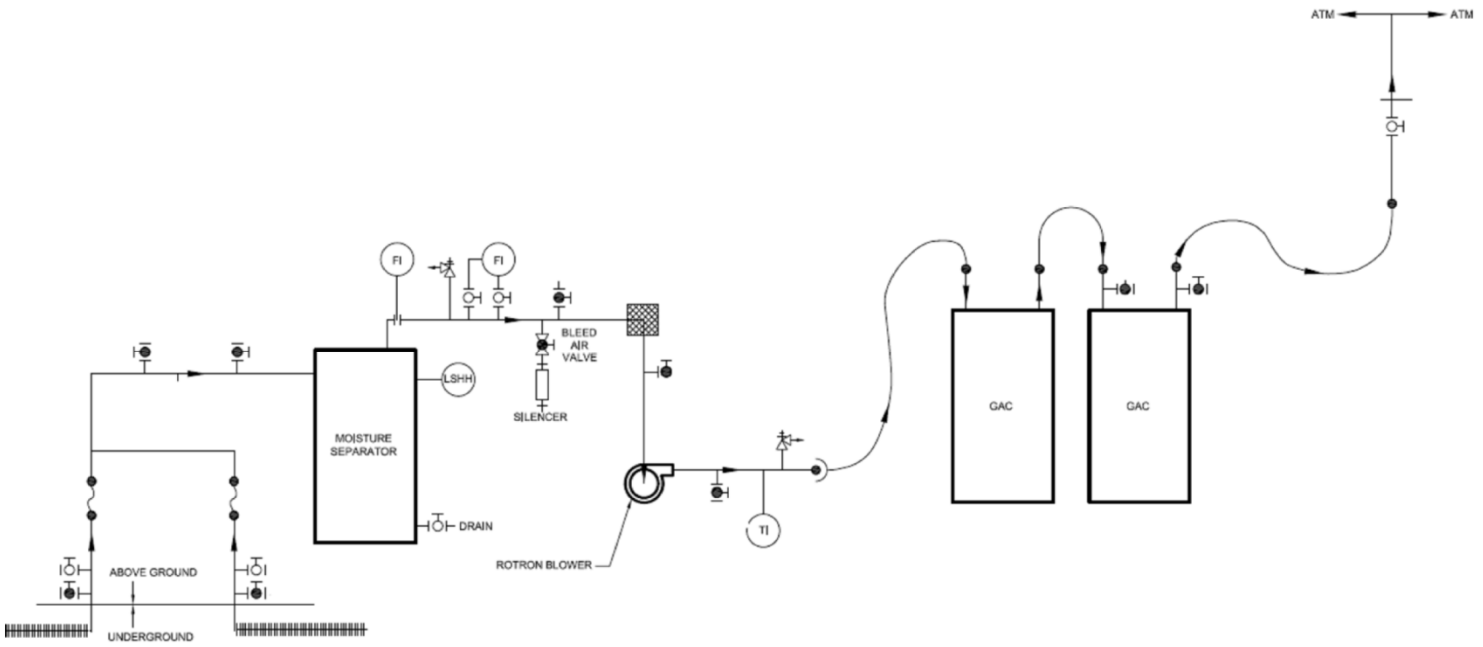



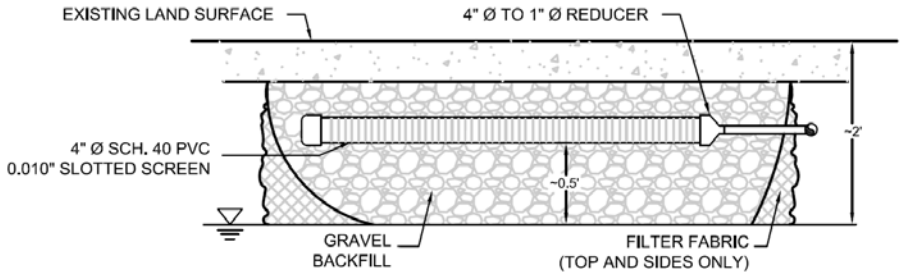

TYPICAL SPARGE POINT DETAIL
NOT TO SCALE

Figure 7

# SZ Air Sparge and SVE Conceptual Process Flow Diagram




SOIL VAPOR EXTRACTION CONCEPTUAL PROCESS FLOW DIAGRAM
NOT TO SCALE




SOIL VAPOR EXTRACTION CHAMBER DETAIL
NOT TO SCALE

Note: a plastic cap may be included between the land surface and the SVE chamber

Figure 8

# SZ Air Sparge and SVE Cost Summary

| SZ – AS and SVE | |
|---|---|
| Approximate Time to Achieve CAO | 2 to 3 years |
| Capital Cost Estimate | $252,900 |
| Annual O&M&M Cost Estimate | $96,200 |
| DPT Sampling Cost | $19,700 |
| Total Cost Estimate | $465,000 to $561,000 |

- CAO is conservative since treating area with probable DNAPL
  - Based on air sparge performance at other KSC sites
- Total cost estimate is cost to reach NADCs
  - Includes capital cost, DPT sampling, and two to three years of annual O&M&M
- Cost assumes the use of an existing mobile air sparge trailer

Table 1

# Response to Comments

Jacobs Comment #2: SZ Air Sparge and SVE: General – The site conceptual model includes probable DNAPL in the SZ. There is little literature regarding reduction of DNAPL by air sparging, so citations of applicable studies would be helpful in evaluating the estimate for the time to achieve the CAO and in evaluating the likelihood of rebound. We recognize that good information about air sparging performance in DNAPL source zones will be generated by the CCB Hot Spots 1 and 2 IM in the near future.

*Response: Based on the size of the source zone (0.04 acres – the non-inferred area), the likelihood of "pools" of DNAPL mass is relatively small. It is anticipated that the DNAPL mass present is likely smaller ganglia, which are easier to treat via AS. It has been documented that AS is a viable technology for sites that have low levels of DNAPL and LNAPL (not recoverable) as noted in the references below.*

- *Air Sparging Guidance Document (TR-2193-ENV) Naval Facilities Engineering Service Center, August 2001;*
- *Dense Nonaqueous Phase Liquids (DNAPL) Treatment Technologies (http://cluin.org/contaminantfocus/default.focus/sec/Dense_Nonaqueous_Phase_Liquids_%28DNAPLs%29/cat/Treatment_Technologies/) – developed by the EPA Ground Water Task Force.*
- *While not a specific literature reference, Geosyntec designed, installed, and operated an AS/SVE system at Lipham Cleaners in Longwood, Florida, which had PCE groundwater concentrations exceeding 10% of solubility (0.32 acres) and plume depth similar to CRHE (depth of sparge wells ~36 ft BLS). The AS operations at the site reduced groundwater concentrations to less than NADCs in 2.5 years.*

TT Comment #13: Cost Estimate, T-1 – The costs presented for a SVE system are significantly higher than what would be expected, considering the size of the system. Please clarify the $50,000 line item.

*Response: The cost for the SVE system was based off of vendor provided unit pricing (from Product Recovery Management) that includes the equipment trailer, blower, moisture separator with pump-out and controls, liquid-phase carbon, telemetry, delivery and start-up assistance. The estimated cost for the system, since the components have not been specifically selected was between $40,000 and $50,000, so the conservative $50,000 cost was utilized.*

TT Comment #14: Cost Estimate, T-1/T-2 – The electrical line installation line item cost appears low. Please revisit.

*Response: The cost for the electric line installation was scaled from the actual cost for the electric line installation performed in 2012 at VPF. The work at VPF included the installation of 50 feet of electric line and was approximately $5,000. Therefore, we felt that the identified line item cost was a conservative estimate for this Step 2, which assumed the installation of 30 ft of electric line.*

# Response to Comments

Jacobs Comment #3: SZ Air Sparge and SVE: General – Where there is DNAPL, the free phase product (TCE in this case) typically occupies a significant portion of available pore space. Air will seek the path of least resistance, so it seems likely that air-to-DNAPL contact will be low. What is the expected mechanism for reduction of DNAPL mass by air sparging? Please include your assumptions about degradation rate and effectiveness. It is important to understand these in order to evaluate and confirm estimates of time to achieve NADCs and cost.

*Response: DNAPL mass reduction via AS can occur via two mechanisms: (i) the volatilization of the DNAPL via direct contact with the air; and (ii) the dissolution of DNAPL into the groundwater as the dissolved concentrations are removed via volatilization. The rate for direct volatilization of the DNAPL would be comparable to rates observed at other sites where AS has been implemented. The rate for dissolution of DNAPL into the groundwater would be slower. The time to achieve the CAO was estimated to be the time to reduce CVOCs to NADCs and was based on air sparging results at other sites (one to two years) with time added for the dissolution of the DNAPL into groundwater.*

*It should be noted that the conceptual layout also included a very robust air sparge well network in the area of potential DNAPL to create an aggressive environment (20 foot spacing of AS wells). Operation of the system in this environment would include an aggressive dynamic approach to maximize air-to-DNAPL contact.*

# 1B – Air Sparge and SVE 10xNADC Plume

# 10xNADC Air Sparge and SVE Conceptual Design

- Installation of 34 AS wells via HSA
  - Screened from approximately 48 to 50 ft BLS
  - Five angle drilled AS wells beneath the building
  - Spacing in the source zone and under the building of approximately 20 ft and spacing of wells in 10XNADC ring approximately 30 feet (assumed 20 ft ROI)
  - 25-hp AS system operating one of three zones at a time
  - Use mobile air sparge trailer #3 (conservative 25 hp compressor)
    - Assumes electrical hookup available on site (transformer SS/USS-1103)
    - Capable of 190 scfm and 31.9 psi (estimated need ~ 30 psi to most distal well)
  - Anticipated flow rate of 5 to 10 scfm per well
- Purchase of SVE system – 16 SVE chambers installed to capture vapors in treatment area
  - 10-hp SVE system operating one of two zones at a time
  - GAC treatment of recovered vapors
  - SVE chambers (to maximize air flow) around the building and in the SZ
  - Anticipated flow rate of 20 to 30 scfm per chamber

# Response to Comments

Jacobs Comment #4: Alternative 1B, 10X NADC Plume Air Sparge and SVE: Slide 35 (new slide 46) – The conceptual plan calls for angular drilling to deploy AS wells under the building, with SVE wells positioned along the perimeter. Please confirm the influence of the perimeter SVE network is adequate to capture vapors from beneath the building.

*Response: The estimated ROI of the SVE system is between 20 ft and 30 ft (as described in the Description of Alternatives). The layout of the SVE wells with the estimated ROI should be adequate to cover the area underneath the building (approximate size of 70 by 50 ft) – see updated figure in the ADP with estimated ROI presented on slide 50. The layout is more than adequate for a conceptual design and associated costing and the exact details of the SVE layout will be evaluated during the design phase, if AS/SVE is selected.*

# 10xNADC Air Sparge and SVE Conceptual Design

- Hand auger to water table for well installation and hand dig for trenching in the utility corridor
- DPT groundwater sampling included (5 days)
  - To evaluate system optimization or shut down
- Minimum monthly O&M (daily for first three days, weekly first month, monthly thereafter)
- Performance monitoring
  - Installation of 15 monitoring wells
  - Quarterly monitoring for VOCs

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# 10xNADC Air Sparge and SVE Conceptual Design Layout

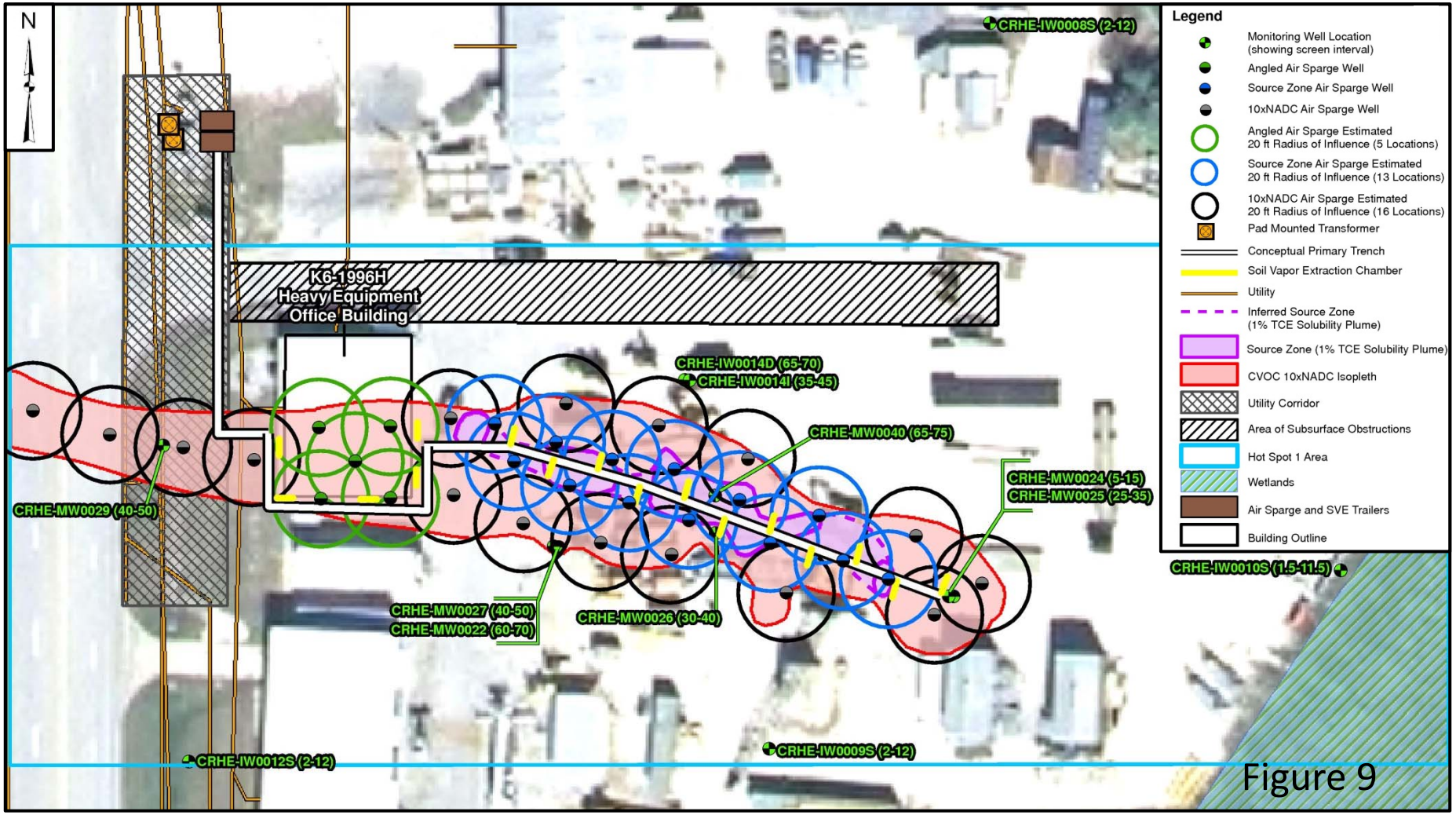
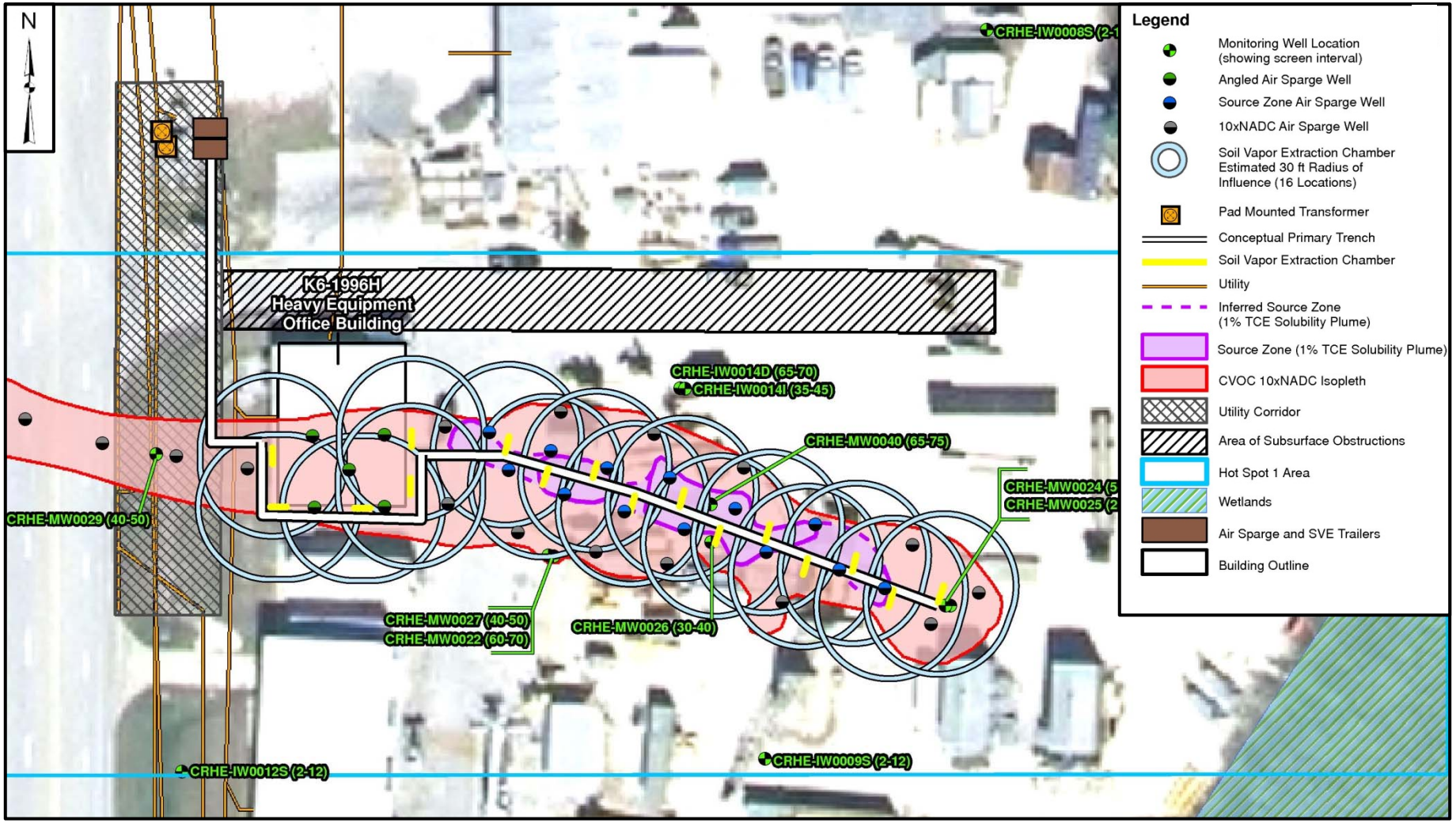
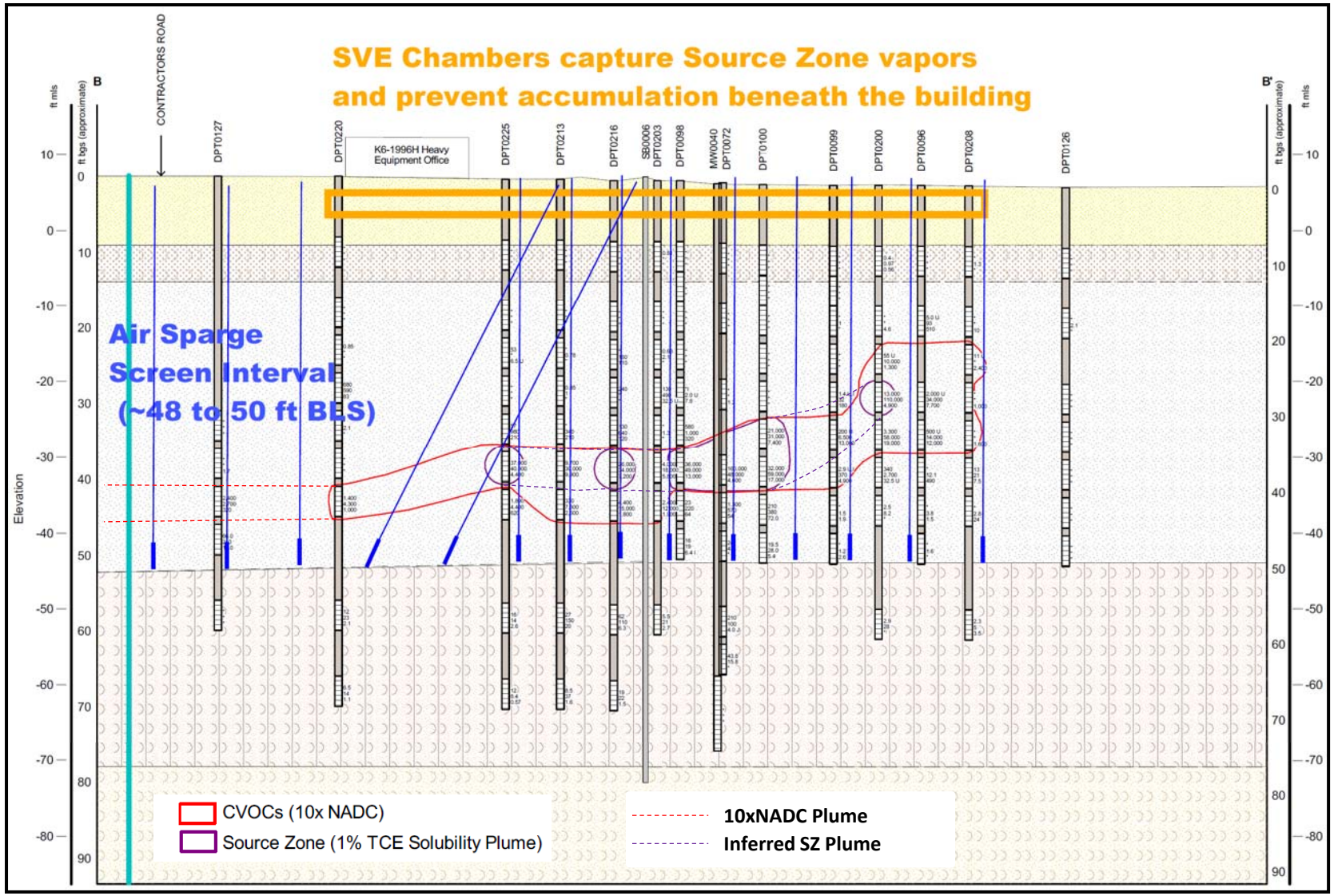



Figure 9

# 10xNADC Air Sparge and SVE Conceptual Design Layout



# 10xNADC Air Sparge and SVE Conceptual Design Layout

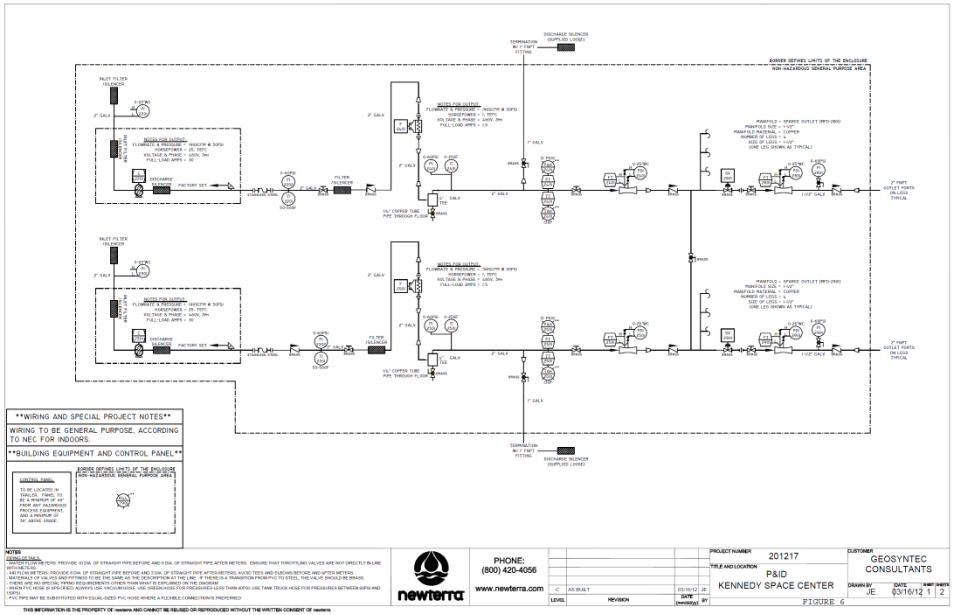


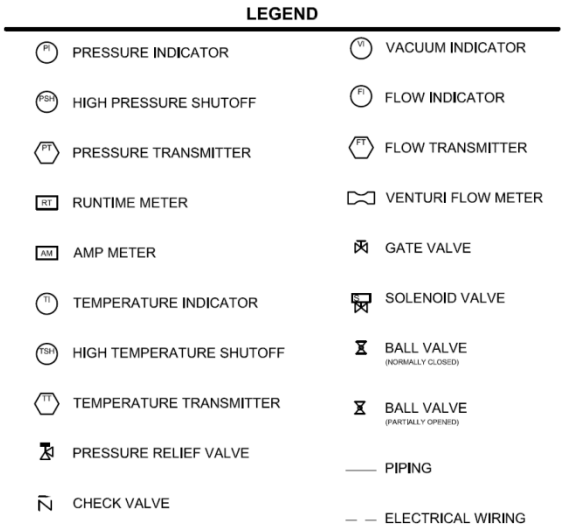
# Response to Comments

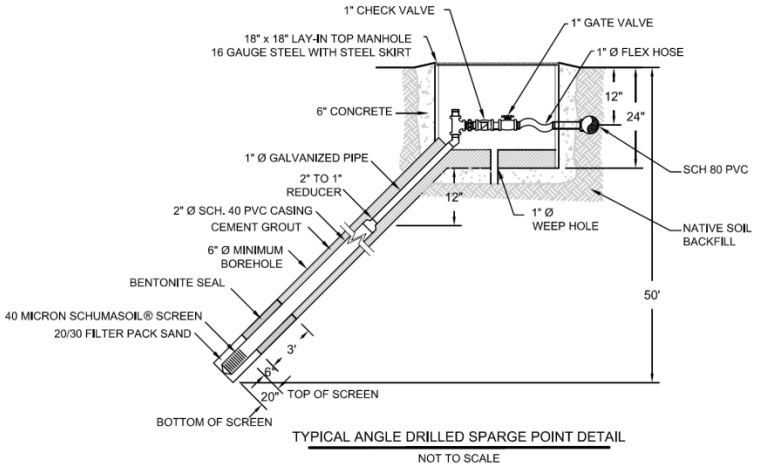
TT Comment #6: Slide 38 (new slide 51) – Based on the presented ten times Natural Attenuation Default Criteria (10X NADC) plume, it is not clear what the AS wells to the western part of the cross section are treating and this interpretation does not match what is shown in plan view. We suggest revising the cross section to provide a closer correlation to the center line of the source zone/10X NADC plume (global comment).

*Response: The 10XNADC plume on the plan view is drawn by contouring the data on the west side of the building, which the cross section does not include. The 10XNADC contour has been updated on the cross sections in the presentation.*

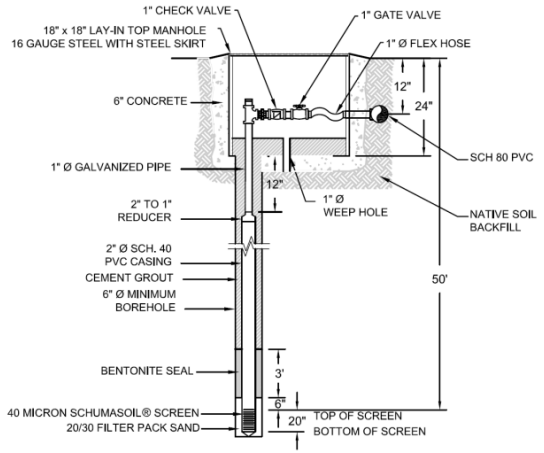
# 10xNADC Air Sparge and SVE Conceptual Process Flow Diagram



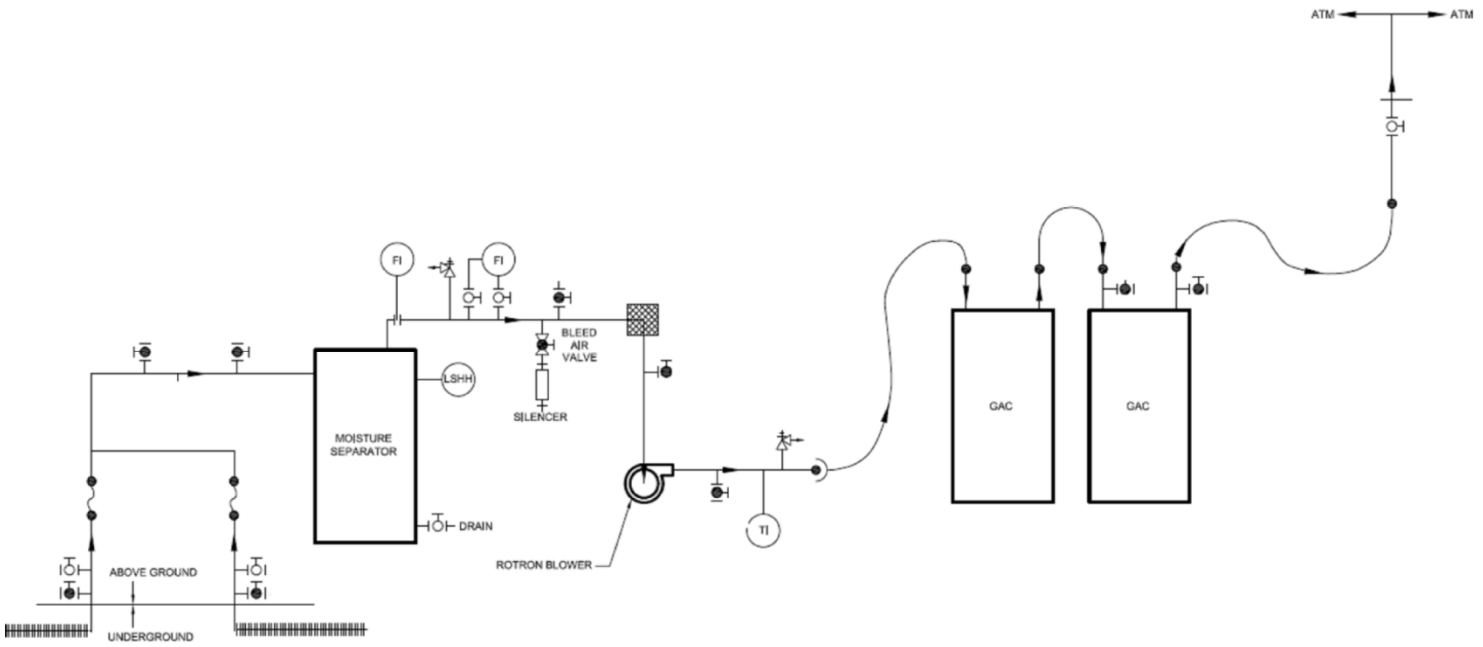
TYPICAL ANGLE DRILLED SPARGE POINT DETAIL
NOT TO SCALE



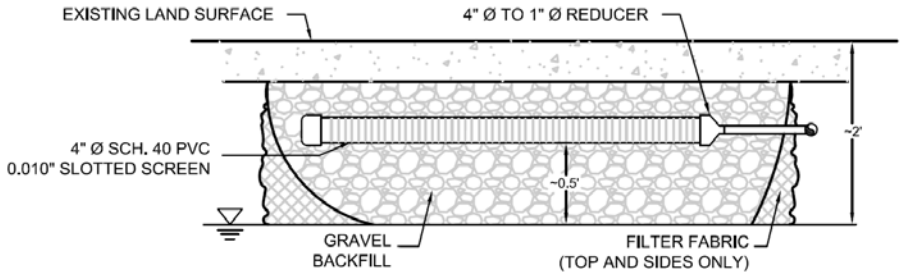
TYPICAL SPARGE POINT DETAIL
NOT TO SCALE

Figure 7

# 10xNADC Air Sparge and SVE Conceptual Process Flow Diagram




SOIL VAPOR EXTRACTION CONCEPTUAL PROCESS FLOW DIAGRAM
NOT TO SCALE




SOIL VAPOR EXTRACTION CHAMBER DETAIL
NOT TO SCALE

Note: a plastic cap may be included between the land surface and the SVE chamber

Figure 8

Jacobs Comment #5: Alternative 1B, 10X NADC Plume Air Sparge and SVE: Slide 40 (new slide 54) – The plastic cap described in the Alternatives Description is not included in the SVE chamber detail. We suggest it be added.

*Response: A note was added to the ADP to provide information about the plastic cap on the SVE chamber detail. The specific engineering details of the plastic cap (which may not be warranted at all locations) is a design detail which would be included in the Interim Measure design, if AS/SVE is selected.*

# 10xNADC Air Sparge and SVE Summary

| 10xNADC – AS and SVE | |
|---|---|
| Approximate Time to Achieve CAO | 2 to 3 years |
| Capitol Cost Estimate | $424,600 |
| Annual O&M Cost Estimate | $121,200 |
| DPT Sampling Cost | $32,400 |
| Total Cost Estimate | $699,000 to $821,000 |

- CAO is conservative since treating area with probable DNAPL
  - Based on air sparge performance at other KSC sites
- Total cost estimate is cost to reach NADCs
  - Includes capital cost, DPT sampling, and two to three years of annual O&M&M
- Cost assumes the use of an existing mobile air sparge trailer
- Cost assumes purchase of trailer mounted SVE system Table 2

TT Comment #7: Slide 41 (new slide 55) – A pre-packaged SVE enclosure may be more appropriate and less expensive than a mobile trailer. We suggest evaluating the use of an enclosure instead of a trailer.

*Response: If AS/SVE is selected as the remedial alternative, these suggestions will be taken into consideration with NASA during the design phase.*

# 2A – Bioremediation SZ

# SZ Bioremediation Conceptual Design

- 29 DPT injection points
  - Electron donor injected from 20 to 50 ft BLS
  - Injection point spacing based on 8 ft ROI
- Injection of 33 drums of emulsified oil
  - Based on filling 0.5% of pore volume with emulsified oil
  - Conservative estimate based on possibility of DNAPL
- Second injection (17 drums) of emulsified oil 24 months after initial event
  - Based on filling 0.25% of pore volume with emulsified oil
- DPT sampling (3 days) included to aid in design for second injection event
- Installation of 10 performance monitoring wells
  - Sample all for VOCs quarterly
  - Analyze subset of 5 wells for *Dhc*, *vcrA*, sulfate, sulfide, and TOC

Jacobs Comment #8: Alternative 2A, SZ Bioremediation: Slide 43 (new slide 59) – Was a case study or information from one of your other sites used to develop the conceptual design of a 0.5% initial/0.25% follow-up pore volume emulsified oil application?

*Response: The emulsified oil dosing that we have used successfully during bioremediation implementation is between the range of 0.1% to 1% of the pore space and usually for dissolved phase plumes is around 0.1 to 0.2% of the pore space. The dosing of 0.5% and 0.25% was selected within that range and above the vendor's recommendation to be conservative.*

Jacobs Comment #9: Alternative 2A, SZ Bioremediation: Slide 43 (new slide 59)/Alternatives Description – We assume multiple lifts will be used to deliver emulsified oil through the treatment zone. What is the anticipated vertical area of influence for each lift?

*Response: Multiple lifts would occur to deliver the emulsified oil, continuously over the entire treatment interval. The anticipated vertical lift would be every 2 feet and emulsified oil and chase water would be injected to reach the desired ROI. The injection details will be decided during the design, if bioremediation is selected*

TT Comment #15: Description of Alternatives, Page 5 – The stated 60% oil substrate and 1:20 dilution results in an injection concentration of approximately 3%. Considering groundwater dilution and the suspected presence of DNAPL, the substrate dosage concentrations appear low. Please provide rationale for the bioremediation dosing.

*Response: The 1:20 dilution is within the recommend range of dilution from the vendor, so that the emulsion remains stable. See response to Jacob's comment #8 above for dosing information.*

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# SZ Bioremediation Conceptual Design Layout

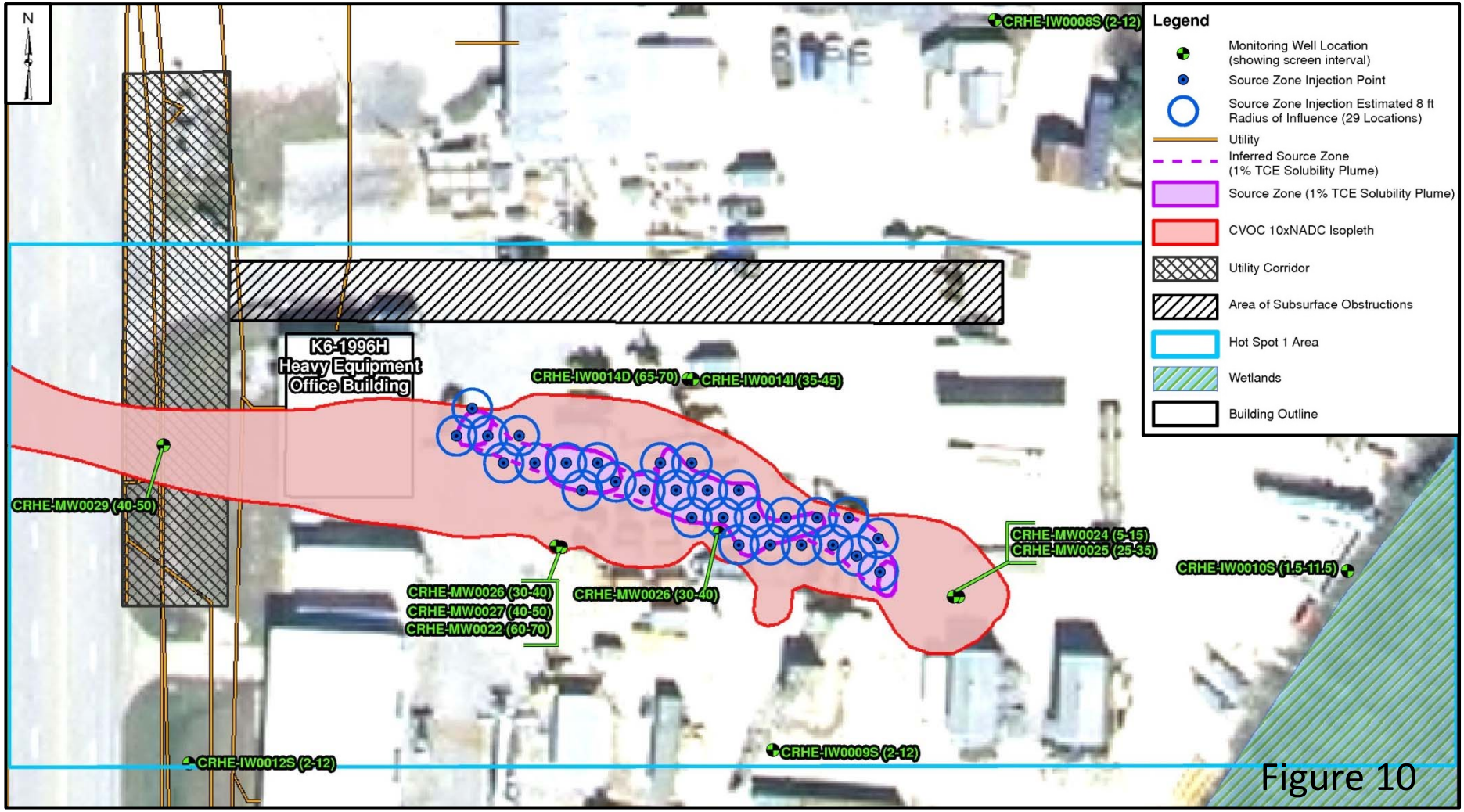


Figure 10

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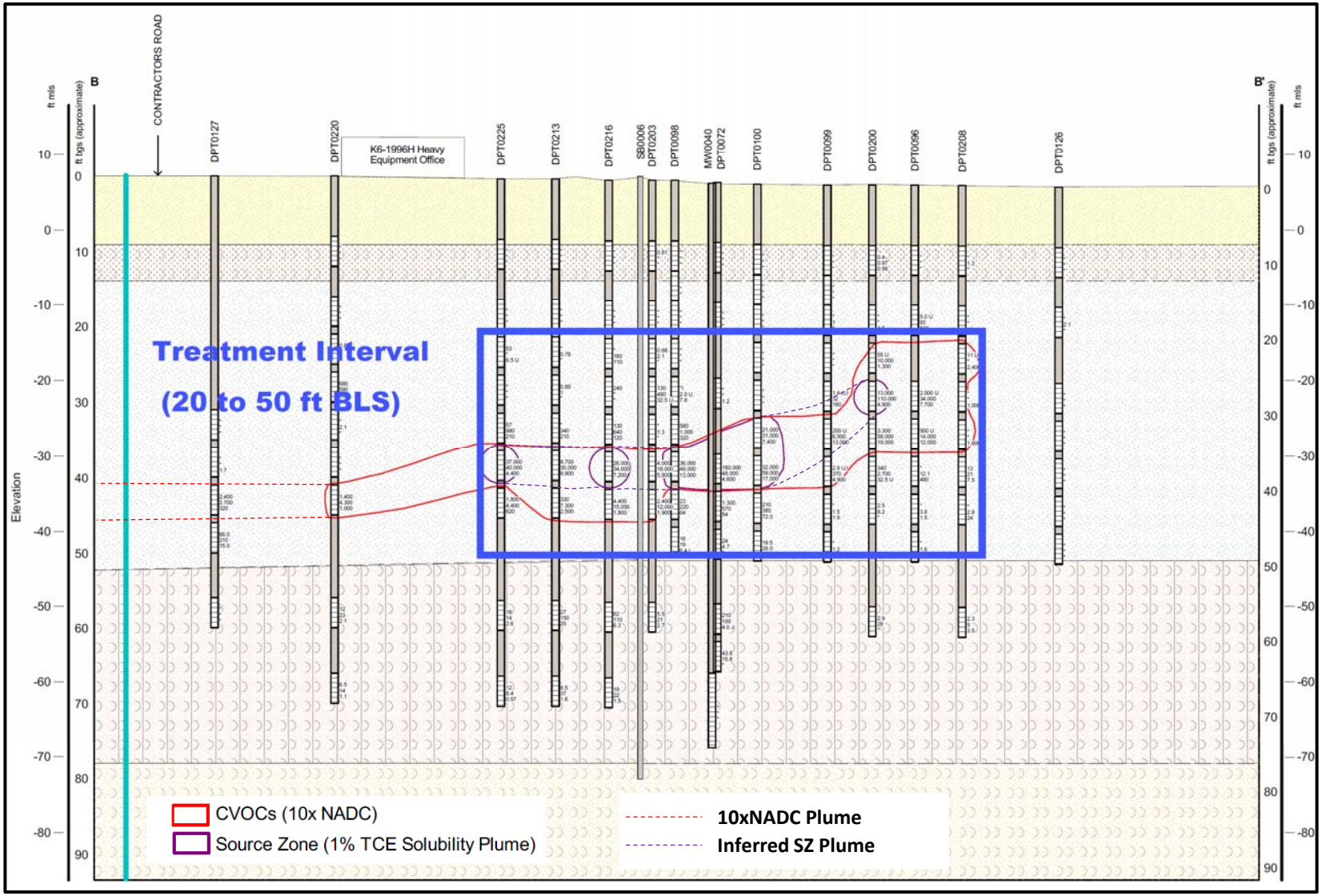
# SZ Bioremediation
# Conceptual Process Flow Diagram



TT Comment #8: Slide 45/50/56/61 (new slides 64/74/82/88) – Do the alternatives assume treatment of the entire area that is within the blue rectangle? If this is the case, the volumes used to calculate remedial additives may be substantially overestimated for treatment of the applicable plume interval. Please clarify.

*Response: AS/SVE will treat the entire interval from 20 ft to 50 ft; therefore, to compare the same treatment volume for all three technologies, the treatment interval for both enhanced bioremediation and EZVI was expanded to 20 to 50 ft BLS.*

# SZ Bioremediation Summary

| SZ – Bioremediation | |
|---|---|
| Approximate Time to Achieve CAO | 3 to 5 years |
| Capitol Cost Estimate | $167,400 |
| Annual O&M Cost Estimate | $60,000 |
| DPT Sampling Cost | $19,700 |
| Second Injection Cost Estimate | $69,900 |
| Total Cost Estimate | $437,000 to $557,000 |

- CAO is conservative since treating area with probable DNAPL
  - Based on MLP dechlorination rates from source area biostimulation
- Total cost estimate is cost to reach NADCs
  - Includes capital cost, DPT sampling, second injection event, and three to five years of annual O&M&M

Table 3

# Response to Comments

Jacobs Comment #10: Alternative 2A, SZ Bioremediation: Slide 46 (new slide 66) – Since the estimate of time to achieve CAO was based on MLP dechlorination rates, was a factor applied to account for the variance in TCE concentrations between the two sites?

*Response: A factor was not applied to account for the variance in concentrations between the two sites, since the TCE concentrations are similar – see response to Jacob's comment #6. TCE is generally not the rate limiting CVOC with regards to dechlorination (longest time to NADC); it is usually vinyl chloride. The time to reach CAO was based on the dechlorination rates for vinyl chloride from MLP. Using MLP rates, time to reach NADC for TCE was approximately 2 years, for cDCE was approximately 3.4 years and for vinyl chloride approximately 4.4 years; therefore, a range of 3 to 5 years was selected for this evaluation.*

Jacobs Comment #6: Alternative 2A, SZ Bioremediation: General – Emulsified oil is well-documented as a successful technology for enhanced reductive dechlorination of hot spots and areas affected by flux from DNAPL, particularly in aerobic environments, but literature regarding reduction of DNAPL mass is sparse. Citations of applicable studies would be helpful. We note the reference to the MLP/VAB Area and the successful treatment there, but also note that the highest TCE detection at that site was an order of magnitude below the highest detections at CRHE.

*Response: Bioremediation has been utilized at a number of DNAPL sites, including successful applications at three NASA sites where DNAPL has been present: LC34 (Demonstration of Biodegradation of DNAPL - 2004), LC34 Partitioning Electron Donor IM Hot Spot 1, and MLP (biostimulation using ethyl lactate). It should also be noted that at facilities where EZVI has been applied (LC34, Hangar K and Paris Island) collected data and documents indicate that the mass reduction is due to both abiotic and biotic reductive dechlorination.*

*With regards to TCE concentrations at MLP, TCE was measured at a maximum concentration of 95,000 µg/L from DPT location MLP-PT6 in 2002 and a maximum soil concentration of 102 mg/kg of TCE was detected (MLP-RTS1). The referenced concentrations are indicators of the presence of DNAPL. Concentrations of all CVOCs were reduced to below NADCs (TCE and cDCE to below GCTL) and VC is the only COC that remains above the GCTL.*

*The LC34 PED IM was implemented in an area with a maximum TCE concentration of 141,000 µg/L, an average TCE concentration of 22,000 µg/L, and a maximum soil concentration of 56.2 mg/kg TCE.*

*The LC34 (Demonstration of Biodegradation of DNAPL) initial TCE concentration of 132,000 µg/L to 350,000 µg/L and complete dechlorination to ethene was observed, with a TCE mass removal of 98.5%. Complete dechlorination occurred with up to 92 mg/L ethene production observed.*

*Based on the above data, the use of MLP dechlorination rates is adequate to estimate a time to reach CAO for CRHE.*

*Additionally, there is an Interstate Technology and Regulatory Council guidance document that consider the bioremediation of DNAPL source zones viable and provide case studies: In Situ Bioremediation of Chlorinated Ethene: DNAPL Source Zones (BIODNAPL) – June 2008.*

Jacobs Comment #7: Alternative 2A, SZ Bioremediation: General/Alternatives Description – Since contact with DNAPL is critical, please consider adding a discussion of the delivery mechanism for the emulsified oil. While the chase water will be beneficial in overall dispersion, it may be unlikely to enhance contact within DNAPL zones.

*Response: Direct contact of the oil with the DNAPL is not required for bioremediation to be successful. Mass removal of DNAPL during bioremediation is due to the microorganisms dechlorinating the CVOC mass (reducing concentrations) in the dissolved phase, which creates a concentration gradient and then dissolution of the DNAPL occurs. The emulsified oil will be delivered via DPT injection (6 to 8 gpm and 30 to 45 psi) and the chase water will be used to create the desired radius of influence from each injection point.*

# 2B – Bioremediation 10xNADC Plume

# 10xNADC Bioremediation Conceptual Design

- 107 DPT injection points
  - Electron donor injected from 20 to 50 ft BLS
  - Injection point spacing based on 8 ft ROI
  - Six angle-drilled injection points beneath the building
    - Avoiding angle drilling through utility corridor – only drilling from east side
  - Solar-powered groundwater recirculation system to increase flow beneath the building
  - Passive vents to avoid methane accumulation beneath the building
  - Hand auger to water table in utility corridor
  - MOT required, partially close Contractor's Road while injecting in the road
- Injection of 102 drums of emulsified oil
- DPT sampling (5 days) included to aid in design for second injection event
- Second emulsified oil injection 24 months after initial event (35 drums)
  - SZ: 50% original dose into all original locations
  - 10xNADC: 50% into half of the original locations
- Installation of 15 performance monitoring wells
  - Sample all for VOCs quarterly
  - Analyze subset of 8 wells *Dhc*, *vcrA*, sulfate, sulfide, and TOC
  - Sampling the injection and extraction wells to aid in evaluation of mass removal under building

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# 10xNADC Bioremediation Conceptual Design Layout

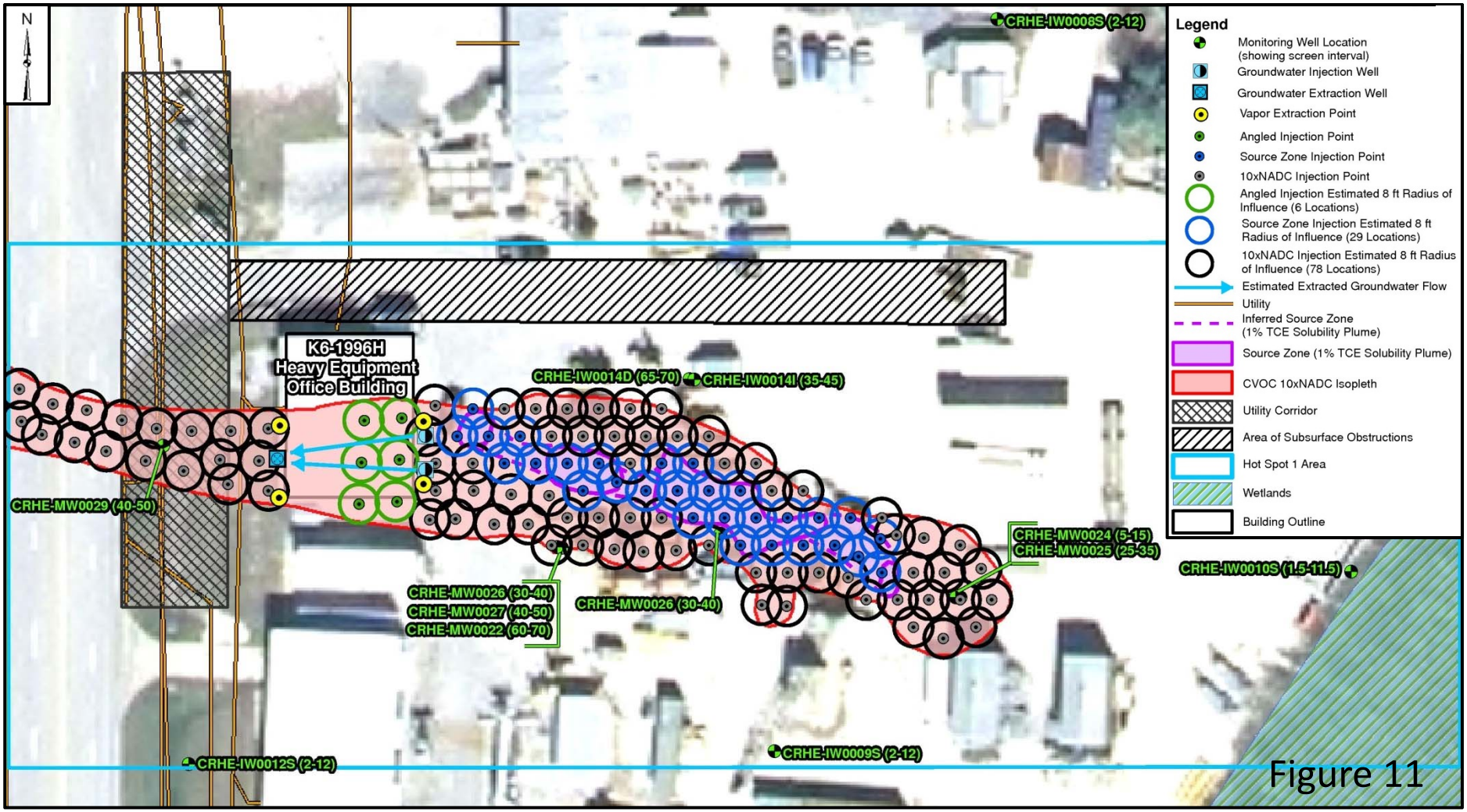
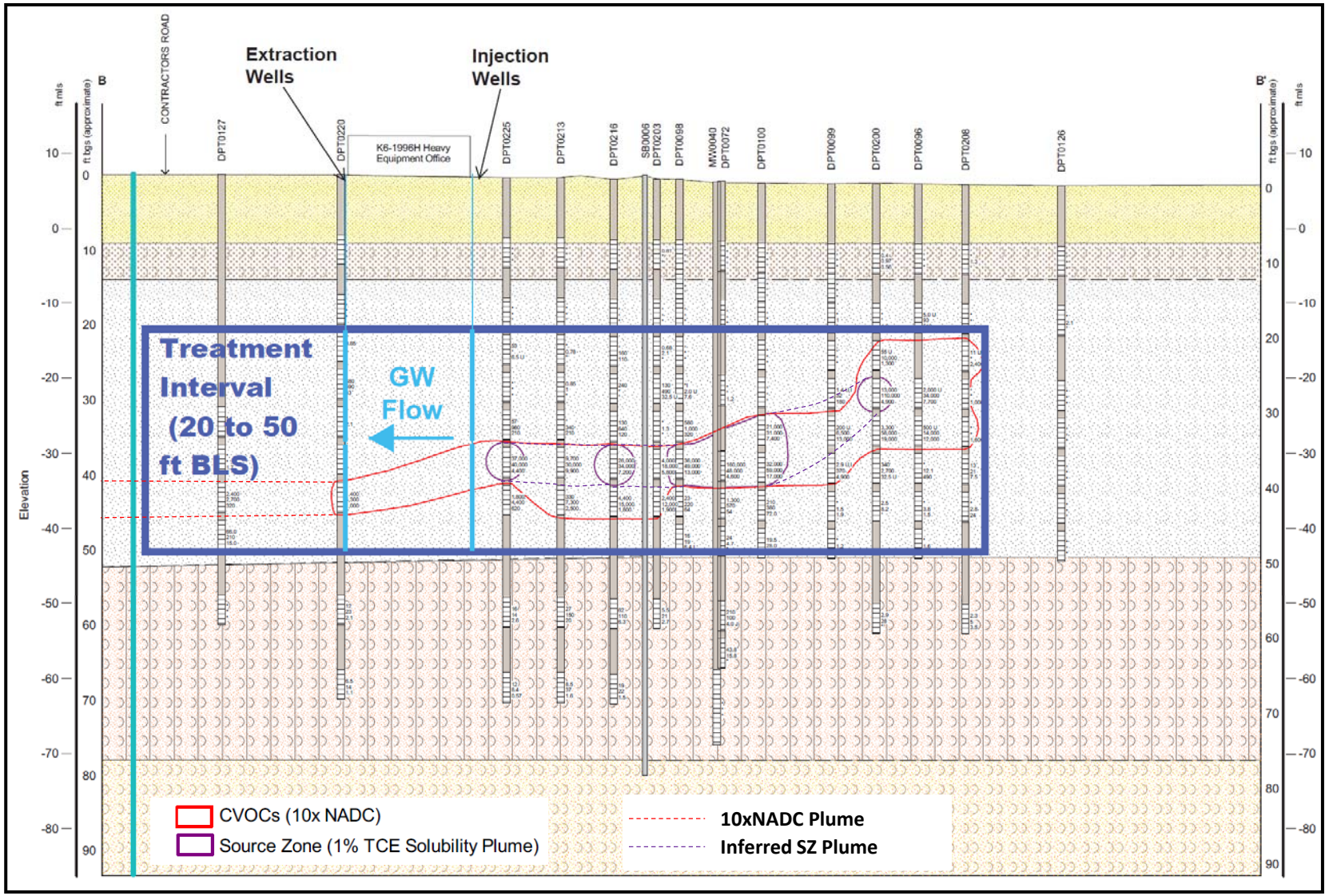



Figure 11

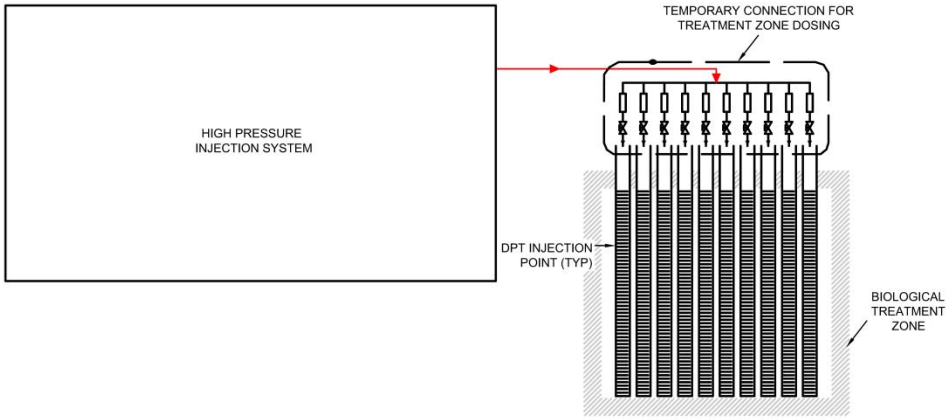
TT Comment #9: Slide 49 (new slide 72) – The passive vents, as currently placed, do not clearly appear to provide protection of methane accumulation underneath the structure. Furthermore, will the venting cause secondary issues such as odor? We recommend the methane venting approach be revised.

*Response: We feel that the passive venting system is adequate for a Step 2 evaluation. The vents provide a path for any methane produced to be discharged at the roof level to the atmosphere. During the design phase, an evaluation would be performed if active venting is recommended (could add a radon type electric or solar fan, or a wind turbine to the vent stack to make the system active). It is unlikely that the passive venting will cause any secondary issues. The approach proposed has been implemented at a number of bioremediation project sites in Florida without secondary odor issues.*

# 10xNADC Bioremediation Conceptual Design Layout

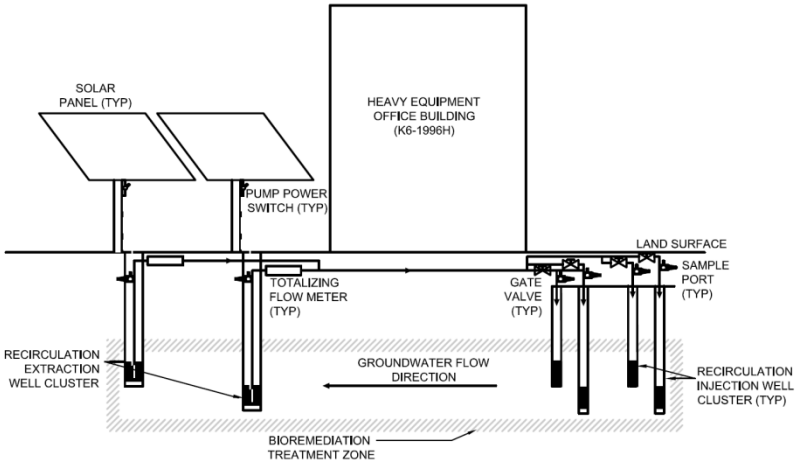


# 10xNADC Bioremediation Conceptual Process Flow Diagram



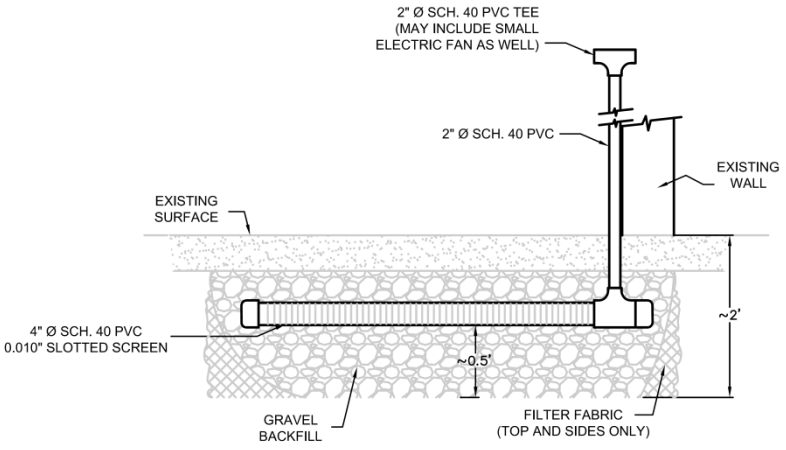

BIOREMEDIATION CONCEPTUAL PROCESS FLOW DIAGRAM

NOT TO SCALE




RECIRCULATION CONCEPTUAL PROCESS FLOW DIAGRAM

NOT TO SCALE




PASSIVE VENT CONSTRUCTION DETAILS

NOT TO SCALE

Figure 12

# 10xNADC Bioremediation Summary

| SZ – Bioremediation with Recirculation | |
|---|---|
| Approximate Time to Achieve CAO | 3 to 5 years |
| Capitol Cost Estimate | $440,500 |
| Annual O&M Cost Estimate | $99,500 |
| DPT Sampling Cost | $32,400 |
| Second Injection Cost Estimate | $158,200 |
| Total Cost Estimate | $930,000 to $1,129,000 |

- CAO is conservative since treating area with probable DNAPL
  - Based on MLP dechlorination rates from source area biostimulation
- Total cost estimate is cost to reach NADCs
  - Includes capital cost, DPT sampling, second injection event, and three to five years of annual O&M&M

Table 4

# 3A – EZVI SZ

# SZ EZVI Conceptual Design

- 126 DPT injection points
  - 5% EZVI (sizes ranging from 0.1 to 5 microns) by weight
    - Used at Hangar K site at CCAFS
  - Approximately 20,500 gallons of EZVI
    - Based on filling 10% of pore space
  - EZVI injected from 20 to 50 ft BLS
  - Injection point spacing based on estimated 3 ft ROI
- Second EZVI injection event 24 months after initial event (50% the initial injection volume - 10,250 gallons)
- DPT sampling (3 days) included to aid in design of second injection event
- Installation of 10 performance monitoring wells
  - Sample all for VOCs quarterly

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# Response to Comments

Jacobs Comment #11: Alternative 3A, SZ EZVI: Slide 54 (new slide 78)/Alternatives Description – What injection technique did Vironex use for development of the conceptual design? Will that technique be able to access the DNAPL pore space? Note that at Hangar K, a 6-ft. ROI was achieved using the Badger© technology. (A 6-ft ROI was also assumed in the recent injections at the GSA Reclamation Yard, but we won't have confirmation of the ROI until the first performance monitoring event.) We are concerned both that the 3-ft. ROI assumed may be overly conservative, but – at the same time – injection cost may be understated since the injection technique is not described.

*Response: Vironex uses a high-performance double piston pump to inject EZVI, top down, at approximately 50 gpm to achieve lateral distribution of EZVI. The high frequency piston action of the pump helps to distribute the EZVI throughout the pore space to achieve contact with the DNAPL. Each injection interval is separated by 2 ft to help minimize creation of vertical flow paths.*

*The estimated 3 ft ROI was conservative, so we have also provided a less conservative costing based on an estimated 6-ft ROI. It should be noted that our definition of ROI involves achievement of complete distribution of injectate throughout the desired target interval (not an indicator of a seam of EZVI at 6 ft); accordingly, we used a more conservative 3 ft ROI since the ZVI component is dependent on contact to achieve the desired abiotic reductions intended to target DNAPL. This non-conservative costing resulted in a capital cost range of $673,000 to $734,000 and the second injection cost ranged from $306,000 to $336,000 (total cost reduction of $90,000). For the source zone, this would reduce the cost range from $1,240,000 to $1,340,000 to $1,149,000 to $1,249,000. For the 10X NADC area, this would reduce the cost range from $1,718,000 to $1,883,000 to $1,628,000 to $1,793,000. The cost driver for EZVI is the purchase of the material (~$700,000 for two injection events); accordingly, the less conservative 6 ft ROI does not have a significant bearing on the range of costs.*

TT Comment #10: Slide 54/59 (new slide 78/86) – The injection radius of influence (ROI) of 3 feet is very conservative and may bias the costs of emulsified zero-valent iron (EZVI) alternatives. We suggest the spacing be revisited.

*Response: The costing was updated to evaluate a non-conservative 6 ft ROI and is included in the response to Jacobs' comment #11 above.*

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# SZ EZVI
# Conceptual Design Layout

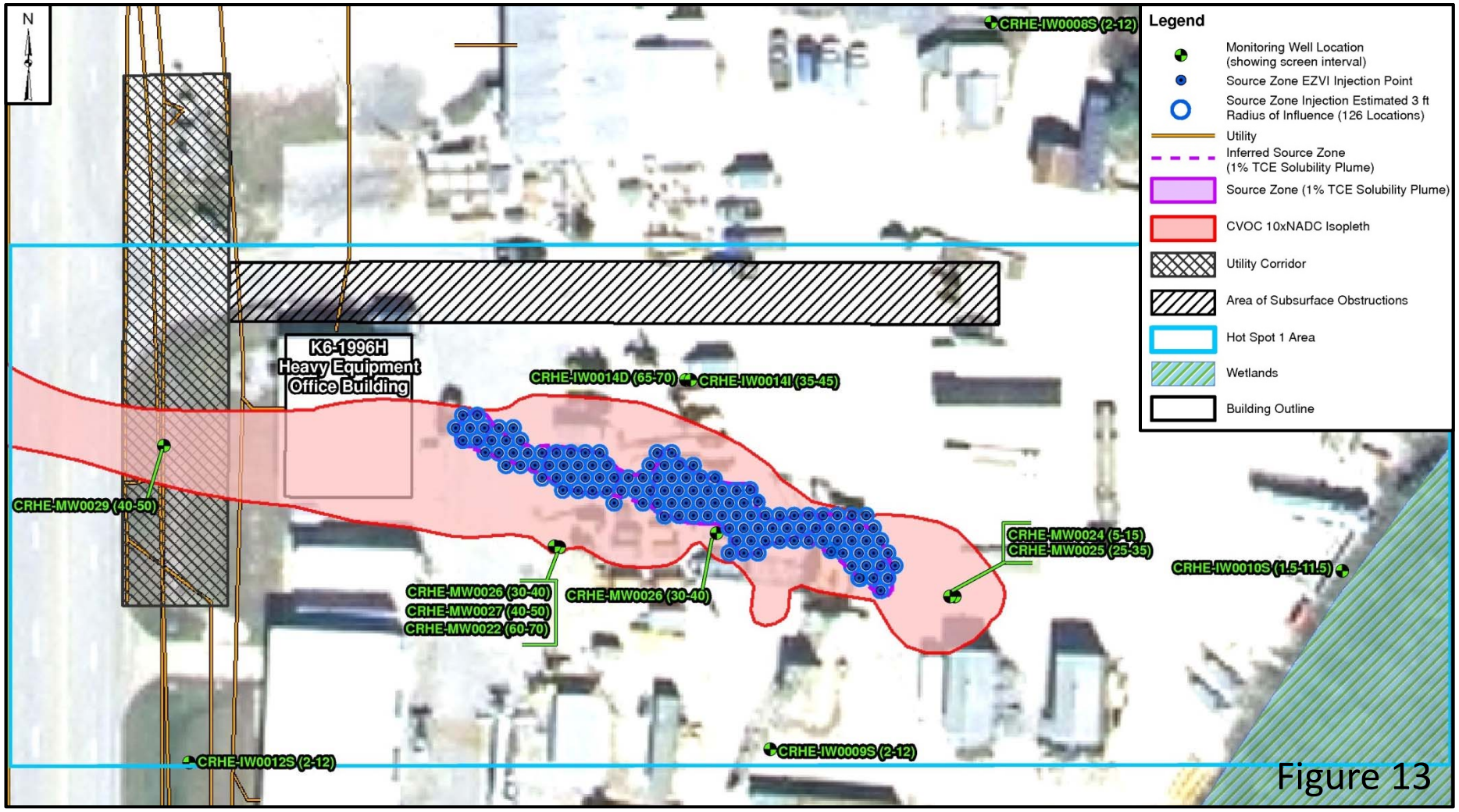
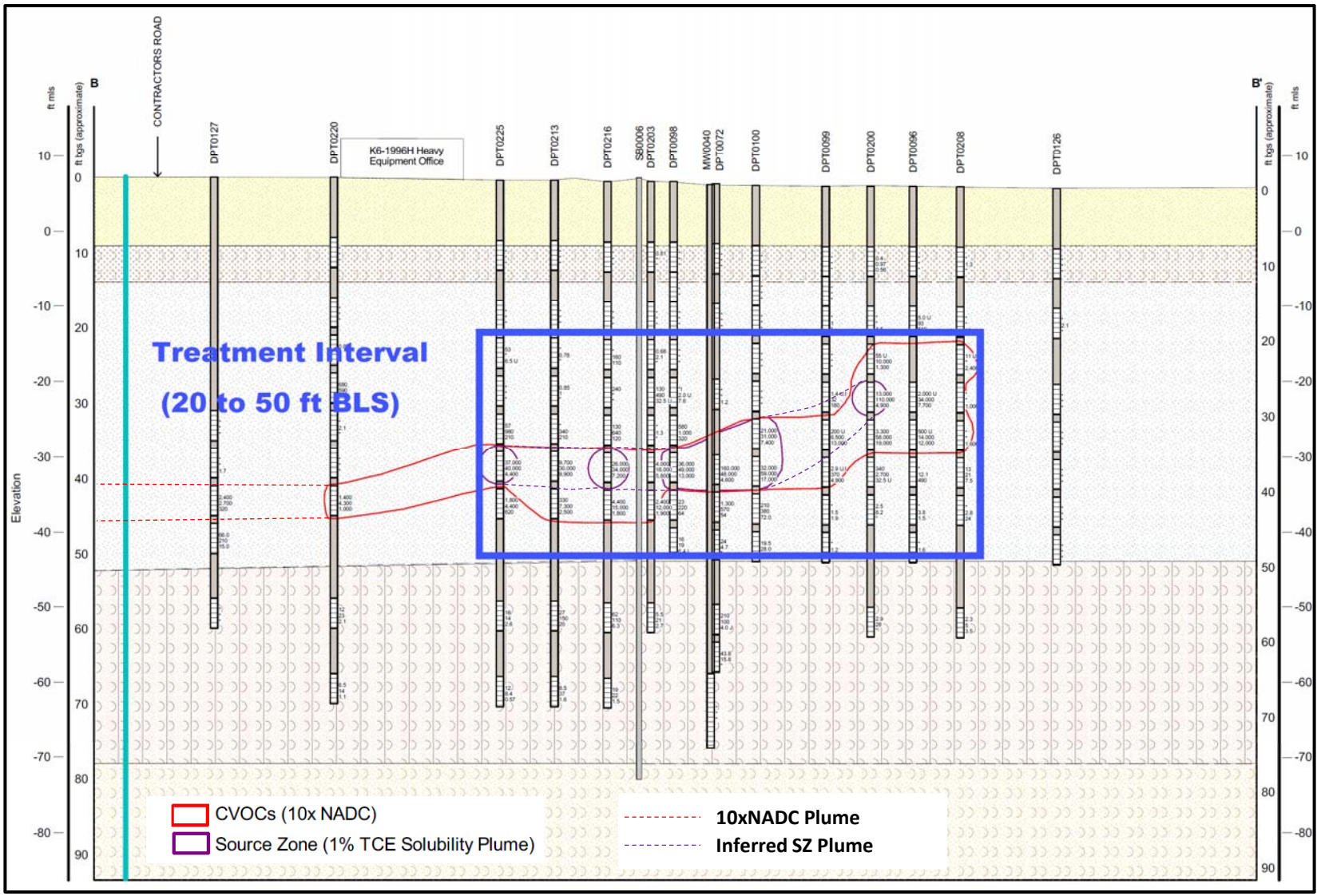



Figure 13

# SZ EZVI
# Conceptual Design Layout



# SZ EZVI Summary

| SZ – EZVI | |
|---|---|
| Approximate Time to Achieve CAO | 3 to 5 years |
| Capitol Cost Estimate | $734,100 |
| Annual O&M Cost Estimate | $50,000 |
| DPT Sampling Cost | $19,700 |
| Second Injection Cost Estimate | $335,800 |
| Total Cost Estimate | $1,240,000 to $1,340,000 |

- CAO is conservative since treating area with probable DNAPL
  - Based on results from Hanger K
- Total cost estimate is cost to reach NADCs
  - Includes capital cost, second injection event, and three to five years of annual O&M&M

Table 5

# Response to Comments

Jacobs Comment #12: Alternative 3A, SZ EZVI: Slide 57 (new slide 83) – Regarding time to achieve CAO based on results from Hangar K: At Hangar K, TCE concentrations were reduced by 88% six months after the first injection. After a pre-programmed second injection and a total elapsed time of 18 months from the first injection, TCE concentrations were reduced by 99%. It does not appear that NADC for all chlorinated VOCs will be reached within 5 years.

*Response: The concentrations at Hangar K were higher and the impacted area was larger than what is observed at CRHE; two 200 ppm TCE plumes were delineated that were approximately 3,000 and 6,200 square feet (with impacts from ~ 30 to 52 ft BLS).*

*To reduce the average CVOC concentrations to their NADCs in the SZ, a reduction in mass of 98.4% (VC), 98.5% (cDCE), and 99.6% (TCE) is required. If the removal is based on the maximum concentrations, a concentration reduction of 99.8% (TCE), 99.4% (cDCE) and 99.5% (VC) is required. Based on the site conditions, we believe a 5 year timeframe is adequate for these reductions.*

# 3B – EZVI and Bioremediation with Recirculation 10xNADC Plume

# SZ EZVI and 10xNADC Bioremediation Conceptual Design

- EZVI in the Source Zone – same as Alternative 3A
  - 5% EZVI (sizes ranging from 0.1 to 5 microns) by weight
  - Approximately 20,500 gallons of EZVI
  - EZVI injected from 20 to 50 ft BLS
  - Injection point spacing based on 3 ft ROI
- Bioremediation in the 10xNADC – same as 10xNADC area in Alternative 2B
  - 78 DPT injection points
  - Injection point spacing based on 8 ft ROI
  - Six angle-drilled injection points beneath the building
  - Solar-powered groundwater recirculation system to increase flow beneath the building
  - Passive vents to avoid methane accumulation beneath the building
  - Hand auger to water table in utility corridor
  - MOT required, partially close Contractor's Road while injecting in the road
- DPT sampling (5 days) included to aid in design of second injection event
- Second injection 24 months after initial event (SZ: 50% initial injection volume, 10xNADC with 50% into half of the original locations)
- Installation of 15 performance monitoring wells
  - Sample all for VOCs quarterly
  - Analyze subset of 3 wells for *Dhc, vcrA*, sulfate, sulfide, and TOC
  - Sampling of injection and extraction wells to evaluate mass removal under building

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# SZ EZVI and 10xNADC Bioremediation Conceptual Design Layout

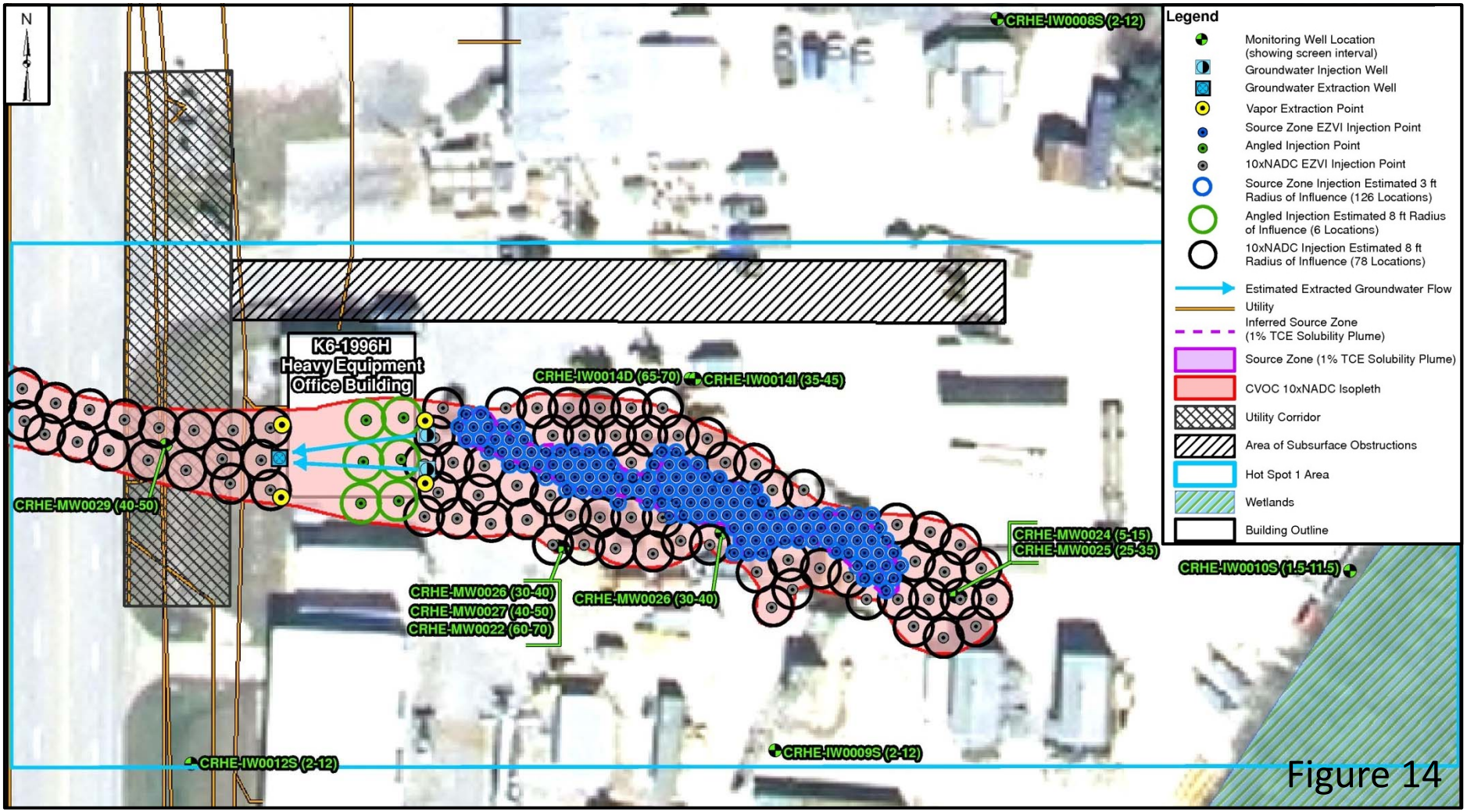
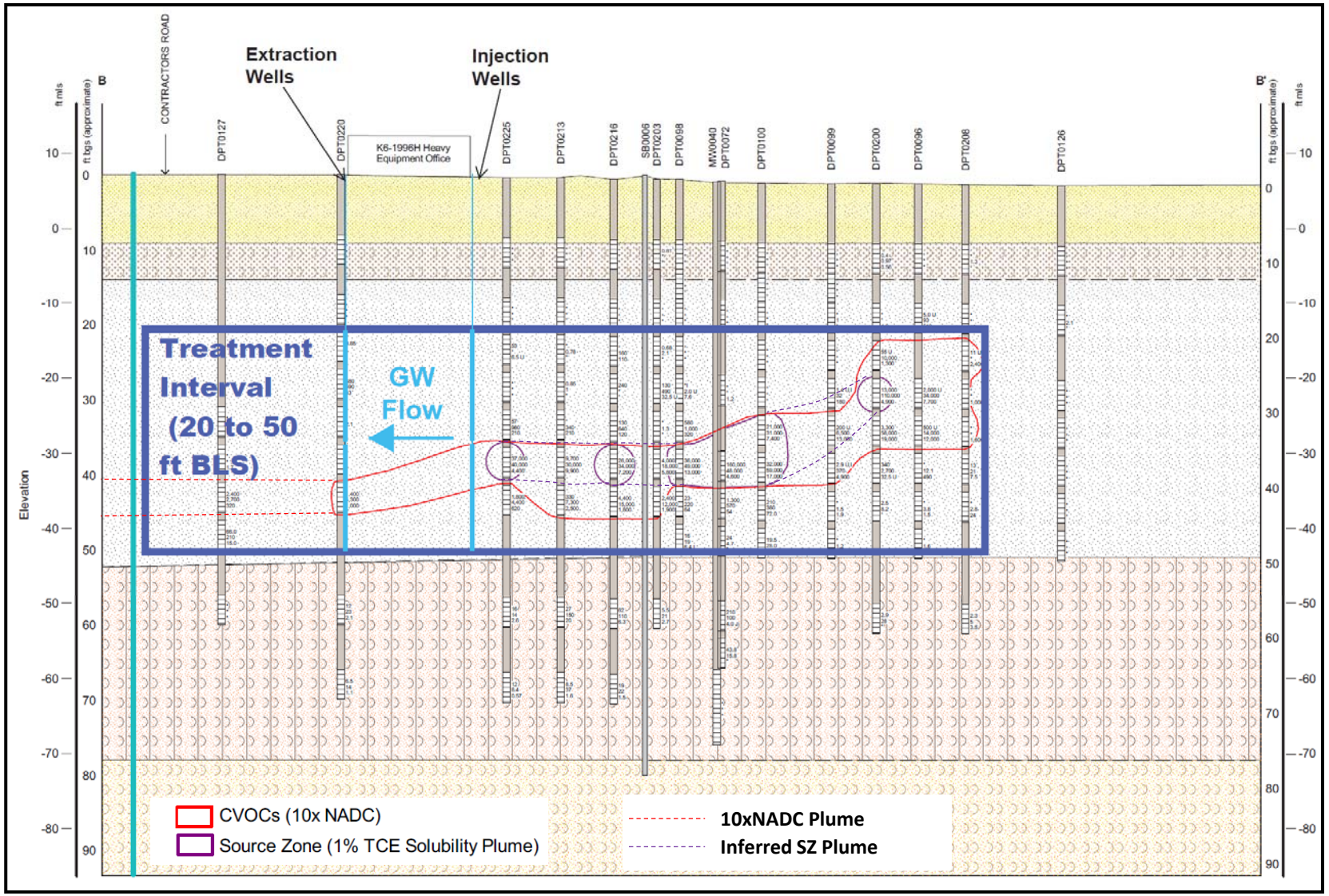
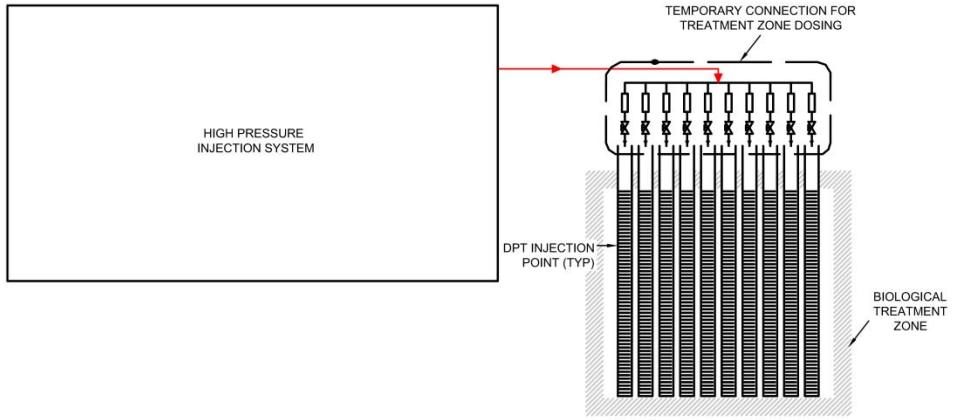



Figure 14

# SZ EZVI and 10xNADC Bioremediation Conceptual Design Layout

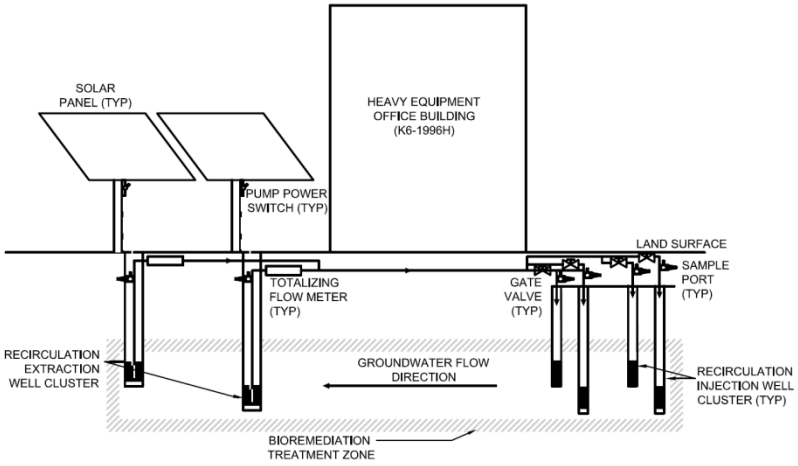


# SZ EZVI and 10xNADC Bioremediation Conceptual Design Layout



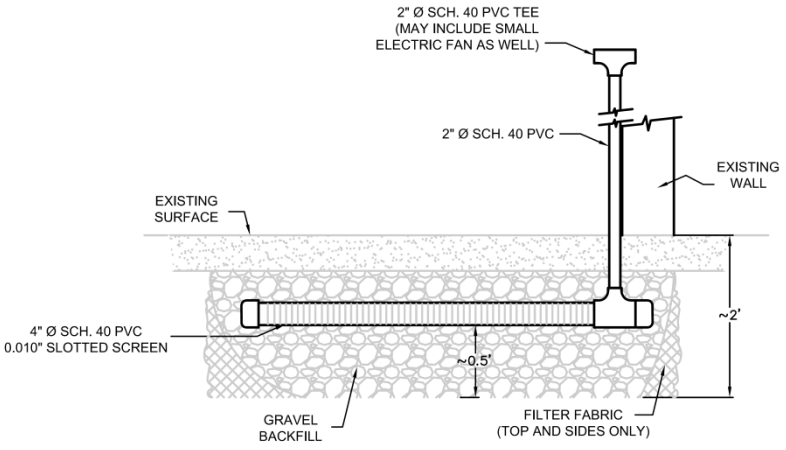

BIOREMEDIATION CONCEPTUAL PROCESS FLOW DIAGRAM

NOT TO SCALE




RECIRCULATION CONCEPTUAL PROCESS FLOW DIAGRAM

NOT TO SCALE




PASSIVE VENT CONSTRUCTION DETAILS

NOT TO SCALE

Figure 12

# SZ EZVI and 10xNADC Bioremediation Summary

| SZ – EZVI and Bioremediation with Recirculation | |
|---|---|
| Approximate Time to Achieve CAO | 3 to 5 years |
| Capitol Cost Estimate | $1,009,700 |
| Annual O&M Cost Estimate | $82,500 |
| DPT Sampling Cost | $32,400 |
| Second Injection Cost Estimate | $428,400 |
| Total Cost Estimate | $1,718,000 to $1,883,000 |

- CAO is conservative since treating area with probable DNAPL
  - Based on Hangar K results
- Total cost estimate is cost to reach NADCs
  - Includes capital cost, second injection event, and three to five years of annual O&M&M

Table 6

Jacobs Comment #14: Alternative 3B, 10X NADC Plume EZVI and Bioremediation with Recirculation: Slide 63 (new slide 90) – Similar to the note regarding Slide 57: At Hangar K, the HCP was treated using emulsified vegetable oil and lactate. Early indications are that the dissolved plume's decay has accelerated through the combination of SZ and HCP treatment, but it does not appear that NADC for all chlorinated VOCs will be reached within 5 years.

*Response: The calculation of time to reach NADC for each CVOC using enhanced bioremediation was based on MLP dechlorination rates and we feel this is an appropriate approximation.*

# Response to Comments

Jacobs Comment #13: Alternative 3B, 10X NADC Plume EZVI and Bioremediation with Recirculation: General – EZVI was engineered specifically as a DNAPL technology. Consider reducing the footprint of the EZVI application in the inferred SZ. When using EZVI in combination with technologies that enhance biological degradation, please consider applying EZVI only in the zones where the TCE concentrations exceed 10% of solubility. At Hangar K, EZVI was applied in zones where TCE concentrations were ≥200 ppm.

*Response: There are only two locations at CRHE with TCE concentrations near 10% TCE solubility (110,000 µg/L): DPT0072 from 36 to 40 ft BLS (160,000 µg/L) and DPT0134 from 36 to 40 ft BLS (100,000 µg/L); therefore, adjusting the treatment area to encompass the 10% solubility would create a small treatment area. The footprint for EZVI injection was agreed upon in the Step 1 to evaluate the implementation in the area where TCE is greater than 1% solubility. A reduction of the vertical treatment interval, currently from 20 to 50 ft BLS, can be evaluated during the design phase, by utilizing the DPT sampling data to reduce the vertical treatment interval.*

| Alternative | | Advantages | Disadvantages | Limitations | Expectations | Sustainability |
|---|---|---|---|---|---|---|
| 1A | Air Sparge and Soil Vapor Extraction in SZ | Demonstrated technology at nearby sites; local site geology well understood; short duration anticipated (<3 years). | Energy intensive; high O&M; potential for offsite plume migration. | Heavy equipment on site - equipment wheel loads could require specialized vault boxes and trenching design. | Rapid volatilization of CVOCs to less than NADCs achieved in 3 years or less. | Short cleanup timeframe, reusable treatment system, significant power and O&M requirements. Trenching and infrastructure installation required. |
| 1B | Air Sparge and Soil Vapor Extraction in 10xNADC | Demonstrated technology at nearby sites; local site geology well understood; short duration anticipated (<3 years). | Energy intensive; high O&M; potential for offsite plume migration. | Heavy equipment on site. Weight of equipment may damage air sparge wells, SVE Chambers and/or piping. Occupied building requires angled drilling and vapor treatment. Congested utility corridor requires hand digging to water table. | Rapid volatilization of CVOCs to less than NADCs achieved in 3 years or less. | Short cleanup timeframe, reusable treatment system, significant power and O&M requirements. Trenching and infrastructure installation required. |
| 2A | Bioremediation - Biostimulation using emulsified oil in SZ | Passive in situ approach; low O&M cost; demonstrated technology in other areas of KSC with similar lithology/constituents. Aquifer conditions are anaerobic. Limited treatment footprint with no infrastructure installation. | Large number of injection locations required, potential for additional injections beyond those budgeted, and potential for incomplete dechlorination. | Possibility of DNAPL present and slower dechlorination rates. | Reductive dechlorination of CVOCs to ethene within 3 to 5 yrs. | In situ technology with no monthly O&M or electrical power requirements. |
| 2B | Bioremediation - Biostimulation using emulsified oil in 10xNADC | Passive in situ approach; low to medium O&M cost; demonstrated technology in other areas of KSC with similar lithology/constituents. Aquifer conditions are anaerobic. | Large number of injection locations required, potential for additional injections beyond those budgeted, and potential for incomplete dechlorination. O&M required for recirculation wells. | Occupied building requires angled drilling and vapor treatment. Congested utility corridor requires hand digging to water table. | Reductive dechlorination of CVOCs to ethene within 3 to 5 yrs. | In situ technology. Solar powered - low electrical demand. |

# Technology Comparison

| Alternative | | Advantages | Disadvantages | Limitations | Expectations | Sustainability |
|---|---|---|---|---|---|---|
| 3A | EZVI in SZ | Passive in situ approach with low O&M cost. Limited treatment footprint. Expected biodegradation of COCs. | Large number of injection locations required, potential for additional injections beyond those budgeted, and potential for incomplete dechlorination. | Contact is important for success of this technology; distribution via injection could be problematic. | Abiotic reductive dechlorination of CVOCs to ethene within 3 to 5 yrs. | In situ technology with no monthly O&M or electrical power requirements. |
| 3B | EZVI with Bioremediation - EZVI in SZ and biostimulation using emulsified oil in 10xNADC | Passive in situ approach; low O&M cost; demonstrated technology in other areas of KSC with similar lithology/constituents. Aquifer conditions are anaerobic. Limited treatment footprint for EZVI. | Large number of injection locations required, potential for additional injections beyond those budgeted, and potential for incomplete dechlorination. O&M required for recirculation wells. | Occupied building requires angled drilling and vapor treatment. Congested utility corridor requires hand digging to water table. | Abiotic reductive dechlorination of CVOCs to ethene within 3 to 5 yrs. | In situ technology. Solar powered - low electrical demand. |

# Sustainability Assessment

| Remediation Technology | Green House Gas (GHG) Emissions (metric ton) | Total Energy Used (MMBTU) | Water Consumption (gallons) | NOx Emissions (metric ton) | SOx Emissions (metric ton) | Particulate Matter (PM10) Emissions (metric ton) |
|---|---|---|---|---|---|---|
| Source Zone Air Sparging/Soil Vapor Extraction | 243 | 3,741 | 175,703 | 0.38 | 0.58 | 0.004 |
| 10xNADC Air Sparging/Soil Vapor Extraction | 254 | 3,894 | 176,403 | 0.44 | 0.59 | 0.009 |
| Source Zone Bioremediation | 48 | 741 | 124,875 | 0.15 | 0.10 | 0.005 |
| 10xNADC Bioremediation | 87 | 1,355 | 246,675 | 0.28 | 0.16 | 0.011 |
| Source Zone EZVI | 28 | 338 | 230,020 | 0.08 | 0.03 | 0.005 |
| Combination Source Zone EZVI 10xNADC Bioremediation | 46 | 639 | 351,820 | 0.13 | 0.05 | 0.008 |

- AS/SVE high GHG due to electrical use during operation
- Total energy due to electricity during operation (AS/SVE) and due to manufacture of vegetable oil (Bio) and EZVI
- Water consumption due to electricity usage and dilution water
- NOx and SOx due to equipment use
- PM10 due to electricity usage and equipment use (drilling)

# Technology Cost Comparison
# Source Zone Treatment

| Alternative | | Capital Cost | Annual Cost Year One | Annual Costs Year Two | Annual Costs Year Three | Annual Costs Year Four | Annual Costs Year Five | Estimated Time to NADC | Total "Pay as You Go" Cost (Active Remediation) | Present Value Cost (Active Remediation) |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | | $ | $ | $ | $ | $ | $ | Years | $ | $ |
| 1A | SZ AS/SVE | $252,900 | $96,200 | $115,900 | N/A | N/A | N/A | 2 | $470,000 | $450,000 |
| | | $252,900 | $96,200 | $115,900 | $96,200 | N/A | N/A | 3 | $560,000 | $550,000 |
| 2A | SZ Bioremediation | $167,400 | $60,000 | $149,600 | $60,000 | N/A | N/A | 3 | $440,000 | $420,000 |
| | | $167,400 | $60,000 | $149,600 | $60,000 | $60,000 | $60,000 | 5 | $560,000 | $540,000 |
| 3A | SZ EZVI | $734,100 | $50,000 | $405,500 | $50,000 | N/A | N/A | 3 | $1,240,000 | $1,220,000 |
| | | $734,100 | $50,000 | $405,500 | $50,000 | $50,000 | $50,000 | 5 | $1,340,000 | $1,310,000 |

Net rate of return is 5%

Table 7

# Technology Cost Comparison
# Source Zone Treatment

| Alternative | | Total "Pay as You Go" Cost (Active Remediation) | Estimated CVOC Mass Removed | Estimated Cost per Pound of CVOC Mass Removed |
|---|---|---|---|---|
| Units | | $ | lbs | $/lbs |
| 1A | SZ AS/SVE | $450,000 | 58 | $8,100 |
| | | $550,000 | | $9,700 |
| 2A | SZ Bioremediation | $420,000 | 58 | $7,600 |
| | | $540,000 | | $9,700 |
| 3A | SZ EZVI | $1,220,000 | 58 | $21,400 |
| | | $1,310,000 | | $23,100 |

Mass removed is estimated mass based on reducing concentrations to NADC in the treatment areas

Table 7

Geosyntec consultants

# Technology Cost Comparison 10X NADC Area

| Alternative | | Capital Cost | Annual Cost Year One | Annual Costs Year Two | Annual Costs Year Three | Annual Costs Year Four | Annual Costs Year Five | Estimated Time to NADC | Total "Pay as You Go" Cost (Active Remediation) | Present Value Cost (Active Remediation) |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | | $ | $ | $ | $ | $ | $ | Years | $ | $ |
| 1B | 10xNADC AS/SVE | $424,600 | $121,200 | $153,600 | N/A | N/A | N/A | 2 | $700,000 | $690,000 |
| | | $424,600 | $121,200 | $153,600 | $121,200 | N/A | N/A | 3 | $820,000 | $800,000 |
| 2B | 10xNADC Bioremediation | $440,500 | $99,500 | $290,100 | $99,500 | N/A | N/A | 3 | $930,000 | $910,000 |
| | | $440,500 | $99,500 | $290,100 | $99,500 | $99,500 | $99,500 | 5 | $1,130,000 | $1,100,000 |
| 3B | SZ EZVI 10xNADC Bioremediation | $1,009,700 | $82,500 | $543,300 | $82,500 | N/A | N/A | 3 | $1,720,000 | $1,680,000 |
| | | $1,009,700 | $82,500 | $543,300 | $82,500 | $82,500 | $82,500 | 5 | $1,880,000 | $1,840,000 |

Net rate of return is 5%

Table 7

# Technology Cost Comparison
# Source Zone Treatment

| Alternative | | Total "Pay as You Go" Cost (Active Remediation) | Estimated CVOC Mass Removed | Estimated Cost per Pound of CVOC Mass Removed |
|---|---|---|---|---|
| Units | | $ | lbs | $/lbs |
| 1B | 10xNADC AS/SVE | $700,000 | 152 | $4,600 |
| | | $820,000 | | $5,400 |
| 2B | 10xNADC Bioremediation | $930,000 | 152 | $6,100 |
| | | $1,130,000 | | $7,400 |
| 3B | SZ EZVI 10xNADC Bioremediation | $1,720,000 | 152 | $11,300 |
| | | $1,880,000 | | $12,400 |

Mass removed is estimated mass based on reducing concentrations to NADC in the treatment areas

Table 7

Jacobs Comment #15: Technology Comparison and Technology Cost Comparisons – For SZ Alternatives 1A (air sparging) and 2A (emulsified oil), we are concerned that the lack of documented performance history for these technologies for DNAPL treatment may result in some understatement of both the estimated time to achieve CAO and the treatment cost. Treatment success at CRHE will largely depend on the amount of DNAPL present and how efficiently that DNAPL mass is removed or controlled. Inclusion of applicable site or study information would be very helpful.

*Response: See responses to comment #2 and #6 above.*

TT Comment #12: Cost Estimate, Global Comment – The cost estimates do not clearly identify if direct or burdened costs are presented in the Step 2 EE. Please clarify.

*Response: The cost estimates are fully burdened.*

# Response to Comments

TT Comment #11: Slide 71 (new slide 104) – Prior to concurring with the selection of bioremediation, we suggest that the EZVI alternatives be revisited per Comment 10. Although there is limited case study literature available regarding the efficacy of bioremediation of dense non-aqueous-phase liquid (DNAPL), the limitations of bioremediation may be understated in this ADP. Additionally, we suggest screening bioremediation substrates that contain ZVI as a supplement to the bioremediation alternatives.

*Response: The costing was revised using a 6 ft ROI and is included in the response to Jacob's comment #11 above. See comment #6 for discussion of bioremediation in DNAPL source zones. We feel that emulsified oil is the best substrate for implementing bioremediation at this site.*

# Technology Evaluation Summary

- All three technologies are capable of treating COCs
- Why not air sparging?
  - Trenching at an active facility with large pieces of equipment and personnel that work in the area
  - Heavy equipment will likely require specialty vault boxes and geotech evaluation for trenching
  - Likely mounding from AS and possible entrainment issue with SVE
  - Scale up/expansion issues (when looking at plume as a whole) – due to presence of road/railroad yard and woods/wetland
  - Engineering solutions can be developed, but there are risks
- Why Bioremediation?
  - Passive implementation
  - Ideal geochemistry
  - Reduced O&M&M (monitoring only)
  - Amenable to scaling
  - More cost effective than EZVI

# Path Forward

- Recommend bioremediation of the source zone
  - AS/SVE is less expensive per pound and total "Pay as You Go", but bioremediation offers:
    - A more passive technology at a busy site
    - Reduced impact to operations
    - Reduced risk of damage to utilities or to the treatment system during operation
    - Reduced risk of failure – AS/SVE mounding likely to cause entrainment issues for SVE with potential exposure to personnel
- Test consensus

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# CONTRACTOR'S ROAD HEAVY EQUIPMENT AREA: HOT SPOT 1
# DESCRIPTION OF ALTERNATIVES

## OVERVIEW

The Contractor's Road Heavy Equipment (CRHE) Area Step 1A and 1B Engineering Evaluation Advanced Data Packages (ADPs) for Hot Spot 1 were presented at the December 2013 Kennedy Space Center Remediation Team meeting. During the Step 1 Engineering Evaluation, the source zone was defined as the area with concentrations of trichloroethene (TCE) greater than 11,000 micrograms per liter (µg/L). Based upon the proximity of adjacent source zone contours, the separately contoured areas were combined to form an overall source zone area for the evaluation of remedial technologies as presented on **Figure 1** (of the ADP). The source zone is approximately 0.07 acres (3,050 square feet) and is located east of the Heavy Equipment Office Building (K6-1996H).

The ten times Natural Attenuation Default Concentration (10xNADC) area is defined as the area with groundwater TCE, *cis*-1,2-dichloroethene (cDCE), and vinyl chloride (VC) concentrations greater than ten times their respective NADC. The 10xNADC plume encompasses the source zone and extends west beneath the Heavy Equipment Office Building (M6-1996H), a utility corridor, and Contractor's Road. The western portion of the 10xNADC plume is defined by the Hot Spot 1 boundary, located at the west edge of Contractor's Road. The 10xNADC plume is approximately 0.44 acres (19,000 square feet). The area within the 10xNADC plume that does not include the source zone is referred to as the 10xNADC ring.

Based on the Step 1B, aggressive treatment technologies retained for further evaluation for the source zone consisted of:

- air sparging/soil vapor extraction (AS/SVE);
- bioremediation; and
- emulsified zero valent iron (EZVI) injection.

Aggressive treatment technologies retained for further evaluation of the 10xNADC area consisted of:

- AS/SVE;
- bioremediation; and
- EZVI injection in the source zone/bioremediation of the 10xNADC ring.

Additionally, institutional controls were retained for all remedial alternatives.

The Corrective Action Objective (CAO) used in this evaluation is to reduce TCE, cDCE, and VC concentrations to less than NADCs or concentrations which will facilitate a transition to natural

attenuation monitoring (NAM). Descriptions of the treatment technologies and conceptual designs are provided in the following sections.

## AIR SPARGING / SOIL VAPOR EXTRACTION - OVERVIEW

Air sparging is a proven technology at KSC sites that entrains contaminants in air injected into the subsurface. Volatilized contaminants are released to the atmosphere or collected using an SVE system (because of the mass present in the subsurface and presence of nearby structures and personnel).

For each air sparging scenario considered, the system would include the hollow stem auger installation of 2-inch diameter schedule 40 PVC air sparge wells to a total depth of 50 ft below land surface (BLS) with a 20″ Schumasoil well screen installed from approximately 48 to 50 feet BLS. The air sparge wells would transition to 1- inch diameter galvanized steel pipe approximately 12 inches below grade. Wells would be completed flush with land surface with a 16-inch diameter steel manhole or 18″ x 18″ x 24″ steel vault box set in a concrete pad. The well head at each air sparge well would include a gate valve and a check valve. Upstream of the well head the piping would transition to SCH 80 PVC that would be buried at least 24 inches below grade. The PVC piping would run from the sparge wells to the manifold, which would house pressure gauges and flow meters for each well. The piping from the manifold would run to the equipment trailer, located near an electrical transformer, where the piping would transition to galvanized steel for the above ground connections to the trailer. Both air sparge scenarios assume the use of an existing air sparge trailer, which would alternate operation of two or three zones.

In consideration of the existing structures, workers, and NASA request, an SVE system is proposed to protect personnel working in the area and to alleviate the potential accumulation of contaminants in the vapor phase beneath the building (which could result in a release of vapor to indoor air). The new, trailer mounted, minimum 10-horsepower blower will be piped below grade to a network of SVE chambers located at approximate 20 foot intervals around the building and through the source zone. The chambers will be constructed of 4-inch diameter slotted PVC pipe laid in a 1-ft x 2-ft x 5-ft "chamber" lined with filter fabric and filled with pea gravel. The greater surface area (compared to that provided by a standard SVE well) will allow for greater airflow at a lower vacuum, increasing the SVE system effectiveness. To aid in the effectiveness of the SVE system, a plastic cap will be installed over the treatment area to prevent water infiltration, reduce emissions of fugitive vapors, prevent vertical short-circuiting of air flow, and to increase the design ROI. Off-gases would be treated using vapor-phase granular activated carbon (GAC).

In addition to the installation of the air sparge/SVE system, performance monitoring wells would be installed using direct push technology (DPT) drilling to supplement the existing monitoring well network at the site. Each scenario includes quarterly sampling of the newly installed performance monitoring well network (10 or 15 monitoring wells) for chlorinated volatile organic compound

(CVOC) analysis. AS/SVE is expected to meet the CAO within two to three years based on experience at other sites at KSC and in Florida.

Included in the air sparge evaluation is DPT groundwater sampling (three or five days) to aid in evaluation of air sparge system optimization or to aid in evaluation of shutting down the system.

***Air Sparging/Soil Vapor Extraction – Source Zone***

Air sparging in the source zone would include the installation of an estimated 13 vertical air sparge wells, as described in the previous section. Air sparge wells would be spaced conservatively (approximately 20 feet between wells), with an estimated 20-ft radius of influence (ROI), allowing for a robust overlap of influence from adjacent wells. The spacing of the air sparge wells was more conservative, since the presence of dense non-aqueous phase liquid (DNAPL) is possible. The specific number and spacing of the air sparge wells would be refined in the interim measure (IM) design.

The SVE system would be constructed with an estimated 11 chambers as described in the previous section. The radius of influence expected from the SVE system is approximately 20 to 30 ft as observed at other Florida sites with similar vadose zone lithology. Operation and maintenance would be performed on the AS/SVE system for the first three days of operation, weekly for the remainder of the first month of operation, and monthly thereafter.

Up to 10 performance monitoring wells would be installed, using DPT drilling, to supplement the existing monitoring well network at the site. The performance monitoring network (10 monitoring wells) would be sampled quarterly for chlorinated volatile organic compounds (CVOCs).

***Air Sparging/Soil Vapor Extraction – 10xNADC Area***

Air sparging in the 10xNADC Area would include the installation of an estimated 29 vertical air sparge wells and five angle-drilled wells. AS/SVE of the 10xNADC area involves the following design constraints and implementation considerations:

- Vertical air sparge wells cannot be readily installed beneath the Heavy Equipment Office Building (K6-1996H) because it is currently in use by personnel; therefore, the following approach was utilized for the feasibility study evaluation and layout:
    - angle-drilled air sparge wells (five) installed via sonic drilling methods from land surface east of the building (to avoid drilling in the utility corridor) beneath the building to aid in air distribution; and
    - SVE chambers along the building's exterior walls to avoid accumulation of potential vapors beneath the occupied building.

- Utilities in the corridor east of Contractor's Road will require hand digging to the water table prior to drilling any locations in this area and all trenching will be performed by hand;
- Maintenance of Traffic (MOT) will be required to shut down part of Contractor's Road during installation of air sparge wells and piping beneath and adjacent to the roadway.

Air sparge well spacing in the source zone and under the building was approximately 20 feet between wells. The well spacing for the 10XNADC ring was approximately 30 feet between wells. The ROI is assumed to be 20 ft. The SVE system would be constructed with 16 of the SVE chambers described in the overview section, with five of those chambers located around the building's footprint.

Operation and maintenance of the system would be performed for the first three days of operation, weekly for the remainder of the first month of operation, and monthly thereafter.

Up to 15 performance monitoring wells would be installed, using DPT drilling, to supplement the existing monitoring well network at the site. The performance monitoring network (15 monitoring wells) would be sampled quarterly for CVOCs.

**BIOREMEDIATION - OVERVIEW**

Bioremediation via biostimulation involves the injection of an electron donor into the subsurface to promote reductive dechlorination utilizing the native microbial population. The electron donor provides a substrate for the anaerobic microorganisms to promote respiration of the chlorinated solvents. As the microorganisms consume the electron donor, they (i) create a reducing environment and (ii) provide electron donor for the dechlorinating organisms. Groundwater sampling has determined that *Dehalococcoides (Dhc)* organisms are present at concentrations of approximately $10^7$ gene copies per liter of groundwater and that the vinyl chloride reductase gene (*vcrA*) is present (approximately $10^6$ gene copies per liter of groundwater), ensuring capability to reduce CVOCs to ethene. Groundwater geochemical data, in combination with *Dhc*, *vcrA*, and ethene concentrations, provide confirmation that biological reductive dechlorination is occurring at CRHE.

The proposed electron donor for cost estimating purposes is EOS PRO (60% oil), a commercially available food grade emulsified oil substrate with Vitamin B12 supplement. The electron donor would be delivered to the subsurface via DPT injection points with 16 foot spacing center to center (assumes a ROI of approximately 8 feet). The estimated 8 ft ROI has been achieved at other NASA-KSC bioremediation injection sites, and groundwater movement over time will further support the distribution of the electron donor. It is assumed for Step 2 cost evaluation purposes that the injection will be performed by Vironex and Vironex will provide the

necessary specialized equipment (tanks, pumps, and hoses for dilution and mixing of electron donor) and the DPT rig for injection.

The estimated electron donor calculations (volume of EOS PRO required) is provided in **Table A-1**. Based on experience implementing bioremediation at other sites, the volume of emulsified oil utilized ranges from 0.1 to 1% of the pore volume within the treatment area. **Table A-1** provides the estimation of the amount of EOS PRO that would be required to fill 0.1 to 1% of the pore volume and also provides the vendor recommended dosing. The volume of electron donor chose from each treatment area was conservatively estimated to be within the range of the 0.1 to 1%.

Bioremediation is expected to meet the CAO within three to five years based on dechlorination rates from the source zone biostimulation at the Vehicle Assembly building/Mobile Launch Pad site.

***Bioremediation – Source Zone***

Bioremediation of the source zone includes treatment of the area with TCE concentrations greater than 1% solubility (11,000 µg/L) and includes the injection of approximately 1,700 gallons (33 drums; 52.5 gallons per drum) of electron donor into 29 injection points. The volume of electron donor will fill approximately 0.5% of the pore volume, which is a conservative estimate based on the possibility of DNAPL being present. It is assumed that the EOS will be diluted 1:20 prior to injection and that chase water will be required to achieve the estimated 8 ft ROI. The solution will be injected over the 20 to 50 ft BLS treatment interval.

For costing and evaluation purposes, a second injection event was budgeted for approximately 24 months following the initial event. The second injection event assumes injection of 50% of the original EOS PRO volume (17 drums), which will fill 0.25% of the pore volume with EOS PRO. The same number of injection locations (29) will be utilized during this second injection. It is assumed that the EOS will be diluted 1:20 prior to injection and that chase water will be required to achieve the estimate 8 ft ROI.

Up to 10 performance monitoring wells would be installed, using DPT drilling, to supplement the existing monitoring well network at the site. The performance monitoring network (10 monitoring wells) would be sampled quarterly for CVOCs, with five of the samples additionally analyzed for biological and geochemical parameters (*Dhc*, *vcrA*, sulfate, sulfide, and total organic carbon [TOC]).

***Bioremediation - 10xNADC Area***

Bioremediation of the 10xNADC area includes the source zone, as described above, as well as the 10xNADC ring (the area of 10XNADC outside the source area). Bioremediation of the 10xNADC area would follow a similar approach to source zone bioremediation, with the addition of the following design constraints and implementation considerations:

- Vertical injection points cannot be readily installed beneath the Heavy Equipment Office Building (K6-1996H) because it is currently in use by personnel; therefore, the following recommendations are made:
    - angle-drilled injection points (six) beneath the building to aid in amendment injection (only six points are included because assuming will only drill from east side of building to avoid angle drilling through utility corridor and DPT rig has limited capability to reach under building);
    - emulsified oil dosing under the building would be based on the pore volume present under the building and that volume would be injected into the six injection locations;
    - use of existing (from GSA Seized Property IM) solar-powered recirculation system (two solar panels and two pumps) to aid in amendment distribution under the building; and
    - passive vents along the building's exterior walls to avoid potential accumulation of methane beneath the occupied building.
- Utilities in the corridor east of Contractor's Road will require hand digging to the water table prior to drilling any locations in this area;
- MOT will be required to shut down part of Contractor's Road during injection work in and adjacent to the roadway.

The bioremediation of the source zone would be implemented as described in the previous section. Within the 10xNADC ring, bioremediation would include the injection of approximately 3,600 gallons (69 drums) of EOS PRO into 84 injection points. The solution will be injected over the 20 to 50 ft BLS treatment interval. The volume of EOS PRO will fill 0.2% of the 10xNADC ring pore volume. The percentage of the pore volume to be filled in the 10xNADC ring was reduced from the dosing used in the source zone, since the concentrations in this area are less than what are observed in the source zone. A total of 102 drums would be injected into 113 injection points in both the source zone and 10xNADC ring. For the six angled injections beneath the building, drilling will be performed east of the building to avoid drilling in the utility corridor.

For budgeting purposes, a second injection event is proposed may be performed 24 months following the initial event. The second injection event would involve the injection of 50% of the original EOS PRO volume (17 drums) to the same number of injection points in the source zone, and injection of 50% of the original EOS PRO amount into 50% of the original injection points in the 10xNADC ring (18 drums). A total of 35 drums of EOS PRO would be injected during the second event.

The solar-powered recirculation system will aid in distribution of amendment beneath the Heavy Equipment Office Building. Two 5-inch diameter extraction wells: one screened from 20 to 35 and one screened 35 to 50 ft BLS and two clusters with two 4-inch injection wells (a total of four wells) with the same screen intervals would be installed via hollow stem auger drilling. Solar-powered pumps would be installed within the extraction wells and piping would be installed in a trench exterior to and running along the southern portion of the building. Four passive vents would be installed, two on the east and two on the west side of the building, to avoid methane accumulation beneath the occupied building.

Up to 15 performance monitoring wells would be installed, using DPT drilling, to supplement the existing monitoring well network at the site. The performance monitoring network (15 monitoring wells) would be sampled quarterly for CVOCs, with eight of the samples additionally analyzed for biological and geochemical parameters (*Dhc*, *vcrA*, sulfate, sulfide, and TOC). Also, plan to sample the injection and extraction wells semi-annually with analysis of samples for VOCs to aid in evaluation of mass removal from under the building.

**EZVI INJECTION - OVERVIEW**

Emulsified zero-valent iron promotes reductive dechlorination in a similar fashion to standard (non-emulsified) ZVI, but has the added benefit of sequestration of contaminants in the oil phase resulting in additional contaminant reduction. Additionally, the emulsified oil helps promote a more suitable environment for biological reductive dechlorination via enhanced bioremediation. EZVI is composed of micro- or nano-scale ZVI suspended in a water phase, which is encompassed by a larger oil phase and surfactant. When introduced into groundwater, an emulsion is formed which is stabilized by the surfactant. Hydrophobic contaminants such as TCE are attracted to the oil phase and are subsequently dechlorinated by the ZVI in the emulsion. EZVI is well suited to treat DNAPL source zones, but is also effective at dechlorinating dissolved-phase groundwater plumes (though the cost for EZVI typically results in the technology focused in the source zone).

The EZVI solution utilized at the CRHE area would be 5% EZVI (sizes ranging from 0.1 to 5 microns) by weight. The EZVI would be delivered to the subsurface via high pressure DPT injection into injection points with 6 foot spacing center to center (assumes a ROI of 3 feet). The target injection volume would fill 10% of the aquifer pore space within the source zone. For costing purposes, it was assumed the injection would be performed by Vironex and Vironex will provide the necessary equipment (tanks, pumps, and hoses for dilution and mixing of electron donor) and the DPT rig for injection. Vironex estimates that six injection points can be completed per day. Dosing calculations for the EZVI are included in **Table A-2**.

EZVI injection is estimated to reach the CAO within 3 to 5 years based on the results observed at Hangar K.

***EZVI Injection – Source Zone***

Approximately 20,500 gallons of EZVI solution would be injected into 126 injection points in the source zone.

For costing purposes, a second injection event is included. The second injection event would involve the injection of the half of the volume (10,250 gallons) of EZVI solution (the same concentration solution injected into half of the original locations).

Up to 10 performance monitoring wells would be installed, using DPT drilling, to supplement the existing monitoring well network at the site. The performance monitoring network (10 monitoring wells) would be sampled quarterly for CVOCs.

***Combination EZVI Injection – Source Zone/Bioremediation – 10xNADC Ring***

The treatment of the 10xNADC zone would involve a combination of EZVI injection in the source zone and bioremediation of the 10xNADC ring. Bioremediation of the 10xNADC ring involves the following design constraints and implementation considerations:

- Vertical injection points cannot be readily installed beneath the Heavy Equipment Office Building (K6-1996H) because it is currently in use by personnel; therefore, the following recommendations are made:
    - angle-drilled injection points (six) beneath the building to aid in amendment injection (only six points are included because assuming will only drill from east side of building to avoid angle drilling through utility corridor and DPT rig has limited capability to reach under building);
    - emulsified oil dosing under the building would be based on the pore volume present under the building and that volume would be injected into the six injection locations;
    - use of existing (from GSA Seized Property IM) solar-powered recirculation system (two solar panels and two pumps) to aid in amendment distribution under the building; and
    - passive vents along the building's exterior walls to avoid accumulation of methane beneath the occupied building.
- Utilities in the corridor east of Contractor's Road will require hand digging to the water table prior to drilling any locations in this area;
- MOT will be required to shut down part of Contractor's Road during injection work in and adjacent to the roadway.

EZVI injection in the source zone would be implemented as described in the previous section. Within the 10xNADC ring, bioremediation would include the injection of approximately 3,600 gallons (69 drums) of amendment into 84 injection points (same as described in the 10XNADC bioremediation description). The solution will be injected over the 20 to 50 ft BLS treatment interval. This volume will achieve a target of filling 0.2% of the 10xNADC ring pore volume with EOS PRO. For the six angled injections beneath the building, drilling will be performed east of the building to avoid drilling in the utility corridor.

For costing purposes, a second injection event is proposed approximately 24 months following the initial event. The second injection event would involve the injection of the original EZVI volume (10,250 gallons) adjacent to the half of the original injection points in the source zone, and injection of 50% of the original EOS PRO amount into 50% of the original injection points in the 10xNADC ring (18 drums).

The solar-powered recirculation system will aid in distribution of amendment beneath the Heavy Equipment Office Building. Two 5-inch diameter extraction wells: one screened from 20 to 35 and one screened 35 to 50 ft BLS and two clusters with two 4-inch injection wells (a total of four wells) with the same screen intervals would be installed via hollow stem auger drilling. Solar-powered pumps would be installed within the extraction well screens and piping would be installed in a trench exterior to and running along the southern portion of the building. Four passive vents would be installed, two on the east and two on the west side of the building, to avoid methane accumulation beneath the occupied building.

Up to 15 performance monitoring wells would be installed, using DPT drilling, to supplement the existing monitoring well network at the site. The performance monitoring network (10 monitoring wells) would be sampled quarterly for CVOCs, with 8 of the samples additionally analyzed for biological and geochemical parameters (*Dhc*, *vcrA*, sulfate, sulfide, and TOC). Also, plan to sample the injection and extraction wells semi-annually with analysis of samples for VOCs to aid in evaluation of mass removal from under the building.

**Table A-1. Emulsified Oil Calculations**
**Step Two Engineering Evaluation**
**Contractor's Road Heavy Equipment Area**

| Parameter | Value | Units | Method of Determination |
|---|---|---|---|
| Porosity | 0.3 | | Engineering estimate |
| Hydraulic Conductivity | 7.6 | ft/day | From specific capacity test during RFI |
| Groundwater Flow Velocity | 69 | ft/yr | From Step 1 Eng Eval ADP |
| Area of 10xNADC Treatment Area including Source Zone (SZ) | 19,170 | $ft^2$ | Based on GIS plume area (0.44 acres) |
| Area of SZ Treatment Area | 3,050 | $ft^2$ | Concentration of TCE > 11,000 µg/L; Area based on GIS plume area (0.07 acres) |
| Area of 10xNADC Treatment Area not including SZ (10xNADC Ring) | 16,120 | $ft^2$ | Area of 10xNADC plume, minus the Source Zone plume (0.37 acres) |
| Vertical Treatment Interval | 30 | ft | Based on groundwater sampling data and 20 ft to 50 ft treatment interval |
| **SZ Treatment Area** | | | |
| Volume of SZ Treatment Area | 91,500 | $ft^3$ | Area of SZ x Vertical Treatment Interval |
| Pore Volume in SZ Treatment Area | 27,450 | $ft^3$ | Volume x Porosity |
| **Pore Volume in SZ Treatment Area** | **205,340** | **gal** | **1 $ft^3$ = 7.480519 gal** |
| **EOS Calculations - SZ** | | | |
| ***Assuming filling 0.1% Pore Volume*** | | | |
| Volume of EOS (SZ) | 342 | gal | Assumes EOS is 60% oil |
| Drums of EOS (SZ) | 7 | drums | 1 drum = 52.5 gallons of EOS |
| ***Assuming filling 1% Pore Volume*** | | | |
| Volume of EOS (SZ) | 3,422 | gal | Assumes EOS is 60% oil |
| Drums of EOS (SZ) | 66 | drums | 1 drum = 52.5 gallons of EOS |
| ***Based on Vendor Calculation Sheet*** | | | |
| Drums of EOS (SZ) | 12 | drums | see attached calculation sheet |
| **Estimated Number of Drums for Step 2 ADP (SZ) 1st Injection** | **33** | **drums** | **0.5% of pore volume due to possibility of DNAPL** |
| **Estimated Number of Drums for Step 2 ADP (SZ) 2nd Injection** | **17** | **drums** | **0.25% of pore volume due to possibility of DNAPL** |
| Total Volume of EOS in 1st Injection | 1,711 | gal | Based on 52.5 gal per drum |
| Total Volume of EOS in 2nd Injection | 893 | gal | Based on 52.5 gal per drum |
| | | | |
| **10xNADC Ring Treatment Area** | | | |
| Volume of 10xNADC Ring Treatment Area | 483,600 | $ft^3$ | Area of 10xNADC ring x Vertical Treatment Interval |
| Pore Volume in 10xNADC Ring Treatment Area | 145,080 | $ft^3$ | Volume x Porosity |
| **Pore Volume in 10xNADC Ring Treatment Area** | **1,085,274** | **gal** | **1 $ft^3$ = 7.480519 gal** |
| **EOS Calculations - 10xNADC Ring** | | | |
| ***Assuming filling 0.1% Pore Volume*** | | | |
| Volume of EOS (10xNADC Ring) | 1,809 | gal | Assumes EOS is 60% oil |
| Drums of EOS (10xNADC Ring) | 35 | drums | 1 drum = 52.5 gallons of EOS |
| ***Assuming filling 1% Pore Volume*** | | | |
| Volume of EOS (10xNADC Ring) | 18,088 | gal | Assumes EOS is 60% oil |
| Drums of EOS (10xNADC Ring) | 345 | drums | 1 drum = 52.5 gallons of EOS |
| ***Based on Vendor Calculation Sheet*** | | | |
| Drums of EOS (10xNADC Ring) | 49 | drums | Difference of the attached calculation sheets |
| **Estimated Number of Drums for Step 2 ADP (10xNADC Ring) 1st Injection** | **69** | **drums** | **0.2% of pore volume** |
| **Estimated Number of Drums for Step 2 ADP (10xNADC Ring) 2nd Injection** | **18** | **drums** | **Half the treatment area; 0.1% of pore volume** |
| Total Volume of EOS in 1st Injection | 3,618 | gal | Based on 52.5 gal per drum |
| Total Volume of EOS in 2nd Injection | 945 | gal | Based on 52.5 gal per drum |

**Table A-2. EZVI Dosing Calculations**
**Step Two Engineering Evaluation**
**Contractor's Road Heavy Equipment Area**

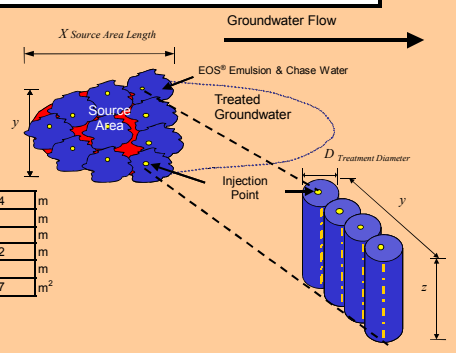
| Parameter | Value | Units | Method of Determination |
|---|---|---|---|
| Porosity | 0.3 | | Engineering estimate |
| Hydraulic Conductivity | 7.6 | ft/day | From specific capacity test during RFI |
| Groundwater Flow Velocity | 69 | ft/yr | From Step 1 ADP |
| Area of Source Zone Treatment Area | 3,050 | $ft^2$ | Concentration of TCE > 11,000 µg/L; Area based on GIS plume area (0.07 acres) |
| Area of 10xNADC Treatment Area including Source Area | 19,170 | $ft^2$ | Based on GIS plume area (0.44 acres) |
| Area of 10xNADC Treatment Area not including Source Area (10xNADC ring) | 16,120 | $ft^2$ | 10XNADC area - source area |
| Vertical Treatment Interval | 30 | ft | Based on groundwater sampling data (20 to 50 ft BLS) |
| **EZVI Calculations - Source Area Only** | | | |
| Volume of EZVI Treatment Area | 91,500 | $ft^3$ | Area x Vertical Treatment Interval |
| Pore Volume in EZVI Treatment Area | 27,450 | $ft^3$ | Volume x Porosity |
| Pore Volume in EZVI Treatment Area | 205,340 | gal | 1 $ft^3$ = 7.480519 gal |
| **Volume of EZVI in 1st Injection** | **20,534** | **gal** | **Assumes EZVI solution (5% by weight) needs to fill 10% pore volume** |
| **Volume of EZVI in 2nd Injection** | **10,267** | **gal** | **Volume and dosing remains the same** |
| **EOS Calculations - 10xNADC** | | | |
| Volume of 10xNADC Treatment Area | 483,600 | $ft^3$ | Area x Vertical Treatment Interval |
| Pore Volume in 10xNADC Treatment Area | 145,080 | $ft^3$ | Volume x Porosity |
| Pore Volume in 10xNADC Treatment Area | 1,085,274 | gal | 1 $ft^3$ = 7.480519 gal |
| ***Assuming filling 0.1% Pore Volume*** | | | |
| Volume of EOS (10xNADC) | 1,809 | gal | Assumes EOS is 60% oil |
| Drums of EOS (10xNADC) | 35 | drums | 1 drum = 52.5 gallons of EOS |
| ***Assuming filling 1% Pore Volume*** | | | |
| Volume of EOS (10xNADC) | 18,088 | gal | Assumes EOS is 60% oil |
| Drums of EOS (10xNADC) | 345 | drums | 1 drum = 52.5 gallons of EOS |
| ***Based on Vendor Calculation Sheet*** | | | |
| Drums of EOS (10xNADC) | 49 | drums | Difference of the attached calculation sheets |
| **Estimated Number of Drums for Step 2 ADP (10xNADC) 1st Injection** | **69** | **drums** | **0.2% of pore volume** |
| **Estimated Number of Drums for Step 2 ADP (10xNADC) 2nd Injection** | **18** | **drums** | **Half the treatment area; 0.1% of pore volume** |
| Total Volume of EOS in 1st Injection | 3,618 | gal | Based on 52.5 gal per drum |
| Total Volume of EOS in 2nd Injection | 945 | gal | Based on 52.5 gal per drum |

# EOS® SOURCE AREA & DNAPL DESIGN WORKSHEET

**U.S. Version 2.1g, Rev. Date: December 7, 2008**
www.EOSRemediation.com

Help

| | |
|---|---|
| Site Name: | CRHE - Source Zone |
| Location: | KSC, FL |
| Project No.: | |




## Step 1: Select a Substrate from the EOS® Family of Bioremediation Products

Substrate Selected (pick from drop down list): EOS® 598B42 (Preferred for Chlorinateds)
For Product Literature Click Here

## Step 2: EOS® Consumption During Contaminant Biodegradation / Biotransformation

### Section A: Source Area Dimensions

| | | | | |
|---|---|---|---|---|
| Length of treatment area parallel to groundwater flow, "x" | 195 | ft | 59.4 | m |
| Width of treatment area perpendicular to groundwater flow, "y" | 20 | ft | 6.1 | m |
| Minimum depth to contamination | 20 | ft | 6.1 | m |
| Maximum depth of contamination | 50 | ft | 15.2 | m |
| Treatment thickness, "z" | 30 | ft | 9.1 | m |
| Treatment zone cross-sectional area, A = y * z | 600 | $ft^2$ | 55.7 | $m^2$ |

### Section B: Groundwater Flow Rate / Site Data

Soil Characteristics

| | | | | |
|---|---|---|---|---|
| Nominal Soil Type (pick from drop down list) | Sand | | | |
| Total Porosity (accept default or enter *n*) | 0.40 | (decimal) | | |
| Effective Porosity (accept default or enter $n_e$) | 0.30 | (decimal) | | |
| Soil bulk density; (1-n)*2.65 g/cc (accept calculated or enter dry bulk density) | 1.60 | g/cc | 100 | lbs / $ft^3$ |
| Fraction of organic carbon: foc | 0.0030 | range: 0.0001 to 0.01 | | |

Hydraulic Characteristics

| | | | | |
|---|---|---|---|---|
| Hydraulic Conductivity (accept default or enter *K*) | 7.6 | ft/day | 2.7E-03 | cm/sec |
| Hydraulic Gradient (accept default or enter *i*) | 0.005 | ft/ft | | |

Note: Since the hydraulic gradient ($i = dh/dx$) is negative, we ask you to enter $-i$ in the EOS® Design Tool so that you can enter a positive number for convenience.

| | | | | |
|---|---|---|---|---|
| Non-reactive Transport Velocity, $V_x = -(K \times i) / n_e$ | 0.13 | ft/day | 0.039 | m/day |
| Groundwater flow rate through treatment zone, $Q = -KiA$ | 170.54 | gallons/day | 645.62 | L/day |

### Section C: Calculated Contact Length

| | | | | |
|---|---|---|---|---|
| Contact time ($\tau$) between oil and contaminants (accept default or enter $\tau$) | 60 | typical values 60 to 180 days, see comment | | |
| Calculated Contact Length ($x$) $= \tau * V_x$ | 7.6 | ft | 2.3 | m |

| | | | | |
|---|---|---|---|---|
| Treatment zone volume | 117,000 | $ft^3$ | 3,313 | $m^3$ |
| Treatment zone groundwater volume (volume * porosity) | 345,688 | gallons | 1,308,663 | L |

| | | | |
|---|---|---|---|
| **Section D: Design Lifespan For One Application** | 3 | year(s) | typical values 5 to 10 years |
| Estimated total groundwater volume treated over design life | 532,434 | gallons | 2,015,621 L |

### Section E: Electron Acceptors

***Dissolved Phase Electron Donor Demand***

| Inputs | Typical Value | GW Conc. (mg/L) | MW (g/mole) | e⁻ equiv./ mole | Stoichiometry *Contaminant/* $H_2$ *(wt/wt* $H_2$*)* | Hydrogen Demand *(g* $H_2$*)* |
|---|---|---|---|---|---|---|
| Dissolved Oxygen (DO) | 0 to 8 | 0.5 | 32.0 | 4 | 7.94 | 126.9763158 |
| Nitrate Nitrogen ($NO_3^-$ - N) | 1 to 10 | 1 | 62.0 | 5 | 12.30 | 163.8213163 |
| Sulfate ($SO_4^{2-}$) | 10 to 500 | 500 | 96.1 | 8 | 11.91 | 84596.94462 |
| Tetrachloroethene (PCE), $C_2Cl_4$ | | | 165.8 | 8 | 20.57 | |
| Trichloroethene (TCE), $C_2HCl_3$ | | 46.75 | 131.4 | 6 | 21.73 | 4337.111698 |
| cis-1,2-dichloroethene (c-DCE), $C_2H_2Cl_2$ | | 26.443 | 96.9 | 4 | 24.05 | 2216.547769 |
| Vinyl Chloride (VC), $C_2H_3Cl$ | | 3.672 | 62.5 | 2 | 31.00 | 238.7196134 |
| Carbon tetrachloride, $CCl_4$ | | | 153.8 | 8 | 19.08 | |
| Chloroform, $CHCl_3$ | | | 119.4 | 6 | 19.74 | |
| *sym*-tetrachloroethane, $C_2H_2Cl_4$ | | | 167.8 | 8 | 20.82 | |
| 1,1,1-Trichloroethane (TCA), $CH_3CCl_3$ | | | 133.4 | 6 | 22.06 | |
| 1,1-Dichloroethane (DCA), $CH_2CHCl_2$ | | | 99.0 | 4 | 24.55 | |
| Chloroethane, $C_2H_5Cl$ | | | 64.9 | 2 | 32.18 | |
| Perchlorate, $ClO_4^-$ | | | 99.4 | 8 | 12.33 | |
| Hexavalent Chromium, Cr[VI] | | | 52.0 | 3 | 17.20 | |
| User added | | | | | | |
| User added | | | | | | |
| User added | | | | | | |

***Sorbed Phase Electron Donor Demand***

The concentration of the sorbed contaminant can be estimated by: $C_{SOIL} = K_{OC} \times f_{oc} \times C_{WATER}$

Where: $K_{oc}$ is partition coefficient with respect to organic carbon.
$f_{oc}$ (fraction organic carbon) is the mass of organic matter in soil divided by the total mass of soil
$C_{WATER}$ is the concentration of the contaminant in the groundwater

Default values for Koc taken from: US EPA, Superfund Section, APPENDIX K, Soil Organic Carbon (Koc) / Water (Kow) Partition Coefficients (Average Value Used)

| Inputs<br>Adjust *Koc* as necessary to provide site specific estimates or enter sediment concentration ($C_{SOIL}$) | $K_{oc}$ (L/kg) | $C_{SOIL}$ (mg/Kg) | Mass (g) | Hydrogen Demand *(g* $H_2$*)* |
|---|---|---|---|---|
| Tetrachloroethene (PCE), $C_2Cl_4$ | 272 | | | |
| Trichloroethene (TCE), $C_2HCl_3$ | 165.7 | | | |
| cis-1,2-dichloroethene (c-DCE), $C_2H_2Cl_2$ | 45.6 | | | |
| Vinyl Chloride (VC), $C_2H_3Cl$ | 26.3 | | | |
| Carbon tetrachloride, $CCl_4$ | 158 | | | |
| Chloroform, $CHCl_3$ | 53 | | | |
| *sym*-tetrachloroethane, $C_2H_2Cl_4$ | 79 | | | |
| 1,1,1-Trichloroethane (TCA), $CH_3CCl_3$ | 139 | | | |
| 1,1-Dichloroethane (DCA), $CH_2CHCl_2$ | 54 | | | |
| User added | | | | |
| User added | | | | |
| User added | | | | |

### Section F: Additional Hydrogen Demand and Carbon Losses

| Generation (Potential Amount Formed) | Typical Value | GW Conc. (mg/L) | MW (g/mole) | e⁻ equiv./ mole | Stoichiometry *Contaminant / $H_2$* | Hydrogen Demand *(g* $H_2$*)* | DOC Released *(moles)* |
|---|---|---|---|---|---|---|---|
| Estimated Amount of $Fe2^+$ Formed | 10 to 100 | 50 | 55.8 | 1 | 55.41 | 1818.913839 | |
| Estimated Amount of Manganese ($Mn^{2+}$) Formed | | | 54.9 | 2 | 27.25 | | |
| Estimated Amount of $CH_4$ Formed | 5 to 20 | 10 | 16.0 | 8 | 1.99 | 10130.75121 | |
| Target Amount of DOC to Release | 60 to 100 | 100 | 12.0 | | | | 16781.46 |

**Design Safety Factor:** 2.0 typical values 1 to 3

**Calculations assume:**
1.) all reactions go to completion during passage through emulsified edible oil treated zone; and,
2.) perfect reaction stoichiometry.

### EOS® Requirement Calculations Based on Hydrogen Demand and Carbon Losses

| | | |
|---|---|---|
| Stoichiometric Hydrogen Demand | 456.5 | pounds |
| DOC Released | 1,916.2 | pounds |

**EOS® Requirement Based on Hydrogen Demand and Carbon Loss**
3,997 lbs

## Step 3: EOS® Requirement Based on Attachment by Aquifer Material

**Soil Characteristics**

| | | |
|---|---|---|
| Effective treatment thickness, "$z_e$" (typically less than 40%) | 0.40 | |
| For Additional Information on Effective Thickness, Click Here | | |
| Weight of sediment to be treated | 4,684,101 | lbs |
| Adsorptive Capacity of Soil (accept default or enter site specific value) | 0.0010 | lbs EOS® / lbs sediment |

**EOS® Attachment by Aquifer Material[1]**
- Fine sand with some clay 0.001 to 0.002 lbs EOS® / lbs soil
- Sand with higher silt/clay content 0.002 to 0.004 lbs EOS® / lbs soil

[1]Default values provided based on laboratory studies completed by NCSU
For Additional Data, Click Here

**EOS® Requirement Based on Oil Entrapment by Aquifer Material**
4,684 lbs

## Summary – How much EOS® do you need?

**Suggested Quantity of EOS® for Your Project:** 12 drums

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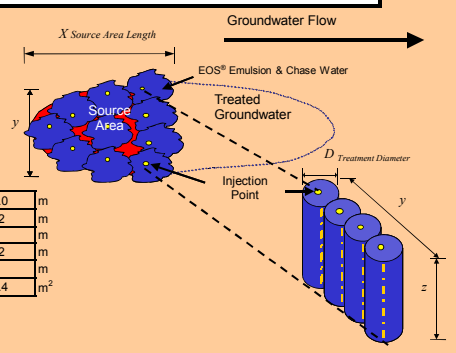
††EOS® is a registered trademark of EOS Remediation, LLC

# EOS® SOURCE AREA & DNAPL DESIGN WORKSHEET

**U.S. Version 2.1g, Rev. Date: December 7, 2008**
www.EOSRemediation.com

Help

| | |
|---|---|
| Site Name: | CRHE - 10xNADC Plume (includes source zone volume) |
| Location: | KSC, FL |
| Project No.: | |




## Step 1: Select a Substrate from the EOS® Family of Bioremediation Products

Substrate Selected (pick from drop down list): EOS® 598B42 (Preferred for Chlorinateds)
For Product Literature Click Here

## Step 2: EOS® Consumption During Contaminant Biodegradation / Biotransformation

### Section A: Source Area Dimensions

| | | | | |
|---|---|---|---|---|
| Length of treatment area parallel to groundwater flow, "x" | 420 | ft | 128.0 | m |
| Width of treatment area perpendicular to groundwater flow, "y" | 50 | ft | 15.2 | m |
| Minimum depth to contamination | 20 | ft | 6.1 | m |
| Maximum depth of contamination | 50 | ft | 15.2 | m |
| Treatment thickness, "z" | 30 | ft | 9.1 | m |
| Treatment zone cross-sectional area, A = y * z | 1,500 | $ft^2$ | 139.4 | $m^2$ |

### Section B: Groundwater Flow Rate / Site Data

Soil Characteristics

| | | | | |
|---|---|---|---|---|
| Nominal Soil Type (pick from drop down list) | Sand | | | |
| Total Porosity (accept default or enter *n*) | 0.40 | (decimal) | | |
| Effective Porosity (accept default or enter $n_e$) | 0.30 | (decimal) | | |
| Soil bulk density; (1-n)*2.65 g/cc (accept calculated or enter dry bulk density) | 1.60 | g/cc | 100 | lbs / $ft^3$ |
| Fraction of organic carbon: foc | 0.0030 | range: 0.0001 to 0.01 | | |

Hydraulic Characteristics

| | | | | |
|---|---|---|---|---|
| Hydraulic Conductivity (accept default or enter *K*) | 7.6 | ft/day | 2.7E-03 | cm/sec |
| Hydraulic Gradient (accept default or enter *i*) | 0.005 | ft/ft | | |

Note: Since the hydraulic gradient ($i = dh/dx$) is negative, we ask you to enter $-i$ in the EOS® Design Tool so that you can enter a positive number for convenience.

| | | | | |
|---|---|---|---|---|
| Non-reactive Transport Velocity, $V_x = -(K \times i) / n_e$ | 0.13 | ft/day | 0.039 | m/day |
| Groundwater flow rate through treatment zone, $Q = -KiA$ | 426.36 | gallons/day | 1,614.06 | L/day |

### Section C: Calculated Contact Length

| | | | | |
|---|---|---|---|---|
| Contact time ($\tau$) between oil and contaminants (accept default or enter $\tau$) | 60 | typical values 60 to 180 days, see comment | | |
| Calculated Contact Length ($x$) $= \tau * V_x$ | 7.6 | ft | 2.3 | m |

| | | | | |
|---|---|---|---|---|
| Treatment zone volume | 630,000 | $ft^3$ | 17,840 | $m^3$ |
| Treatment zone groundwater volume (volume * porosity) | 1,861,398 | gallons | 7,046,647 | L |

### Section D: Design Lifespan For One Application

| | | | | |
|---|---|---|---|---|
| | 3 | year(s) | typical values 5 to 10 years | |
| Estimated total groundwater volume treated over design life | 2,328,262 | gallons | 8,814,043 | L |

### Section E: Electron Acceptors

***Dissolved Phase Electron Donor Demand***

| Inputs | Typical Value | GW Conc. (mg/L) | MW (g/mole) | e⁻ equiv./ mole | Stoichiometry *Contaminant/ $H_2$ (wt/wt $H_2$)* | Hydrogen Demand ($g\ H_2$) |
|---|---|---|---|---|---|---|
| Dissolved Oxygen (DO) | 0 to 8 | 0.5 | 32.0 | 4 | 7.94 | 555.2504592 |
| Nitrate Nitrogen ($NO_3^-$ - N) | 1 to 10 | 1 | 62.0 | 5 | 12.30 | 716.3687222 |
| Sulfate ($SO_4^{2-}$) | 10 to 500 | 500 | 96.1 | 8 | 11.91 | 369931.1328 |
| Tetrachloroethene (PCE), $C_2Cl_4$ | | | 165.8 | 8 | 20.57 | |
| Trichloroethene (TCE), $C_2HCl_3$ | | 5.947 | 131.4 | 6 | 21.73 | 2412.587842 |
| cis-1,2-dichloroethene (c-DCE), $C_2H_2Cl_2$ | | 26.443 | 96.9 | 4 | 24.05 | 9692.667165 |
| Vinyl Chloride (VC), $C_2H_3Cl$ | | 3.672 | 62.5 | 2 | 31.00 | 1043.888966 |
| Carbon tetrachloride, $CCl_4$ | | | 153.8 | 8 | 19.08 | |
| Chloroform, $CHCl_3$ | | | 119.4 | 6 | 19.74 | |
| *sym*-tetrachloroethane, $C_2H_2Cl_4$ | | | 167.8 | 8 | 20.82 | |
| 1,1,1-Trichloroethane (TCA), $CH_3CCl_3$ | | | 133.4 | 6 | 22.06 | |
| 1,1-Dichloroethane (DCA), $CH_2CHCl_2$ | | | 99.0 | 4 | 24.55 | |
| Chloroethane, $C_2H_5Cl$ | | | 64.9 | 2 | 32.18 | |
| Perchlorate, $ClO_4^-$ | | | 99.4 | 8 | 12.33 | |
| Hexavalent Chromium, Cr[VI] | | | 52.0 | 3 | 17.20 | |
| User added | | | | | | |
| User added | | | | | | |
| User added | | | | | | |

***Sorbed Phase Electron Donor Demand***

The concentration of the sorbed contaminant can be estimated by: $C_{SOIL} = K_{OC} \times f_{oc} \times C_{WATER}$

Where: $K_{oc}$ is partition coefficient with respect to organic carbon.
$f_{oc}$ (fraction organic carbon) is the mass of organic matter in soil divided by the total mass of soil
$C_{WATER}$ is the concentration of the contaminant in the groundwater

Default values for Koc taken from: US EPA, Superfund Section, APPENDIX K, Soil Organic Carbon (Koc) / Water (Kow) Partition Coefficients (Average Value Used)

| Inputs<br>Adjust *Koc* as necessary to provide site specific estimates or enter sediment concentration ($C_{SOIL}$) | $K_{oc}$ (L/kg) | $C_{SOIL}$ (mg/Kg) | Mass (g) | Hydrogen Demand ($g\ H_2$) |
|---|---|---|---|---|
| Tetrachloroethene (PCE), $C_2Cl_4$ | 272 | | | |
| Trichloroethene (TCE), $C_2HCl_3$ | 165.7 | | | |
| cis-1,2-dichloroethene (c-DCE), $C_2H_2Cl_2$ | 45.6 | | | |
| Vinyl Chloride (VC), $C_2H_3Cl$ | 26.3 | | | |
| Carbon tetrachloride, $CCl_4$ | 158 | | | |
| Chloroform, $CHCl_3$ | 53 | | | |
| *sym*-tetrachloroethane, $C_2H_2Cl_4$ | 79 | | | |
| 1,1,1-Trichloroethane (TCA), $CH_3CCl_3$ | 139 | | | |
| 1,1-Dichloroethane (DCA), $CH_2CHCl_2$ | 54 | | | |
| User added | | | | |
| User added | | | | |
| User added | | | | |

### Section F: Additional Hydrogen Demand and Carbon Losses

| Generation (Potential Amount Formed) | Typical Value | GW Conc. (mg/L) | MW (g/mole) | e⁻ equiv./ mole | Stoichiometry *Contaminant / $H_2$* | Hydrogen Demand ($g\ H_2$) | DOC Released *(moles)* |
|---|---|---|---|---|---|---|---|
| Estimated Amount of $Fe2^+$ Formed | 10 to 100 | 50 | 55.8 | 1 | 55.41 | 7953.867129 | |
| Estimated Amount of Manganese ($Mn^{2+}$) Formed | | | 54.9 | 2 | 27.25 | | |
| Estimated Amount of $CH_4$ Formed | 5 to 20 | 10 | 16.0 | 8 | 1.99 | 44300.42111 | |
| Target Amount of DOC to Release | 60 to 100 | 100 | 12.0 | | | | 73383.09 |

**Design Safety Factor:** 2.0 typical values 1 to 3

**Calculations assume:**
1.) all reactions go to completion during passage through emulsified edible oil treated zone; and,
2.) perfect reaction stoichiometry.

### EOS® Requirement Calculations Based on Hydrogen Demand and Carbon Losses

| | | |
|---|---|---|
| Stoichiometric Hydrogen Demand | 1,923.4 | pounds |
| DOC Released | 8,379.2 | pounds |

**EOS® Requirement Based on Hydrogen Demand and Carbon Loss**
17,144 lbs

## Step 3: EOS® Requirement Based on Attachment by Aquifer Material

**Soil Characteristics**

| | | |
|---|---|---|
| Effective treatment thickness, "$z_e$" (typically less than 40%) | 0.40 | |
| For Additional Information on Effective Thickness, Click Here | | |
| Weight of sediment to be treated | 25,222,082 | lbs |
| Adsorptive Capacity of Soil (accept default or enter site specific value) | 0.0010 | lbs EOS® / lbs sediment |

**EOS® Attachment by Aquifer Material[1]**
- Fine sand with some clay 0.001 to 0.002 lbs EOS® / lbs soil
- Sand with higher silt/clay content 0.002 to 0.004 lbs EOS® / lbs soil

[1]Default values provided based on laboratory studies completed by NCSU
For Additional Data, Click Here

**EOS® Requirement Based on Oil Entrapment by Aquifer Material**
25,222 lbs

## Summary – How much EOS® do you need?

**Suggested Quantity of EOS® for Your Project:** 61 drums

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†Exclusive license agreement with Solutions-IES under U.S. Patent #RE40448, E.U. Patent # EP 1 315 675 and several other pending international patents.
††EOS® is a registered trademark of EOS Remediation, LLC

**Table 1. Source Zone Air Sparge/Soil Vapor Extraction Costing**
**Step Two Engineering Evaluation**
**Contractor's Road Heavy Equipment Area**

TECHNOLOGY: Air Sparging with SVE of Source Zone (TCE concentrations greater than 1% solubility)

DESCRIPTION: Installation of 13 sparge wells with a maximum depth of 50 ft BLS with 20-inch schumasoil screens. Installation of an SVE system including SVE chambers at approximately 20 foot spacing north and south of the central piping line. Installation of 10 performance monitoring wells with maximum depths of 40 ft BLS (5 monitoring wells) and 50 ft BLS (5 monitoring wells). Performance monitoring includes sampling of 10 monitoring wells for VOCs quarterly for three years. Assumes use of NASA's mobile air sparge trailer #2 (25 hp), cycling between two zones (one with six, and one with seven sparge wells).

| Item | Description | Unit | No. of Units | Unit Cost | Total | Cost Reference |
|---|---|---|---|---|---|---|
| **CAPITAL COSTS** | | | | | | |
| ***Performance Monitoring Well Installation - 10 monitoring wells*** | | | | | | |
| DPT Mobilization | | EA | 1 | $ 330 | $ 330 | EDS quote 12/2013 |
| Per Diem | | DAY | 3 | $ 220 | $ 660 | EDS quote 12/2013 |
| Direct Push, Daily Rate | Assumes installation of 4 wells per day | DAY | 3 | $ 1,485 | $ 4,455 | EDS quote 12/2013 |
| 1" x 5 ft PVC prepacked screen | | EA | 20 | $ 99 | $ 1,980 | EDS quote 12/2013 |
| 1" x 10 ft PVC Riser | | EA | 35 | $ 18 | $ 616 | EDS quote 12/2013 |
| caps, plugs & points | | EA | 10 | $ 22 | $ 220 | EDS quote 12/2013 |
| 8-inch manhole with 2x2 ft concrete pad | | EA | 10 | $ 110 | $ 1,100 | EDS quote 12/2013 |
| DPT Decon | Decon pit setup/maintain | EA | 1 | $ 275 | $ 275 | EDS quote 12/2013 |
| Drilling Oversight | | DAY | 3 | $ 1,500 | $ 4,500 | Eng. Estimate |
| Drums | | EA | 2 | $ 58 | $ 116 | EDS quote 12/2013 |
| permit | 10 wells per permit | EA | 1 | $ 110 | $ 110 | EDS quote 12/2013 |
| **Subtotal** | | | | | **$ 14,362** | |
| ***Air Sparge Well Installations - Installation of 13 sparge wells via hollow stem*** | | | | | | |
| Hollow Stem Auger Mobilization | | EA | 1 | $ 550 | $ 550 | EDS quote 3/2013 |
| Hollow Stem Auger Per Diem | Assumes wells can be installed in 5 days | DAY | 5 | $ 330 | $ 1,650 | EDS quote 3/2013 |
| Hollow Stem Well Install | 2" air sparge well installed at 50' BLS | FT | 650 | $ 26 | $ 17,160 | EDS quote 3/2013 |
| Hollow Stem Auger Decon | | EA | 13 | $ 83 | $ 1,073 | EDS quote 3/2013 |
| Schumasoil well screens (40 micron) | 20 inch screens | EA | 13 | $ 152 | $ 1,973 | EDS quote 3/2013 |
| Well Completions | Transition to SS 1 ft BLS, Flush 16" manholes | EA | 13 | $ 187 | $ 2,431 | EDS quote 9/2011 |
| Well Development | Air sparge wells; 0.5 hrs per well | HR | 6.5 | $ 110 | $ 715 | EDS quote 3/2013 |
| Drilling Oversight | Includes sparge well installation | DAY | 5 | $ 1,500 | $ 7,500 | Eng. Estimate |
| Bobcat/loader for IDW management | | DAY | 5 | $ 275 | $ 1,375 | EDS quote 10/2012 |
| Roll-off Transport | Liner/Spot/Transfer Costs | EA | 1 | $ 1,000 | $ 1,000 | Scaled from previous costs VPF |
| Roll-Off Box/Rental | Soil cuttings from HSA drilling | WEEK | 3 | $ 100 | $ 300 | Scaled from previous costs VPF |
| Roll-Off Cuttings Disposal (Non-Haz) | Soil (includes analyticals, characterization and non-haz disposal 15 tons) | EA | 1 | $ 1,200 | $ 1,200 | Scaled from previous costs VPF |
| Drums | Assumes approx. 3 gallons development IDW per well, drums 80% full | EA | 1 | $ 58 | $ 58 | EDS quote 12/2013 |
| **Subtotal** | | | | | **$ 36,985** | |
| ***Air Sparge System*** | | | | | | |
| Air sparge piping | sch 80 PVC pipe and fittings | LF | 1200 | $ 2.10 | $ 2,520 | Eng. Estimate |
| Air sparge hose | 1" black general purpose air hose (200 psi) | LF | 50 | $ 3.00 | $ 150 | Eng. Estimate |
| Labor Piping Installation and Connections | Includes trenching, install, connections and backfilling - utility corridor must be hand dug | LS | 1 | $ 20,000 | $ 20,000 | Eng. Estimate |
| Manifold | purchase and installation of 36"x36" x12" NEMA box on concrete pad with piping, flow meters and pressure gauges | LS | 1 | $ 5,500 | $ 5,500 | Scaled from MLP |
| Sparge System Set-up and connections | Connecting to sparge trailer | LS | 1 | $ 5,000 | $ 5,000 | Eng. Estimate |
| Sparge Well Connections | Well head and valving | EA | 13 | $ 125 | $ 1,625 | Eng. Estimate |
| Electric line installation | Install electric line up to 30 ft (includes oversight and | EA | 1 | $ 5,000 | $ 5,000 | Scaled quote from PRM - July 2011 |
| **Subtotal** | | | | | **$ 39,795** | |
| ***SVE System*** | | | | | | |
| SVE System Construction and Setup | SVE system materials (Blower, knockout tank, etc.) | EA | 1 | $ 50,000 | $ 50,000 | Eng. Estimate |
| Carbon vessel | assumes 500 lb vessel - delivery, rental, and disposal of carbon as haz waste | LS | 1 | $ 5,000 | $ 5,000 | Eng. Estimate |
| SVE Piping, Connections | 1" PVC sch 80 pipe and fittings | LF | 950 | $ 2.10 | $ 1,995 | Eng. Estimate |
| Gravel layer | 1 ft thick gravel layer containing horizontal SVE collectors | CYD | 2 | $ 20 | $ 41 | Eng. Estimate |
| Plastic Cap | 6 mil plastic sheeting to cover treatment area | SF | 3,050 | $ 0.10 | $ 305 | Eng. Estimate |
| SVE Installation Labor | Trenching, piping, backfilling, gravel and cap placement, etc. | EA | 1 | $ 15,000 | $ 15,000 | Eng. Estimate |
| Construction oversight | | DAY | 10 | $ 1,500 | $ 15,000 | |
| **Subtotal** | | | | | **$ 87,341** | |
| **ENGINEERING DESIGN AND START-UP COSTS** | | | | | | |
| Task 1 - System Design and Drawings (Step 3 Engineering Evaluation) | | LS | 1 | $ 20,000 | $ 20,000 | Eng. Estimate |
| Task 2 - Permitting/Approvals, Regulatory Advocacy | | HR | 20 | $ 120 | $ 2,400 | Eng. Estimate |
| Task 3 - Subcontracting/Contract Management | | HR | 40 | $ 150 | $ 6,000 | Eng. Estimate |
| Task 4 - Installation Oversight/CQA/Health and Safety | | DAY | 2 | $ 3,000 | $ 6,000 | Eng. Estimate |
| Task 5 - As-Built Drawings and Reporting | CCR and Step 4A Engineering Evaluation ADP/presentation | LS | 1 | $ 28,000 | $ 28,000 | Eng. Estimate |
| Task 6 - Startup Testing/Shakedown and Reporting | | DAY | 2 | $ 2,000 | $ 4,000 | Eng. Estimate |
| Task 7 - Startup/Initial Performance Reporting | Step 4B Engineering Evaluation ADP/presentation | EA | 1 | $ 8,000 | $ 8,000 | Eng. Estimate |
| **Subtotal** | | | | | **$ 74,400** | |
| | | | | **Total Capital Cost** | **$ 252,900** | |
| **ANNUAL OPERATION, MAINTENANCE AND MONITORING** | | | | | | |
| ***Air Sparge/SVE System Maintenance*** | | | | | | |
| Operation and Monthly Maintenance | 1 man crew | DAY | 17 | $ 1,500 | $ 25,500 | Eng. Estimate |
| Carbon vessel | cost for replacement and disposal as non-haz waste | LS | 1 | $ 4,000 | $ 4,000 | Eng. Estimate |
| Electricity | Assume 25 hp sparge system and 10 hp SVE (12 hr/day) | kWh | 114316 | $ 0.12 | $ 13,718 | Eng. Estimate |
| Annual parts and Labor allowance | | LS | 1 | $ 3,000 | $ 3,000 | Eng. Estimate |
| Sampling 10 monitoring wells quarterly | Analysis for VOCs only | EA | 40 | $ 550 | $ 22,000 | Eng. Estimate |
| Reporting/Data Evaluation | Annual Report | EA | 1 | $ 20,000 | $ 20,000 | Eng. Estimate |
| ADP prep/presentation | Step 4C Engineering Evaluation | EA | 1 | $ 8,000 | $ 8,000 | Eng. Estimate |
| | | | | **Annual Operation and Maintenance Cost for Air Sparge System** | **$ 96,200** | |
| **DPT Sampling** | | | | | | |
| DPT Mobilization | | EA | 1 | $ 330 | $ 330 | EDS quote 3/2013 |
| Per Diem | | DAY | 3 | $ 220 | $ 660 | EDS quote 3/2013 |
| Direct Push, Daily Rate | Assumes installation of 4 wells per day | DAY | 3 | $ 1,485 | $ 4,455 | EDS quote 3/2013 |
| Mobile Lab Mobilization | | EA | 1 | $ 385 | $ 385 | KB Labs Quote 2/2013 |
| Mobile Lab Daily Rate | | DAY | 3 | $ 1,485 | $ 4,455 | KB Labs Quote 2/2013 |
| Mobile Lab Per Diem | | DAY | 3 | $ 138 | $ 413 | KB Labs Quote 2/2013 |
| DPT sampling oversight | | DAY | 3 | $ 1,500 | $ 4,500 | Eng. Estimate |
| DPT data evaluation | | DAY | 3 | $ 1,500 | $ 4,500 | Eng. Estimate |
| | | | | **DPT Sampling Cost** | **$ 19,700** | |
| | | | | **Total Remediation Cost (Capital plus two years of operation)** | **$ 465,000** | |
| | | | | **Total Remediation Cost (Capital plus three years of operation)** | **$ 561,200** | |

**Table 2. 10xNADC Air Sparge/Soil Vapor Extraction Costing**
**Step Two Engineering Evaluation**
**Contractor's Road Heavy Equipment Area**

TECHNOLOGY: Air Sparging with SVE of 10xNADC Plume (concentrations of TCE, cDCE, and VC greater than 10xNADC)

DESCRIPTION: Installation of 34 sparge wells to a maximum depth of 50 ft BLS with 20-inch schumasoil screens. Installation of an SVE system including SVE chambers at approximately 20 foot spacing north and south of the central piping line in the source zone and around the building. Installation of 15 performance monitoring wells with maximum depth of 40 ft BLS (7 monitoring wells) and 50 ft BLS (8 monitoring wells). Performance monitoring includes sampling of 15 monitoring wells for VOCs quarterly for three years. Assumes use of NASA's mobile air sparge trailer #2 (25 hp), cycling among three zones, two with 11 and one with 12 sparge wells).

| Item | Description | Unit | No. of Units | Unit Cost | Total | Cost Reference |
|---|---|---|---|---|---|---|
| **CAPITAL COSTS** | | | | | | |
| ***Monitoring Well Installation - 15 monitoring wells*** | | | | | | |
| DPT Mobilization | | EA | 1 | $ 330 | $ 330 | EDS quote 12/2013 |
| Per Diem | | DAY | 4 | $ 220 | $ 880 | EDS quote 12/2013 |
| Direct Push, Daily Rate | Assumes installation of 4 wells per day | DAY | 4 | $ 1,485 | $ 5,940 | EDS quote 12/2013 |
| 1" x 5 ft PVC prepacked screen | | EA | 30 | $ 99 | $ 2,970 | EDS quote 12/2013 |
| 1" x 10 ft PVC Riser | | EA | 53 | $ 18 | $ 933 | EDS quote 12/2013 |
| caps, plugs & points | | EA | 15 | $ 22 | $ 330 | EDS quote 12/2013 |
| 8-inch manhole with 2x2 ft concrete pad | | EA | 15 | $ 110 | $ 1,650 | EDS quote 12/2013 |
| DPT Decon | Decon pit setup/maintain | EA | 1 | $ 275 | $ 275 | EDS quote 12/2013 |
| Drilling Oversight | | DAY | 4 | $ 1,500 | $ 6,000 | Eng. Estimate |
| Drums | | EA | 3 | $ 58 | $ 174 | EDS quote 12/2013 |
| permit | 10 wells per permit | EA | 2 | $ 110 | $ 220 | EDS quote 12/2013 |
| **Subtotal** | | | | | **$ 19,702** | |
| ***Air Sparge Well Installations - Installation of 29 sparge wells via hollow stem*** | | | | | | |
| Hollow Stem Auger Mobilization | | EA | 1 | $ 550 | $ 550 | EDS quote 3/2013 |
| Hollow Stem Auger Per Diem | assumes wells can be installed in 11 days | DAY | 11 | $ 330 | $ 3,630 | EDS quote 3/2013 |
| Hollow Stem Well Install | Drilling and 2" air sparge well installed at 50' BLS | FT | 1450 | $ 26 | $ 38,280 | EDS quote 3/2013 |
| Hollow Stem Auger Decon | | EA | 29 | $ 83 | $ 2,393 | EDS quote 3/2013 |
| Schumasoil well screens (40 micron) | 20 inch screens | EA | 29 | $ 152 | $ 4,402 | EDS quote 3/2013 |
| Well Completions | Transition to SS 1 ft BLS, Flush 16" manholes | EA | 13 | $ 187 | $ 2,431 | EDS quote 9/2011 |
| Well Development | Air sparge wells; 0.5 hrs per well | HR | 14.5 | $ 110 | $ 1,595 | EDS quote 3/2013 |
| Drilling Oversight | Includes sparge well installation | DAY | 11 | $ 1,500 | $ 16,500 | Eng. Estimate |
| **Subtotal** | | | | | **$ 69,781** | |
| ***Air Sparge Well Installations - Installation of five sparge wells via sonic rig (well being installed under the building)*** | | | | | | |
| Sonic Rig Mobilization | | EA | 1 | $ 2,750 | $ 2,750 | Cascade quote 12/2013 |
| Sonic Rig Per Diem | Assumes wells can be installed in 3 days | DAY | 3 | $ 380 | $ 1,139 | Cascade quote 12/2013 |
| Sonic Rig Well Install | Drilling and 2" air sparge well installed at 50' BLS at an angle | FT | 310 | $ 44 | $ 13,640 | Cascade quote 12/2013 |
| Sonic Rig Auger Decon | Per each day | EA | 3 | $ 204 | $ 611 | Cascade quote 12/2013 |
| Schumasoil well screens (40 micron) | 20 inch screens | EA | 5 | $ 83 | $ 413 | Cascade quote 12/2013 |
| Well Completions | Transition to SS 1 ft BLS, complete with 18x18x18 DOT-H-20 vaults | EA | 5 | $ 440 | $ 2,200 | Cascade quote 12/2013 |
| Well Development | Air sparge wells; 0.5 hrs per well | HR | 2.5 | $ 110 | $ 275 | EDS quote 3/2013 |
| Drilling Oversight | Includes sparge well installation | DAY | 3 | $ 1,500 | $ 4,500 | Eng. Estimate |
| **Subtotal** | | | | | **$ 25,527** | |
| ***General Air Sparge Well Installation*** | | | | | | |
| Bobcat/loader for IDW management | | DAY | 5 | $ 275 | $ 1,375 | EDS quote 10/2012 |
| Roll-off Transport | Liner/Spot/Transfer Costs | EA | 2 | $ 1,000 | $ 2,000 | Scaled from previous costs VPF |
| Roll-Off Box/Rental | Soil cuttings from HSA drilling | WEEK | 5 | $ 100 | $ 500 | Scaled from previous costs VPF |
| Roll-Off Cuttings Disposal (Non-Haz) | Soil (includes analyticals, characterization and non-haz disposal 30 tons) | EA | 2 | $ 1,200 | $ 2,400 | Scaled from previous costs VPF |
| Drums | | EA | 3 | $ 58 | $ 174 | EDS quote 12/2013 |
| Permits | 10 wells per permit | EA | 4 | $ 110 | $ 440 | EDS Quote 12/2013 |
| **Subtotal** | | | | | **$ 6,889** | |
| ***Air Sparge System*** | | | | | | |
| Air sparge piping | SCH 80 PVC pipe and fittings | LF | 2500 | $ 2.10 | $ 5,250 | Eng. Estimate |
| Air sparge hose | 1" black general purpose air hose (200 psi) | LF | 150 | $ 3.00 | $ 450 | Eng. Estimate |
| Manifold | purchase and installation of two 36"x36" x12" NEMA box on concrete pad with piping, flow meters and pressure gauges | LS | 1 | $ 15,000 | $ 15,000 | Scaled from MLP |
| Labor Piping Installation and Connections | Includes trenching, install, connections and backfilling | LS | 1 | $ 40,000 | $ 40,000 | Eng. Estimate |
| Sparge System Set-up and connections | Connecting to sparge trailer | LS | 1 | $ 10,000 | $ 10,000 | Eng. Estimate |
| Sparge Well Connections | Well head, valving, flow meters | EA | 34 | $ 125 | $ 4,250 | Eng. Estimate |
| Electric line installation | Install electric line up to 30 ft (includes oversight and supplies) | EA | 1 | $ 5,000 | $ 5,000 | Scaled quote from PRM - July 2011 |
| **Subtotal** | | | | | **$ 79,950** | |
| ***SVE System*** | | | | | | |
| SVE System Construction and Setup | SVE system materials (Blower, knockout tank, etc.) | EA | 1 | $ 50,000 | $ 50,000 | Engineering Estimate |
| Carbon vessel | assumes 1000 lb vessel - delivery, rental, and disposal of carbon as haz waste | LS | 1 | $ 8,000 | $ 8,000 | Eng. Estimate |
| SVE Piping, Connections | 1" PVC sch 80 pipe and fittings | LF | 1,200 | $ 2.10 | $ 2,520 | Engineering Estimate |
| Gravel layer | 1 ft thick gravel layer containing horizontal SVE collectors | CYD | 3 | $ 20 | $ 59 | Engineering Estimate |
| Plastic Cap | 6 mil plastic sheeting to cover treatment area | SF | 19,200 | $ 0.10 | $ 1,920 | Engineering Estimate |
| SVE Installation Labor | Trenching, piping, backfilling, gravel and cap placement, etc. | EA | 1 | $ 25,000 | $ 25,000 | Engineering Estimate |
| Construction oversight | | DAY | 15 | $ 1,500 | $ 22,500 | |
| | | | | | **$ 109,999** | |
| **ENGINEERING DESIGN AND START-UP COSTS** | | | | | | |
| Task 1 - System Design and Drawings | | LS | 1 | $ 30,000 | $ 30,000 | Eng. Estimate |
| Task 2 - Permitting/Approvals, Regulatory Advocacy | | HR | 40 | $ 120 | $ 4,800 | Eng. Estimate |
| Task 3 - Subcontracting/Contract Management | | HR | 80 | $ 150 | $ 12,000 | Eng. Estimate |
| Task 4 - Installation Oversight/CQA/Health and Safety | | DAY | 5 | $ 3,000 | $ 15,000 | Eng. Estimate |
| Task 5 - As-Built Drawings and Reporting | CCR and Step 4A Engineering Evaluation ADP/presentation | LS | 1 | $ 33,000 | $ 33,000 | Eng. Estimate |
| Task 6 - Startup Testing/Shakedown | | DAY | 5 | $ 2,000 | $ 10,000 | Eng. Estimate |
| Task 7 - Startup/Initial Performance Reporting | Step 4B Engineering Evaluation ADP/presentation | EA | 1 | $ 8,000 | $ 8,000 | Eng. Estimate |
| **Subtotal** | | | | | **$ 112,800** | |
| | | | | **Total Capital Cost** | **$ 424,600** | |
| **ANNUAL OPERATION, MAINTENANCE AND MONITORING** | | | | | | |
| ***Air Sparge/SVE System Maintenance*** | | | | | | |
| Operation and Monthly Maintenance | 1 man crew | DAY | 17 | $ 1,500 | $ 25,500 | Eng. Estimate |
| Carbon vessel | cost for replacement and disposal as non-haz waste | LS | 1 | $ 6,000 | $ 6,000 | Eng. Estimate |
| Electricity | Assume 25 hp sparge system and 10 hp SVE (12 hr/day) | kWh | 114316 | $ 0.12 | $ 13,718 | Eng. Estimate |
| Annual parts and Labor allowance | | LS | 1 | $ 5,000 | $ 5,000 | Eng. Estimate |
| Sampling 15 monitoring wells quarterly | | EA | 60 | $ 550 | $ 33,000 | Eng. Estimate |
| Reporting/Data Evaluation | annual report | EA | 1 | $ 30,000 | $ 30,000 | Eng. Estimate |
| ADP prep/presentation | Step 4C Engineering Evaluation | EA | 1 | $ 8,000 | $ 8,000 | Eng. Estimate |
| | | | | **Annual Operation and Maintenance Cost for Air Sparge System** | **$ 121,200** | |
| **DPT Sampling** | | | | | | |
| DPT Mobilization | | EA | 1 | $ 330 | $ 330 | EDS quote 3/2013 |
| Per Diem | | DAY | 5 | $ 220 | $ 1,100 | EDS quote 3/2013 |
| Direct Push, Daily Rate | Assumes installation of 4 wells per day | DAY | 5 | $ 1,485 | $ 7,425 | EDS quote 3/2013 |
| Mobile Lab Mobilization | | EA | 1 | $ 385 | $ 385 | KB Labs Quote 2/2013 |
| Mobile Lab Daily Rate | | DAY | 5 | $ 1,485 | $ 7,425 | KB Labs Quote 2/2013 |
| Mobile Lab Per Diem | | DAY | 5 | $ 138 | $ 688 | KB Labs Quote 2/2013 |
| DPT sampling oversight | | DAY | 5 | $ 1,500 | $ 7,500 | Eng. Estimate |
| DPT data evaluation | | DAY | 5 | $ 1,500 | $ 7,500 | Eng. Estimate |
| | | | | **DPT Sampling Cost** | **$ 32,400** | |
| | | | | **Total Remediation Cost (Capital plus two years of operation)** | **$ 699,400** | |
| | | | | **Total Remediation Cost (Capital plus three years of operation)** | **$ 820,600** | |

**Table 3. Source Zone Bioremediation Costing**
**Step Two Engineering Evaluation**
**Contractor's Road Heavy Equipment Area**

TECHNOLOGY: Bioremediation of Source Zone (TCE concentrations greater than 1% solubility)

DESCRIPTION: DPT injection of emulsified oil (33 drums) at 29 injection points from 20 to 50 ft BLS. Injection of emulsified oil will occur in one injection event, with a second event included 24 months after the first, using 50% of the volume of EOS (17 drums) injected during the initial event. Installation of 10 performance monitoring wells with maximum depth of 40 ft BLS (5 monitoring wells) and 50 ft BLS (5 monitoring wells). Performance monitoring includes sampling of 10 monitoring wells for VOCs (including additional biological and geochemical analyses from 5 wells) quarterly for five years.

| Item | Description | Unit | No. of Units | Unit Cost | Total | Cost Reference |
|---|---|---|---|---|---|---|
| **CAPITAL COSTS** | | | | | | |
| ***Monitoring Well Installation - 10 monitoring wells*** | | | | | | |
| DPT Mobilization | | EA | 1 | $ 330 | $ 330 | EDS quote 12/2013 |
| Per Diem | | DAY | 3 | $ 220 | $ 660 | EDS quote 12/2013 |
| Direct Push, Daily Rate | Assumes installation of 4 wells per day | DAY | 3 | $ 1,485 | $ 4,455 | EDS quote 12/2013 |
| 1" x 5 ft PVC prepacked screen | | EA | 20 | $ 99 | $ 1,980 | EDS quote 12/2013 |
| 1" x 10 ft PVC Riser | | EA | 35 | $ 18 | $ 616 | EDS quote 12/2013 |
| caps, plugs & points | | EA | 10 | $ 22 | $ 220 | EDS quote 12/2013 |
| 8-inch manhole with 2x2 ft concrete pad | | EA | 10 | $ 110 | $ 1,100 | EDS quote 12/2013 |
| DPT Decon | decon pit setup/maintain | EA | 10 | $ 275 | $ 2,750 | EDS quote 12/2013 |
| Drilling Oversight | | DAY | 3 | $ 1,500 | $ 4,500 | Eng. Estimate |
| Drums | | EA | 2 | $ 58 | $ 116 | EDS quote 12/2013 |
| permit | 10 wells per permit | EA | 1 | $ 110 | $ 110 | EDS quote 12/2013 |
| **Subtotal** | | | | | **$ 16,837** | |
| ***DPT EOS Injection - assumes injection activities performed by Vironex*** | | | | | | |
| Emulsified Oil | Purchase 33 drums of EOS (1 injection event; $1.48/lb; 420 lbs per drum) | DR | 33 | $ 624 | $ 20,582 | EOS quote 12/2013 |
| Shipping | | EA | 1 | $ 3,500 | $ 3,500 | EOS quote 12/2013 |
| Driller Mobilization | | EA | 1 | $ 5,203 | $ 5,203 | Vironex quote 12/2013 |
| Setup and Breakdown Rate | | EA | 1 | $ 2,365 | $ 2,365 | Vironex quote 12/2013 |
| DPT Daily Rate | Assumes injection at 10 locations simultaneously (4 gpm); 29 points total; 5 points per day | DAY | 6 | $ 5,797 | $ 34,782 | Scaled from Vironex quote 12/2013 |
| Per Diem Driller | Includes extra day for setup and breakdown | DAY | 7 | $ 495 | $ 3,465 | Scaled from Vironex quote 12/2013 |
| Onsite Electron Donor Injection Oversight | | DAY | 7 | $ 1,500 | $ 10,500 | Eng. Estimate |
| HASP/Spill Plan/Injection Reporting | | EA | 1 | $ 2,750 | $ 2,750 | Vironex quote 12/2013 |
| **Subtotal** | | | | | **$ 83,147** | |
| **ENGINEERING DESIGN AND START-UP COSTS** | | | | | | |
| Task 1 - System Design and Drawings | | LS | 1 | $ 20,000 | $ 20,000 | Eng. Estimate |
| Task 2 - Permitting/Approvals, Regulatory Advocacy | | HR | 20 | $ 120 | $ 2,400 | Eng. Estimate |
| Task 3 - Subcontracting/Contract Management | | HR | 40 | $ 150 | $ 6,000 | Eng. Estimate |
| Task 4 - Installation Oversight/CQA/Health and Safety | | DAY | 2 | $ 3,000 | $ 6,000 | Eng. Estimate |
| Task 5 - As-Built Drawings and Reporting | CCR and Step 4A Engineering Evaluation ADP/presentation | LS | 1 | $ 23,000 | $ 23,000 | Eng. Estimate |
| Task 6 - Startup Testing/Shakedown | | DAY | 1 | $ 2,000 | $ 2,000 | Eng. Estimate |
| Task 7 - Startup/Initial Performance Reporting | Step 4B Engineering Evaluation ADP/presentation | EA | 1 | $ 8,000 | $ 8,000 | Eng. Estimate |
| **Subtotal** | | | | | **$ 67,400** | |
| | | | | **Total Capital Cost** | **$ 167,400** | |
| **ANNUAL OPERATION AND MAINTENANCE** | | | | | | |
| ***Annual Operation and Maintenance Cost for Biostimulation*** | | | | | | |
| Sampling 10 monitoring wells quarterly | | EA | 40 | $ 550 | $ 22,000 | Eng. Estimate |
| Lab Analyses of select wells for sulfate, sulfide, TOC, *Dhc*, and *vcrA* (5 monitoring wells per event) | | EA | 20 | $ 500 | $ 10,000 | Eng. Estimate |
| Reporting\Data Evaluation | annual reporting | EA | 1 | $ 20,000 | $ 20,000 | Eng. Estimate |
| ADP prep/presentation | Step 4C Engineering Evaluation | EA | 1 | $ 8,000 | $ 8,000 | Eng. Estimate |
| | | | | **Annual Operation and Maintenance Cost for Biostimulation** | **$ 60,000** | |
| **DPT Sampling** | | | | | | |
| DPT Mobilization | | EA | 1 | $ 330 | $ 330 | EDS quote 3/2013 |
| Per Diem | | DAY | 3 | $ 220 | $ 660 | EDS quote 3/2013 |
| Direct Push, Daily Rate | Assumes installation of 4 wells per day | DAY | 3 | $ 1,485 | $ 4,455 | EDS quote 3/2013 |
| Mobile Lab Mobilization | | EA | 1 | $ 385 | $ 385 | KB Labs Quote 2/2013 |
| Mobile Lab Daily Rate | | DAY | 3 | $ 1,485 | $ 4,455 | KB Labs Quote 2/2013 |
| Mobile Lab Per Diem | | DAY | 3 | $ 138 | $ 413 | KB Labs Quote 2/2013 |
| DPT sampling oversight | | DAY | 3 | $ 1,500 | $ 4,500 | Eng. Estimate |
| DPT data evaluation | | DAY | 3 | $ 1,500 | $ 4,500 | Eng. Estimate |
| | | | | **DPT Sampling Cost** | **$ 19,700** | |
| **ADDITIONAL INJECTION EVENT** | | | | | | |
| ***Costs for additional injection event, if required*** | | | | | | |
| EOS | 50% dosing in SZ with same number of injection locations as first injection event | DR | 17 | $ 624 | $ 10,603 | EOS quote 12/2013 |
| Shipping | | EA | 1 | $ 1,750 | $ 1,750 | EOS quote 12/2013 |
| Driller Mobilization | | EA | 1 | $ 5,203 | $ 5,203 | Vironex quote 12/2013 |
| Setup and Breakdown Rate | | EA | 1 | $ 2,365 | $ 2,365 | Vironex quote 12/2013 |
| DPT Daily Rate | Assumes injection at 10 locations simultaneously (4 gpm); 29 points total | DAY | 6 | $ 5,797 | $ 34,782 | Scaled from Vironex quote 12/2013 |
| Per Diem Driller | Includes extra day for setup and breakdown | DAY | 7 | $ 495 | $ 3,465 | Scaled from Vironex quote 12/2013 |
| Onsite Electron Donor Injection Oversight | | DAY | 6 | $ 1,500 | $ 9,000 | Eng. Estimate |
| HASP/Spill Plan/Injection Reporting | | EA | 1 | $ 2,750 | $ 2,750 | Vironex quote 12/2013 |
| | | | | **Second Injection Event Cost** | **$ 69,900** | |
| | | | | **Total Remediation Cost (Capital, Second Injection Event, three years of O&M&M)** | **$ 437,000** | |
| | | | | **Total Remediation Cost (Capital, Second Injection Event, five years of O&M&M)** | **$ 557,000** | |

**Table 4. 10xNADC Bioremediation Costing**
**Step Two Engineering Evaluation**
**Contractor's Road Heavy Equipment Area**

TECHNOLOGY: Bioremediation of 10xNADC Plume (concentrations of TCE, cDCE, and VC greater than 10xNADC)

DESCRIPTION: DPT injection of EOS (102 drums) at 113 injection points from 20 to 50 ft BLS. A recirculation system with two injection well clusters and one extraction well cluster (screened from 20 to 35 and 35 to 50 ft BLS). Injection of EOS will occur in one injection event, with a second event included 24 months after the first, using 50% of the EOS volume in all original locations in the source zone (17 drums) and 50% of the EOS volume in 50% of the original locations in the 10xNADC ring (18 drums). Installation of 15 performance monitoring wells with maximum depth of 40 ft BLS (7 monitoring wells) and 50 ft BLS (8 monitoring wells). Performance monitoring includes sampling of 15 monitoring wells for VOCs (including additional biological and geochemical analyses from 8 wells) quarterly for five years.

| Item | Description | Unit | No. of Units | Unit Cost | Total | Cost Reference |
|---|---|---|---|---|---|---|
| **CAPITAL COSTS** | | | | | | |
| ***Monitoring Well Installation - 15 monitoring wells*** | | | | | | |
| Driller Mobilization | | EA | 1 | $ 330 | $ 330 | EDS quote 12/2013 |
| Per Diem | | DAY | 4 | $ 220 | $ 880 | EDS quote 12/2013 |
| Direct Push, Daily Rate | Assumes installation of 4 wells per day | DAY | 4 | $ 1,485 | $ 5,940 | EDS quote 12/2013 |
| 1" x 5 ft PVC prepacked screen | | EA | 30 | $ 99 | $ 2,970 | EDS quote 12/2013 |
| 1" x 10 ft PVC Riser | | EA | 53 | $ 18 | $ 933 | EDS quote 12/2013 |
| caps, plugs & points | | EA | 15 | $ 22 | $ 330 | EDS quote 12/2013 |
| 8-inch manhole with 2x2 ft concrete pad | | EA | 15 | $ 110 | $ 1,650 | EDS quote 12/2013 |
| DPT Decon | decon pit setup/maintain | EA | 1 | $ 275 | $ 275 | EDS quote 12/2013 |
| Drilling Oversight | | DAY | 4 | $ 1,500 | $ 6,000 | Eng. Estimate |
| Drums | | EA | 3 | $ 58 | $ 174 | EDS quote 12/2013 |
| permit | 10 wells per permit | EA | 2 | $ 110 | $ 220 | EDS quote 12/2013 |
| **Subtotal** | | | | | **$ 19,702** | |
| ***DPT EOS Injection*** | | | | | | |
| EOS | Purchase 102 drums of EOS (1 injection event; $1.48/lb; 420 lbs per drum) | DR | 102 | $ 624 | $ 63,617 | EOS quote 12/2013 |
| Shipping | | EA | 2 | $ 7,000 | $ 14,000 | EOS quote 12/2013 |
| Driller Mobilization | | EA | 1 | $ 10,406 | $ 10,406 | Vironex quote 12/2013 |
| Setup and Breakdown Rate | | EA | 1 | $ 2,365 | $ 2,365 | Vironex quote 12/2013 |
| DPT Daily Rate | Assumes injection at 10 locations simultaneously (4 gpm); 107 vertical points, 6 angled; 5 points per day | DAY | 22 | $ 5,797 | $ 127,534 | Scaled from Vironex quote 12/2013 |
| Per Diem Driller | Includes extra day for setup and breakdown | DAY | 23 | $ 495 | $ 11,385 | Scaled from Vironex quote 12/2013 |
| Onsite Electron Donor Injection Oversight | | DAY | 23 | $ 1,500 | $ 34,500 | Eng. Estimate |
| HASP/Spill Plan/Injection Reporting | | EA | 1 | $ 2,750 | $ 2,750 | Vironex quote 12/2013 |
| **Subtotal** | | | | | **$ 266,557** | |
| ***Recirculation System*** | | | | | | |
| Mobilization | mob of hollow stem auger rig | LS | 1 | $ 660 | $ 660 | EDS quote 10/2012 |
| Recirculation Injection wells (4-inch dia) | Hollow Stem Auger Installation w/ Decon; Two wells per cluster, two clusters | FT | 340 | $ 39 | $ 13,090 | EDS quote 10/2012 |
| Extraction Wells (5-inch dia) | Hollow Stem Auger Installation w/ Decon; Two wells per cluster | FT | 170 | $ 44 | $ 7,480 | EDS quote 10/2012 |
| Well Developments | | HR | 3 | $ 110 | $ 330 | EDS quote 10/2012 |
| Well Completions | 36"x36"x4" concrete pads w/ 12" steel manholes | EA | 6 | $ 385 | $ 2,310 | EDS quote 10/2012 |
| Per Diem | | DAY | 6 | $ 330 | $ 1,980 | EDS quote 10/2012 |
| Oversight of Drilling | | DAY | 2 | $ 1,500 | $ 3,000 | Eng. Estimate |
| Bobcat/loader for IDW management | | DAY | 2 | $ 275 | $ 550 | EDS Quote 10/2012 |
| Roll-off Transport | Liner/Spot/Transfer Costs | EA | 1 | $ 1,000 | $ 1,000 | Scaled from previous costs VPF |
| Roll-Off Box/Rental | Soil cuttings from HSA drilling | WEEK | 2 | $ 100 | $ 200 | Scaled from previous costs VPF |
| Roll-Off Cuttings Disposal (Non-Haz) | Soil (includes analyticals, characterization and non-haz disposal 5 tons) | EA | 1 | $ 800 | $ 800 | Scaled from previous costs VPF |
| Installation of permanent injection piping | Includes oversight (installation below grade) | LS | 1 | $ 10,000 | $ 10,000 | Eng. Estimate |
| Recirculation Pipe Material | Assumes 1" PVC and associated fittings | LS | 1 | $ 2,000 | $ 2,000 | Eng. Estimate |
| **Subtotal** | | | | | **$ 43,400** | |
| ***Vapor Venting*** | | | | | | |
| Vapor Venting Piping and fans (includes installation) | assumes 2 days for installation | LS | 1 | $ 8,000 | $ 8,000 | Eng. Estimate |
| **Subtotal** | | | | | **$ 8,000** | |
| **ENGINEERING DESIGN AND START-UP COSTS** | | | | | | |
| Task 1 - System Design and Drawings | | LS | 1 | $ 25,000 | $ 25,000 | Eng. Estimate |
| Task 2 - Permitting/Approvals, Regulatory Advocacy | | HR | 40 | $ 120 | $ 4,800 | Eng. Estimate |
| Task 3 - Subcontracting/Contract Management | | HR | 80 | $ 150 | $ 12,000 | Eng. Estimate |
| Task 4 - Installation Oversight/CQA/Health and Safety | | DAY | 5 | $ 3,000 | $ 15,000 | Eng. Estimate |
| Task 5 - As-Built Drawings and Reporting | CCR and Step 4A Engineering Evaluation ADP/presentation | LS | 1 | $ 28,000 | $ 28,000 | Eng. Estimate |
| Task 6 - Startup Testing/Shakedown | | DAY | 5 | $ 2,000 | $ 10,000 | Eng. Estimate |
| Task 7 - Startup/Initial Performance Reporting | Step 4B Engineering Evaluation ADP/presentation | EA | 1 | $ 8,000 | $ 8,000 | Eng. Estimate |
| **Subtotal** | | | | | **$ 102,800** | |
| | | | | **Total Capital Cost** | **$ 440,500** | |
| **ANNUAL OPERATION AND MAINTENANCE** | | | | | | |
| ***Annual Operation and Maintenance Cost for Biostimulation and Recirculation*** | | | | | | |
| Sampling 15 monitoring wells quarterly and two extraction and four injection wells | | EA | 70 | $ 550 | $ 38,500 | Eng. Estimate |
| Lab Analyses of select wells for sulfate, sulfide, TOC, *Dhc*, and *vcrA* (8 monitoring wells per event) | | EA | 30 | $ 500 | $ 15,000 | Eng. Estimate |
| Reporting\Data Evaluation | annual reporting | EA | 1 | $ 30,000 | $ 30,000 | Eng. Estimate |
| ADP prep/presentation | Step 4C Engineering Evaluation | EA | 2 | $ 8,000 | $ 16,000 | Eng. Estimate |
| | | | | **Annual Operation and Maintenance Cost for Biostimulation** | **$ 99,500** | |
| **DPT Sampling** | | | | | | |
| DPT Mobilization | | EA | 1 | $ 330 | $ 330 | EDS quote 3/2013 |
| Per Diem | | DAY | 5 | $ 220 | $ 1,100 | EDS quote 3/2013 |
| Direct Push, Daily Rate | Assumes installation of 4 wells per day | DAY | 5 | $ 1,485 | $ 7,425 | EDS quote 3/2013 |
| Mobile Lab Mobilization | | EA | 1 | $ 385 | $ 385 | KB Labs Quote 2/2013 |
| Mobile Lab Daily Rate | | DAY | 5 | $ 1,485 | $ 7,425 | KB Labs Quote 2/2013 |
| Mobile Lab Per Diem | | DAY | 5 | $ 138 | $ 688 | KB Labs Quote 2/2013 |
| DPT sampling oversight | | DAY | 5 | $ 1,500 | $ 7,500 | Eng. Estimate |
| DPT data evaluation | | DAY | 5 | $ 1,500 | $ 7,500 | Eng. Estimate |
| | | | | **DPT Sampling Cost** | **$ 32,400** | |
| **ADDITIONAL INJECTION EVENT** | | | | | | |
| ***Costs for additional injection event, if required*** | | | | | | |
| EOS | 50% dosing in SZ (17 drums), 50% in 50% of 10xNADC (18 drums) | DR | 35 | $ 624 | $ 21,830 | EOS quote 12/2013 |
| Shipping | | EA | 1 | $ 3,500 | $ 3,500 | EOS quote 12/2013 |
| Driller Mobilization | | EA | 1 | $ 10,406 | $ 10,406 | Vironex quote 12/2013 |
| Setup and Breakdown Rate | | EA | 1 | $ 2,365 | $ 2,365 | Vironex quote 12/2013 |
| DPT Daily Rate | Assumes injection at 10 locations simultaneously (4 gpm); 68 vertical points, 6 angled | DAY | 15 | $ 5,797 | $ 86,955 | Scaled from Vironex quote 12/2013 |
| Per Diem Driller | Includes extra day for setup and breakdown | DAY | 16 | $ 495 | $ 7,920 | Scaled from Vironex quote 12/2013 |
| Onsite Electron Donor Injection Oversight | | DAY | 15 | $ 1,500 | $ 22,500 | Eng. Estimate |
| HASP/Spill Plan/Injection Reporting | | EA | 1 | $ 2,750 | $ 2,750 | Vironex quote 12/2013 |
| | | | | **Second Injection Event Cost** | **$ 158,200** | |
| | | | | **Total Remediation Cost (Capital, Second Injection Event, three years of O&M&M)** | **$ 929,600** | |
| | | | | **Total Remediation Cost (Capital, Second Injection Event, five years of O&M&M)** | **$ 1,128,600** | |

**Table 5. Source Zone EZVI Injection Costing**
**Step Two Engineering Evaluation**
**Contractor's Road Heavy Equipment Area**

TECHNOLOGY: EZVI Injection within Source Zone (TCE concentrations greater than 1% solubility)

DESCRIPTION: Injection of approximately 20,500 gallons of EZVI using direct-push drilling injection methods at 126 locations from 20 to 50 ft BLS. Injection of EZVI will occur in an initial injection event, followed by a second event 24 months later. Installation of 10 performance monitoring wells with maximum depth of 40 ft BLS (5 monitoring wells) and 50 ft BLS (5 monitoring wells). Performance monitoring includes sampling of 10 monitoring wells for VOCs quarterly for five years.

| Item | Description | Unit | No. of Units | Unit Cost | Total | Cost Reference |
|---|---|---|---|---|---|---|
| **CAPITAL COSTS** | | | | | | |
| ***Monitoring Well Installation - 10 monitoring wells*** | | | | | | |
| Driller Mobilization | | EA | 1 | $ 330 | $ 330 | EDS quote 12/2013 |
| Per Diem | | DAY | 3 | $ 220 | $ 660 | EDS quote 12/2013 |
| Direct Push, Daily Rate | Assumes installation of 4 wells per day | DAY | 3 | $ 1,485 | $ 4,455 | EDS quote 12/2013 |
| 1" x 5 ft PVC prepacked screen | | EA | 20 | $ 99 | $ 1,980 | EDS quote 12/2013 |
| 1" x 10 ft PVC Riser | | EA | 35 | $ 18 | $ 616 | EDS quote 12/2013 |
| caps, plugs & points | | EA | 10 | $ 22 | $ 220 | EDS quote 12/2013 |
| 8-inch manhole with 2x2 ft concrete pad | | EA | 10 | $ 110 | $ 1,100 | EDS quote 12/2013 |
| DPT Decon | decon pit setup/maintain | EA | 10 | $ 275 | $ 2,750 | EDS quote 12/2013 |
| Drilling Oversight | | DAY | 3 | $ 1,500 | $ 4,500 | Eng. Estimate |
| Drums | | EA | 2 | $ 58 | $ 116 | EDS quote 12/2013 |
| permit | 10 wells per permit | EA | 1 | $ 110 | $ 110 | EDS quote 12/2013 |
| **Subtotal** | | | | | **$ 16,837** | |
| ***Injection Event- EZVI*** | | | | | | |
| EZVI Material | 5% ZVI by weight formulation; Does not include NASA royalty; Volume pricing for this quantity only (20,000 gal) | gal | 20,534 | $ 23 | $ 466,146 | Scaled from RemQuest Quote 12/2013 |
| On-site EZVI Storage | | day | 21 | $ 116 | $ 2,436 | RemQuest Quote 12/2013 |
| Tanker dead-head charges | | EA | 2 | $ 2,900 | $ 5,800 | RemQuest Quote 12/2013 |
| Driller Mobilization | | EA | 1 | $ 7,805 | $ 7,804.50 | Vironex quote 12/2013 |
| Setup and Breakdown Rate | | EA | 1 | $ 2,365 | $ 2,365 | Vironex quote 12/2013 |
| DPT Daily Rate | Assumes injection at 6 points per day; 126 points | DAY | 21 | $ 5,797 | $ 121,737 | Vironex quote 12/2013 |
| Per Diem Driller | | DAY | 22 | $ 495 | $ 10,890 | Vironex quote 12/2013 |
| Onsite EZVI Injection Oversight | | DAY | 22 | $ 1,500 | $ 33,000 | Eng. Estimate |
| HASP/Spill Plan/Injection Reporting | | EA | 1 | $ 2,750 | $ 2,750 | Vironex quote 12/2013 |
| **Subtotal** | | | | | **$ 652,900** | |
| **ENGINEERING DESIGN AND START-UP COSTS** | | | | | | |
| Task 1 - System Design and Drawings | | LS | 1 | $ 15,000 | $ 15,000 | Eng. Estimate |
| Task 2 - Permitting/Approvals, Regulatory Advocacy | | HR | 20 | $ 120 | $ 2,400 | Eng. Estimate |
| Task 3 - Subcontracting/Contract Management | | HR | 40 | $ 150 | $ 6,000 | Eng. Estimate |
| Task 4 - Installation Oversight/CQA/Health and Safety | | DAY | 2 | $ 3,000 | $ 6,000 | Eng. Estimate |
| Task 5 - As-Built Drawings and Reporting | CCR and Step 4A Engineering Evaluation ADP/presentation | LS | 1 | $ 23,000 | $ 23,000 | Eng. Estimate |
| Task 6 - Startup Testing/Shakedown | | DAY | 2 | $ 2,000 | $ 4,000 | Eng. Estimate |
| Task 7 - Startup/Initial Performance Reporting | Step 4B Engineering Evaluation ADP/presentation | EA | 1 | $ 8,000 | $ 8,000 | Eng. Estimate |
| **Subtotal** | | | | | **$ 64,400** | |
| | | | | **Total Capital Cost** | **$ 734,100** | |
| **ANNUAL OPERATION AND MAINTENANCE** | | | | | | |
| ***Annual Operation and Maintenance Cost for EZVI*** | | | | | | |
| Sampling 10 monitoring wells quarterly | | EA | 40 | $ 550 | $ 22,000 | Eng. Estimate |
| Reporting\Data Evaluation | Annual Reporting | EA | 1 | $ 20,000 | $ 20,000 | Eng. Estimate |
| ADP prep/presentation | Step 4C Engineering Evaluation | EA | 1 | $ 8,000 | $ 8,000 | Eng. Estimate |
| | | | | **Annual Operation and Maintenance Cost for EZVI** | **$ 50,000** | |
| **DPT Sampling** | | | | | | |
| DPT Mobilization | | EA | 1 | $ 330 | $ 330 | EDS quote 3/2013 |
| Per Diem | | DAY | 3 | $ 220 | $ 660 | EDS quote 3/2013 |
| Direct Push, Daily Rate | Assumes installation of 4 wells per day | DAY | 3 | $ 1,485 | $ 4,455 | EDS quote 3/2013 |
| Mobile Lab Mobilization | | EA | 1 | $ 385 | $ 385 | KB Labs Quote 2/2013 |
| Mobile Lab Daily Rate | | DAY | 3 | $ 1,485 | $ 4,455 | KB Labs Quote 2/2013 |
| Mobile Lab Per Diem | | DAY | 3 | $ 138 | $ 413 | KB Labs Quote 2/2013 |
| DPT sampling oversight | | DAY | 3 | $ 1,500 | $ 4,500 | Eng. Estimate |
| DPT data evaluation | | DAY | 3 | $ 1,500 | $ 4,500 | Eng. Estimate |
| | | | | **DPT Sampling Cost** | **$ 19,700** | |
| **ADDITIONAL INJECTION EVENT** | | | | | | |
| ***Costs for additional injection event, if necessary*** | | | | | | |
| EZVI Material | 5% ZVI by weight formulation; Does not include NASA royalty or 6% FL sales taxes; Volume pricing for this quantity only (20,000 gal) | gal | 10,267 | $ 23 | $ 233,073 | Scaled from RemQuest Quote 12/2013 |
| On-site EZVI Storage | | day | 11 | $ 116 | $ 1,218 | RemQuest Quote 12/2013 |
| Tanker dead-head charges | | EA | 2 | $ 2,900 | $ 5,800 | RemQuest Quote 12/2013 |
| Driller Mobilization | | EA | 1 | $ 7,805 | $ 7,805 | Vironex quote 12/2013 |
| Setup and Breakdown Rate | | EA | 1 | $ 2,365 | $ 2,365 | Vironex quote 12/2013 |
| DPT Daily Rate | Assumes injection at 6 points per day; 126 points | DAY | 11 | $ 5,797 | $ 60,869 | Vironex quote 12/2013 |
| Per Diem Driller | | DAY | 11 | $ 495 | $ 5,445 | Vironex quote 12/2013 |
| Onsite EZVI Injection Oversight | | DAY | 11 | $ 1,500 | $ 16,500 | Eng. Estimate |
| HASP/Spill Plan/Injection Reporting | | EA | 1 | $ 2,750 | $ 2,750 | Vironex quote 12/2013 |
| | | | | **Second Injection Event Cost** | **$ 335,800** | |
| | | | | **Total Remediation Cost (Capital, Second Injection, three years of O&M&M)** | **$ 1,239,600** | |
| | | | | **Total Remediation Cost (Capital, Second Injection, five years of O&M&M)** | **$ 1,339,600** | |

**Table 6. 10xNADC EZVI Injection Costing**
**Step Two Engineering Evaluation**
**Contractor's Road Heavy Equipment Area**

TECHNOLOGY: EZVI Injection within Source Zone (TCE concentrations greater than 1% solubility) and Bioremediation of 10xNADC ring (area with concentrations of TCE, cDCE, and VC greater than 10xNADC, excluding the source zone area)

DESCRIPTION: Injection of EZVI (approximately 20,500 gallons; 126 locations) in the source zone and EOS (approximately 69 drums; 84 locations) in the 10xNADC ring using direct-push methods from 20 to 50 ft BLS. Injection of EZVI and EOS will occur in two injection events, with a second event included 24 months after the initial event. The second event will use the same injection scheme in the source zone and 50% of the original EOS volume into 50% of the initial locations in the 10xNADC ring. Installation of 15 performance monitoring wells with maximum depth of 40 ft BLS (7 monitoring wells) and 50 ft BLS (8 monitoring wells). Performance monitoring includes sampling of 15 monitoring wells for VOCS (including additional biological and geochemical analyses from 3 wells) quarterly for five years.

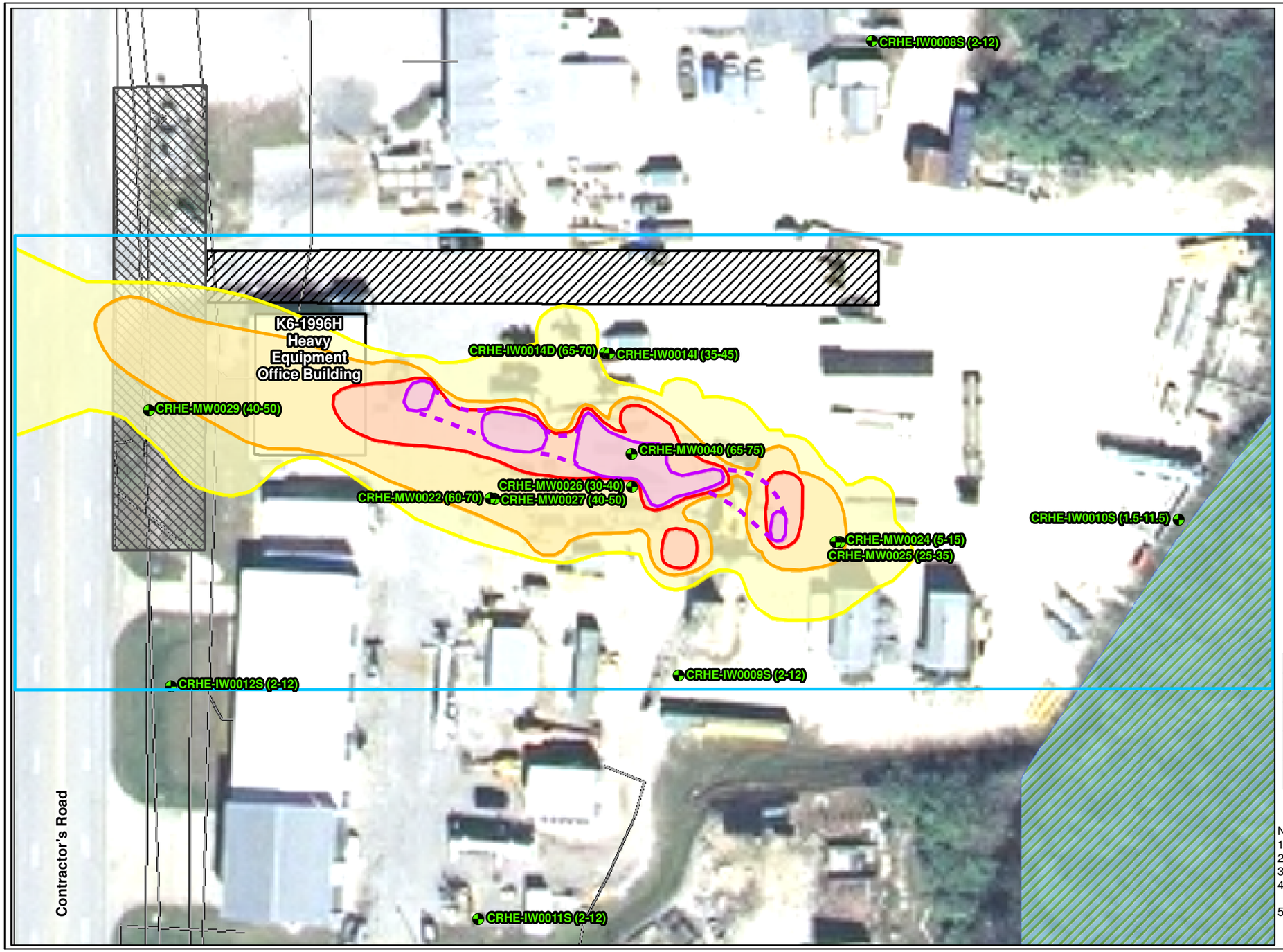
| Item | Description | Unit | No. of Units | Unit Cost | Total | Cost Reference |
|---|---|---|---|---|---|---|
| **CAPITAL COSTS** | | | | | | |
| ***Monitoring Well Installation - 15 monitoring wells*** | | | | | | |
| Driller Mobilization | | EA | 1 | $ 330 | $ 330 | EDS quote 12/2013 |
| Per Diem | | DAY | 4 | $ 220 | $ 880 | EDS quote 12/2013 |
| Direct Push, Daily Rate | Assumes installation of 4 wells per day | DAY | 4 | $ 1,485 | $ 5,940 | EDS quote 12/2013 |
| 1" x 5 ft PVC prepacked screen | | EA | 30 | $ 99 | $ 2,970 | EDS quote 12/2013 |
| 1" x 10 ft PVC Riser | | EA | 53 | $ 18 | $ 933 | EDS quote 12/2013 |
| caps, plugs & points | | EA | 15 | $ 22 | $ 330 | EDS quote 12/2013 |
| 8-inch manhole with 2x2 ft concrete pad | | EA | 15 | $ 110 | $ 1,650 | EDS quote 12/2013 |
| DPT Decon | decon pit setup/maintain | EA | 1 | $ 275 | $ 275 | EDS quote 12/2013 |
| Drilling Oversight | | DAY | 4 | $ 1,500 | $ 6,000 | Eng. Estimate |
| Drums | | EA | 3 | $ 58 | $ 174 | EDS quote 12/2013 |
| permit | 10 wells per permit | EA | 2 | $ 110 | $ 220 | EDS quote 12/2013 |
| **Subtotal** | | | | | **$ 19,702** | |
| ***Injection Event- EZVI*** | | | | | | |
| EZVI Material | 5% ZVI by weight formulation; Does not include NASA royalty; includes 6% FL sales tax; Volume pricing for this quantity only (20,000 gal) | gal | 20,534 | $ 23 | $ 466,146 | Scaled from RemQuest Quote 12/2013 |
| On-site EZVI Storage | | day | 21 | $ 116 | $ 2,436 | RemQuest Quote 12/2013 |
| Tanker dead-head charges | | EA | 2 | $ 2,900 | $ 5,800 | RemQuest Quote 12/2013 |
| Driller Mobilization | | EA | 1 | $ 7,805 | $ 7,805 | Vironex quote 12/2013 |
| Setup and Breakdown Rate | | EA | 1 | $ 2,365 | $ 2,365 | Vironex quote 12/2013 |
| DPT Daily Rate | Assumes injection at 6 points per day; 126 points | DAY | 21 | $ 5,797 | $ 121,737 | Vironex quote 12/2013 |
| Per Diem Driller | | DAY | 22 | $ 495 | $ 10,890 | Vironex quote 12/2013 |
| Onsite EZVI Injection Oversight | | DAY | 22 | $ 1,500 | $ 33,000 | Eng. Estimate |
| HASP/Spill Plan/Injection Reporting | | EA | 1 | $ 2,750 | $ 2,750 | Vironex quote 12/2013 |
| **Subtotal** | | | | | **$ 652,900** | |
| ***Injection Event - EOS*** | | | | | | |
| EOS | Purchase 69 drums of EOS (1 injection event; $1.48/lb; 420 lbs per drum) | DR | 69 | $ 624 | $ 43,035 | EOS quote 12/2013 |
| Shipping | | EA | 1 | $ 5,000 | $ 5,000 | EOS quote 12/2013 |
| Driller Mobilization | | EA | 1 | $ 10,406 | $ 10,406 | Vironex quote 12/2013 |
| Setup and Breakdown Rate | | EA | 1 | $ 2,365 | $ 2,365 | Vironex quote 12/2013 |
| DPT Daily Rate | Assumes injection at 10 locations simultaneously (4 gpm); 78 vertical | DAY | 16 | $ 5,797 | $ 92,752 | Scaled from Vironex quote 12/2013 |
| Per Diem Driller | Includes extra day for setup and breakdown | DAY | 17 | $ 495 | $ 8,415 | Scaled from Vironex quote 12/2013 |
| Onsite Electron Donor Injection Oversight | | DAY | 17 | $ 1,500 | $ 25,500 | Eng. Estimate |
| HASP/Spill Plan/Injection Reporting | | EA | 1 | $ 2,750 | $ 2,750 | Vironex quote 12/2013 |
| **Subtotal** | | | | | **$ 190,223** | |
| ***Recirculation System*** | | | | | | |
| Mobilization | | LS | 1 | $ 660 | $ 660 | EDS quote 10/2012 |
| Recirculation Injection wells (4-inch dia) | Hollow Stem Auger Installation w/ Decon; Two wells per cluster, two clusters | FT | 340 | $ 39 | $ 13,090 | EDS quote 10/2012 |
| Extraction Wells (5-inch dia) | Hollow Stem Auger Installation w/ Decon; Two wells per cluster | FT | 170 | $ 44 | $ 7,480 | EDS quote 10/2012 |
| Well Developments | | HR | 3 | $ 110 | $ 330 | EDS quote 10/2012 |
| Well Completions | 36"x36"x4" concrete pads w/ 12" steel manholes | EA | 6 | $ 385 | $ 2,310 | EDS quote 10/2012 |
| Per Diem | | DAY | 2 | $ 330 | $ 660 | EDS quote 10/2012 |
| Oversight of Drilling | | DAY | 2 | $ 1,500 | $ 3,000 | Eng. Estimate |
| Bobcat/loader for IDW management | | DAY | 2 | $ 275 | $ 550 | EDS Quote 10/2012 |
| Roll-off Transport | Liner/Spot/Transfer Costs | EA | 1 | $ 1,000 | $ 1,000 | Scaled from previous costs VPF |
| Roll-Off Box/Rental | Soil cuttings from HSA drilling | WEEK | 2 | $ 100 | $ 200 | Scaled from previous costs VPF |
| Roll-Off Cuttings Disposal (Non-Haz) | Soil (includes analyticals, characterization and non-haz disposal 5 tons) | EA | 1 | $ 800 | $ 800 | Scaled from previous costs VPF |
| Installation of permanent injection piping | Includes oversight (installation above grade) | LS | 1 | $ 10,000 | $ 10,000 | Eng. Estimate |
| Recirculation Pipe Material | Assumes 1" PVC and associated fittings | LS | 1 | $ 2,000 | $ 2,000 | Eng. Estimate |
| **Subtotal** | | | | | **$ 42,080** | |
| ***Vapor Venting*** | | | | | | |
| Vapor Venting Piping and fans (includes installation) | assumes 2 days for installation | LS | 1 | $ 8,000 | $ 8,000 | Eng. Estimate |
| **Subtotal** | | | | | **$ 8,000** | |
| **ENGINEERING DESIGN AND START-UP COSTS** | | | | | | |
| Task 1 - System Design and Drawings | | LS | 1 | $ 25,000 | $ 25,000 | |
| Task 2 - Permitting/Approvals, Regulatory Advocacy | | HR | 40 | $ 120 | $ 4,800 | Eng. Estimate |
| Task 3 - Subcontracting/Contract Management | | HR | 80 | $ 150 | $ 12,000 | Eng. Estimate |
| Task 4 - Installation Oversight/CQA/Health and Safety | | DAY | 5 | $ 3,000 | $ 15,000 | Eng. Estimate |
| Task 5 - As-Built Drawings and Reporting | CCR and Step 4A Engineering Evaluation ADP/presentation | LS | 1 | $ 28,000 | $ 28,000 | Eng. Estimate |
| Task 6 - Startup Testing/Shakedown | | DAY | 2 | $ 2,000 | $ 4,000 | Eng. Estimate |
| Task 7 - Startup/Initial Performance Reporting | Step 4B Engineering Evaluation ADP/presentation | EA | 1 | $ 8,000 | $ 8,000 | Eng. Estimate |
| **Subtotal** | | | | | **$ 96,800** | |
| | | | | **Total Capital Cost** | **$ 1,009,700** | |
| **ANNUAL OPERATION AND MAINTENANCE** | | | | | | |
| ***Annual Operation and Maintenance Cost for EZVI with bioremediation*** | | | | | | |
| Sampling 15 monitoring wells quarterly and two extraction and four injection wells | | EA | 70 | $ 550 | $ 38,500 | Eng. Estimate |
| Lab Analyses of select wells for sulfate, sulfide, TOC, *Dhc*, and *vcrA* (3 monitoring wells per event) | | EA | 12 | $ 500 | $ 6,000 | Eng. Estimate |
| Reporting\Data Evaluation | Annual Reporting | EA | 1 | $ 30,000 | $ 30,000 | Eng. Estimate |
| ADP prep/presentation | Step 4C Engineering Evaluation | EA | 1 | $ 8,000 | $ 8,000 | Eng. Estimate |
| | | | | **Annual Operation and Maintenance Cost for EZVI** | **$ 82,500** | |
| **DPT Sampling** | | | | | | |
| DPT Mobilization | | EA | 1 | $ 330 | $ 330 | EDS quote 3/2013 |
| Per Diem | | DAY | 5 | $ 220 | $ 1,100 | EDS quote 3/2013 |
| Direct Push, Daily Rate | Assumes installation of 4 wells per day | DAY | 5 | $ 1,485 | $ 7,425 | EDS quote 3/2013 |
| Mobile Lab Mobilization | | EA | 1 | $ 385 | $ 385 | KB Labs Quote 2/2013 |
| Mobile Lab Daily Rate | | DAY | 5 | $ 1,485 | $ 7,425 | KB Labs Quote 2/2013 |
| Mobile Lab Per Diem | | DAY | 5 | $ 138 | $ 688 | KB Labs Quote 2/2013 |
| DPT sampling oversight | | DAY | 5 | $ 1,500 | $ 7,500 | Eng. Estimate |
| DPT data evaluation | | DAY | 5 | $ 1,500 | $ 7,500 | Eng. Estimate |
| | | | | **DPT Sampling Cost** | **$ 32,400** | |
| **ADDITIONAL INJECTION EVENT** | | | | | | |
| ***Costs for additional injection event, if required*** | | | | | | |
| EOS | 50% dosing in 50% of 10xNADC | DR | 18 | $ 624 | $ 11,227 | EOS quote 12/2013 |
| Shipping | | EA | 1 | $ 2,000 | $ 2,000 | EOS quote 12/2013 |
| EZVI Material | 5% ZVI by weight formulation; Does not include NASA royalty; includes 6% FL sales taxes; Volume pricing for this quantity only (20,000 gal) | gal | 10,267 | $ 23 | $ 233,073 | Scaled from RemQuest Quote 12/2013 |
| On-site EZVI Storage | | day | 11 | $ 116 | $ 1,218 | RemQuest Quote 12/2013 |
| Tanker dead-head charges | | EA | 2 | $ 2,750 | $ 5,500 | RemQuest Quote 12/2013 |
| Driller Mobilization | One for each solution | EA | 1 | $ 7,805 | $ 7,805 | Vironex quote 12/2013 |
| Setup and Breakdown Rate | One for each solution | EA | 2 | $ 2,365 | $ 4,730 | Vironex quote 12/2013 |
| DPT Daily Rate - EZVI | Assumes injection at 6 points per day; 126 points | DAY | 11 | $ 5,797 | $ 60,869 | Vironex quote 12/2013 |
| Per Diem Driller - EZVI | | DAY | 11 | $ 495 | $ 5,445 | Vironex quote 12/2013 |
| Onsite EZVI Injection Oversight | | DAY | 11 | $ 1,500 | $ 16,500 | Eng. Estimate |
| HASP/Spill Plan/Injection Reporting | One for each EZVI and EOS | EA | 2 | $ 2,750 | $ 5,500 | Vironex quote 12/2013 |
| Setup and Breakdown Rate - EOS | | EA | 1 | $ 2,365 | $ 2,365 | Vironex quote 12/2013 |
| DPT Daily Rate - EOS | Assumes injection at 10 locations simultaneously (4 gpm); 39 vertical points, 6 angled | DAY | 9 | $ 5,797 | $ 52,173 | Scaled from Vironex quote 12/2013 |
| Per Diem Driller - EOS | Includes extra day for setup and breakdown | DAY | 10 | $ 495 | $ 4,950 | Scaled from Vironex quote 12/2013 |
| Onsite Electron Donor Injection Oversight | | DAY | 10 | $ 1,500 | $ 15,000 | Eng. Estimate |
| | | | | **Year Two Injection Event Cost** | **$ 428,400** | |
| | | | | **Total Remediation Cost (Capital, Second Injection, three years of O&M&M)** | **$ 1,718,000** | |
| | | | | **Total Remediation Cost (Capital, Second Injection, five years of O&M&M)** | **$ 1,883,000** | |

## Table 7. Cost Comparison
## Step Two Engineering Evaluation
### Contractor's Road Heavy Equipment Area

| Alternative | | Capital Cost | Annual Cost Year One (Including Sampling) | Annual Costs Year Two (Including Sampling) | Annual Costs Year Three (Including Sampling) | Annual Costs Year Four (Including Sampling) | Annual Costs Year Five (Including Sampling) | Estimated Timeframe to NADC | Total "Pay as You Go" Cost (Active Remediation) | Present Value Cost (Active Remediation) | Estimated CVOC Mass Removed | Estimated Cost per Pound of CVOC Mass Removed |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | | $ | $ | $ | $ | $ | $ | Years | $ | $ | lbs | $/lbs |
| 1A | SZ AS/SVE | $252,900 | $96,200 | $115,900 | N/A | N/A | N/A | 2 | $470,000 | $450,000 | 58 | $8,100 |
| | | $252,900 | $96,200 | $115,900 | $96,200 | N/A | N/A | 3 | $560,000 | $550,000 | | $9,700 |
| 2A | SZ Bioremediation | $167,400 | $60,000 | $149,600 | $60,000 | N/A | N/A | 3 | $440,000 | $420,000 | 58 | $7,600 |
| | | $167,400 | $60,000 | $149,600 | $60,000 | $60,000 | $60,000 | 5 | $560,000 | $540,000 | | $9,700 |
| 3A | SZ EZVI | $734,100 | $50,000 | $405,500 | $50,000 | N/A | N/A | 3 | $1,240,000 | $1,220,000 | 58 | $21,400 |
| | | $734,100 | $50,000 | $405,500 | $50,000 | $50,000 | $50,000 | 5 | $1,340,000 | $1,310,000 | | $23,100 |
| 1B | 10xNADC AS/SVE | $424,600 | $121,200 | $153,600 | N/A | N/A | N/A | 2 | $700,000 | $690,000 | 152 | $4,600 |
| | | $424,600 | $121,200 | $153,600 | $121,200 | N/A | N/A | 3 | $820,000 | $800,000 | | $5,400 |
| 2B | 10xNADC Bioremediation | $440,500 | $99,500 | $290,100 | $99,500 | N/A | N/A | 3 | $930,000 | $910,000 | 152 | $6,100 |
| | | $440,500 | $99,500 | $290,100 | $99,500 | $99,500 | $99,500 | 5 | $1,130,000 | $1,100,000 | | $7,400 |
| 3B | SZ EZVI 10xNADC Bioremediation | $1,009,700 | $82,500 | $543,300 | $82,500 | N/A | N/A | 3 | $1,720,000 | $1,680,000 | 152 | $11,300 |
| | | $1,009,700 | $82,500 | $543,300 | $82,500 | $82,500 | $82,500 | 5 | $1,880,000 | $1,840,000 | | $12,400 |

**Notes:**

1. Alternatives 2A, 3A, 2B, and 3B assume a second injection event performed 24 months after the initial event.
2. Bioremediation indicates biostimulation with emulsified oil.
3. Alternatives 2B and 3B include recirculation beneath the building and passive venting around the building.
4. SZ indicates source zone.
5. NADC indicates natural attenuation default concentration.
6. AS/SVE indicates air sparging and soil vapor extraction.
7. EZVI indicates emulsified zero valent iron.
8. "Pay as You Go" costs do not consider inflation during the remediation period.
9. Net rate of return: 5%
10. All alternatives include DPT sampling costs in Year 2.




N

50 25 0 50

Feet

**Legend**

- Monitoring Well Location (showing screen interval)
- Utility
- Low Concentration Plume (TCE GCTL)
- High Concentration Plume (TCE NADC)
- Hot Spot (TCE 10xNADC)
- Source Zone (1% TCE Solubility Plume)
- Inferred Source Zone (1% TCE Solubility Plume)
- Utility Corridor
- Area of Subsurface Obstructions
- Hot Spot 1 Area
- Wetlands
- Building Outline

| TCE Plume | Area (acres) |
|---|---|
| Low Concentration Plume (Concentrations Greater than GCTL) | 0.79 |
| High Concentration Plume (Concentrations Greater than NADC) | 0.41 |
| Hot Spot (Concentrations Greater than 10xNADC) | 0.13 |
| Inferred 1% TCE Solubility (TCE Concentrations Greater than 11,000 µg/L) | 0.07 |

Notes:
1. µg/L indicates micrograms per liter.
2. TCE indicates trichloroethene.
3. GCTL indicates Groundwater Cleanup Target Level.
4. NADC indicates Natural Attenuation Default Concentration.
5. The area of subsurface obstructions indicates the area we were unable to drill due to abnormally thick road base present to accommodate heavy equipment.

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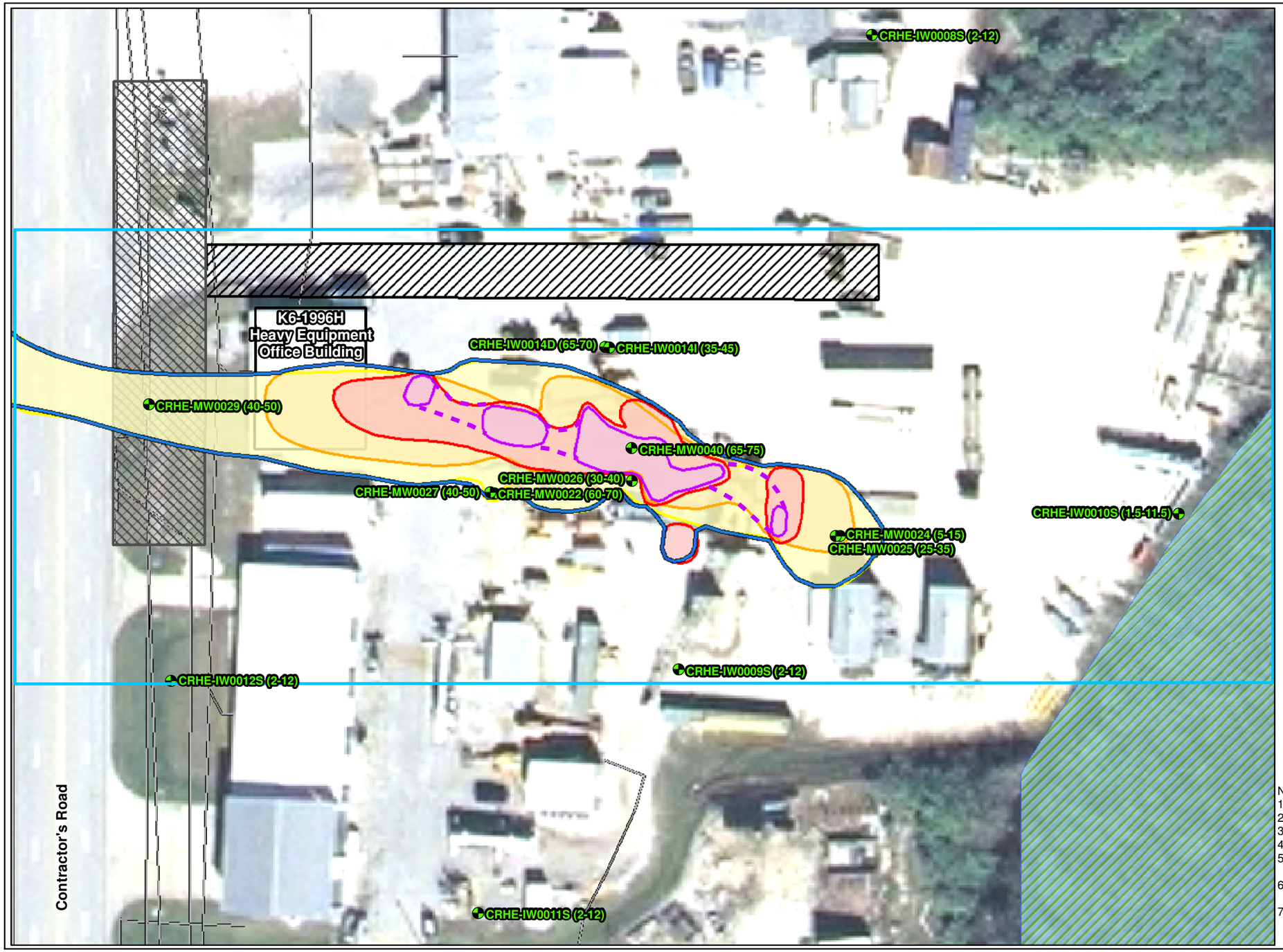
Figure 1
CRHE Area Hot Spot 1 Delineation: TCE Plume




| 10xNADC Plumes | Area (acres) |
|---|---|
| Inferred Source Zone | 0.07 |
| TCE | 0.13 |
| cDCE | 0.23 |
| VC | 0.43 |

Notes:
1. µg/L indicates micrograms per liter.
2. TCE indicates trichloroethene.
3. cDCE indicates *cis*-1,2-dichloroethene.
4. VC indicates vinyl chloride.
5. CVOC indicates Chlorinated Volatile Organic Compound.
6. NADC indicates Natural Attenuation Default Concentration.
7. The area of subsurface obstructions indicates the area we were unable to drill due to abnormally thick road base present to accommodate heavy equipment.

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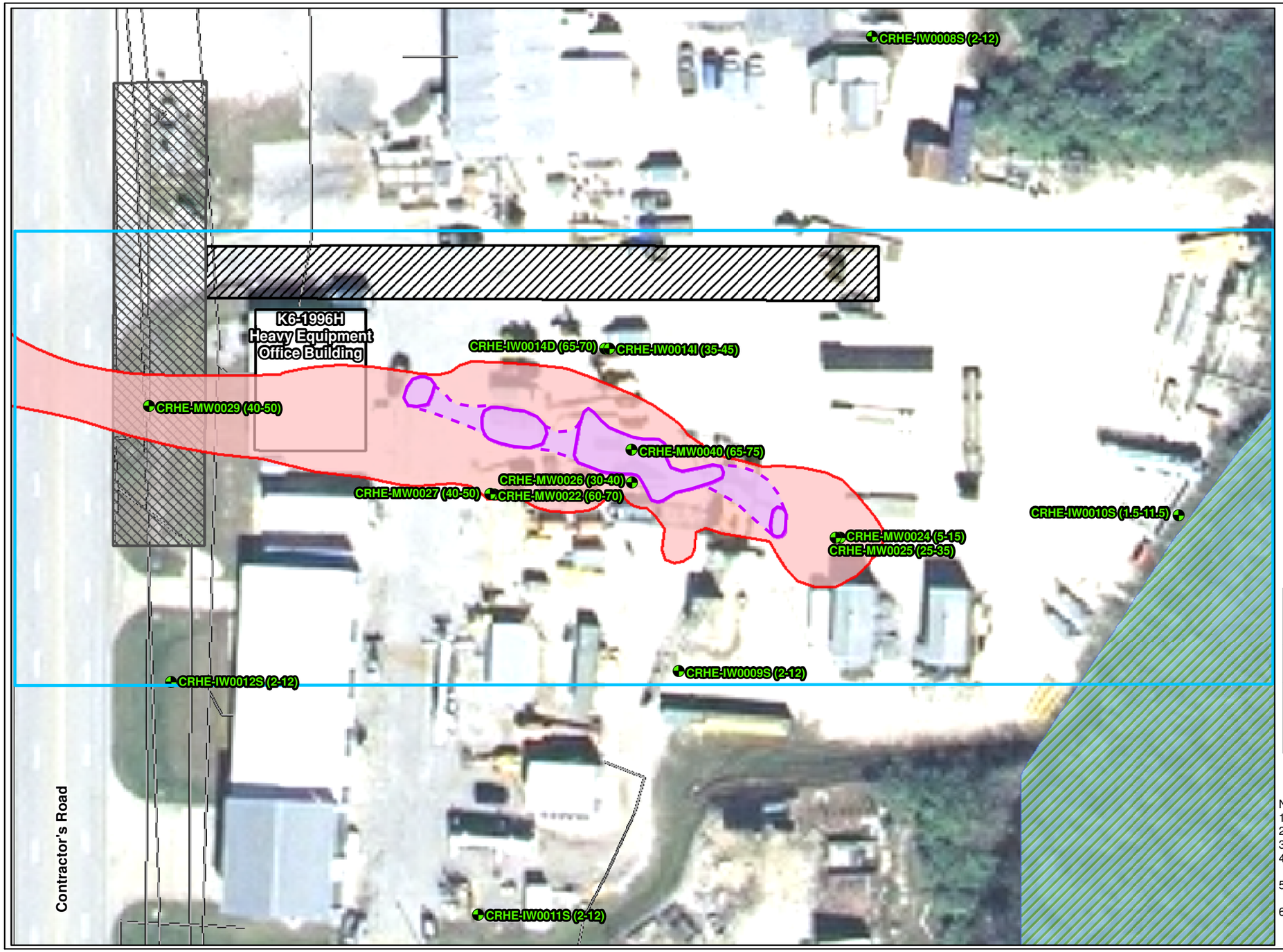
Figure 2
CRHE Area Hot Spot 1 Delineation: 10xNADC Plumes




N

50 25 0 50

Feet

**Legend**

- Monitoring Well Location (showing screen interval)
- Utility
- Source Zone (1% TCE Solubility Plume)
- Inferred Source Zone (1% TCE Solubility Plume)
- CVOC 10xNADC Isopleth
- Utility Corridor
- Area of Subsurface Obstructions
- Hot Spot 1 Area
- Wetlands
- Building Outline

| Hot Spot 1 Plumes | Hot Spot 1 Area (acres) |
|---|---|
| Hot Spot (Concentrations Greater than 10xNADC) | 0.44 |
| Source Zone including Inferred 1% TCE Solubility (TCE Concentrations Greater than 11,000 µg/L) | 0.07 |

Notes:
1. µg/L indicates micrograms per liter.
2. TCE indicates trichloroethene.
3. GCTL indicates Groundwater Cleanup Target Level.
4. CVOC indicates Chlorinated Volatile Organic Compound.
5. NADC indicates Natural Attenuation Default Concentration.
6. The area of subsurface obstructions indicates the area we were unable to drill due to abnormally thick road base present to accommodate heavy equipment.

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Figure 3
CRHE Area Hot Spot 1 Delineation: 10xNADC Plume and Source Zone

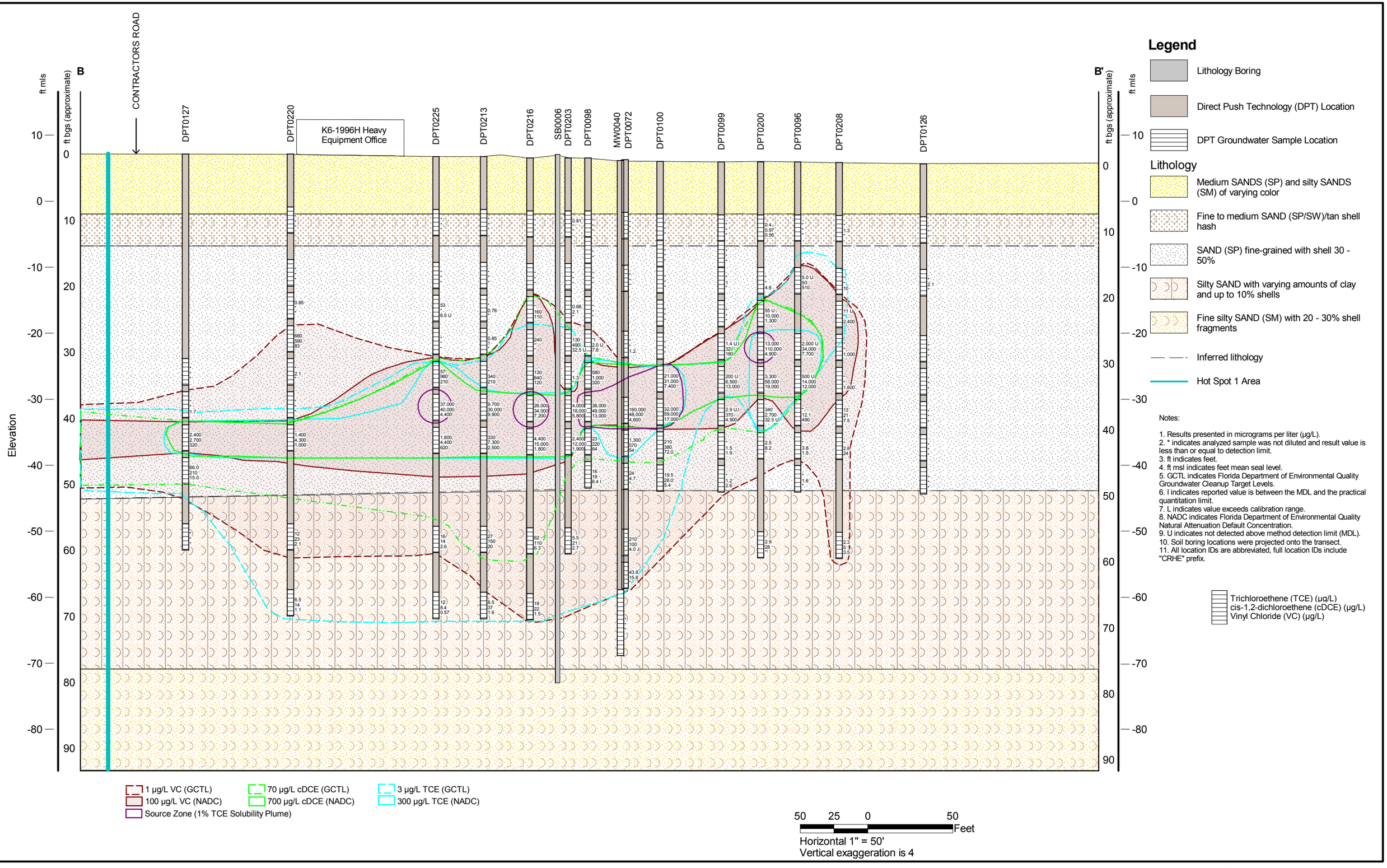
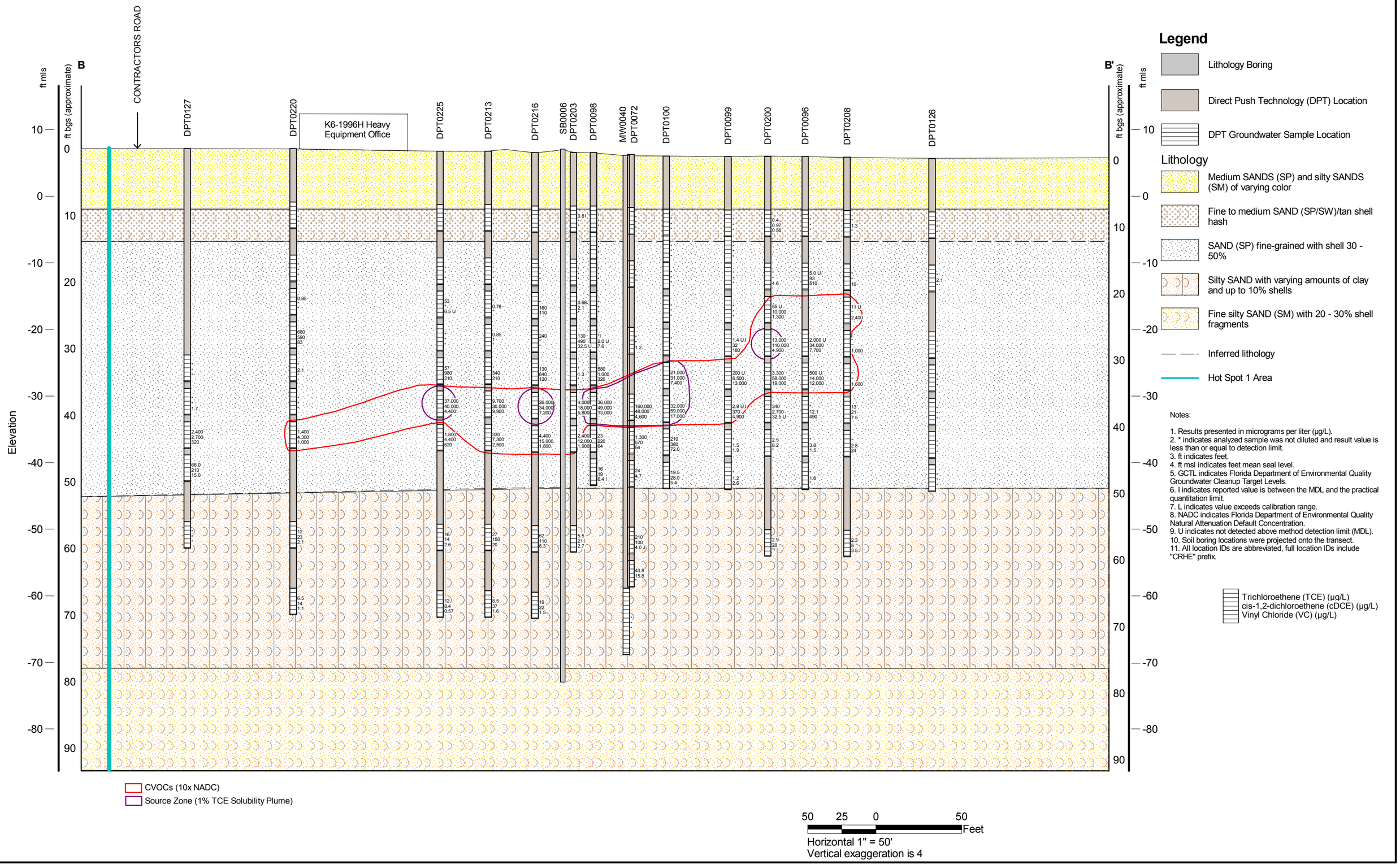



Figure 4
Lithologic Cross Section B to B' and CVOC Isocontours




## Legend

- Lithology Boring
- Direct Push Technology (DPT) Location
- DPT Groundwater Sample Location

### Lithology

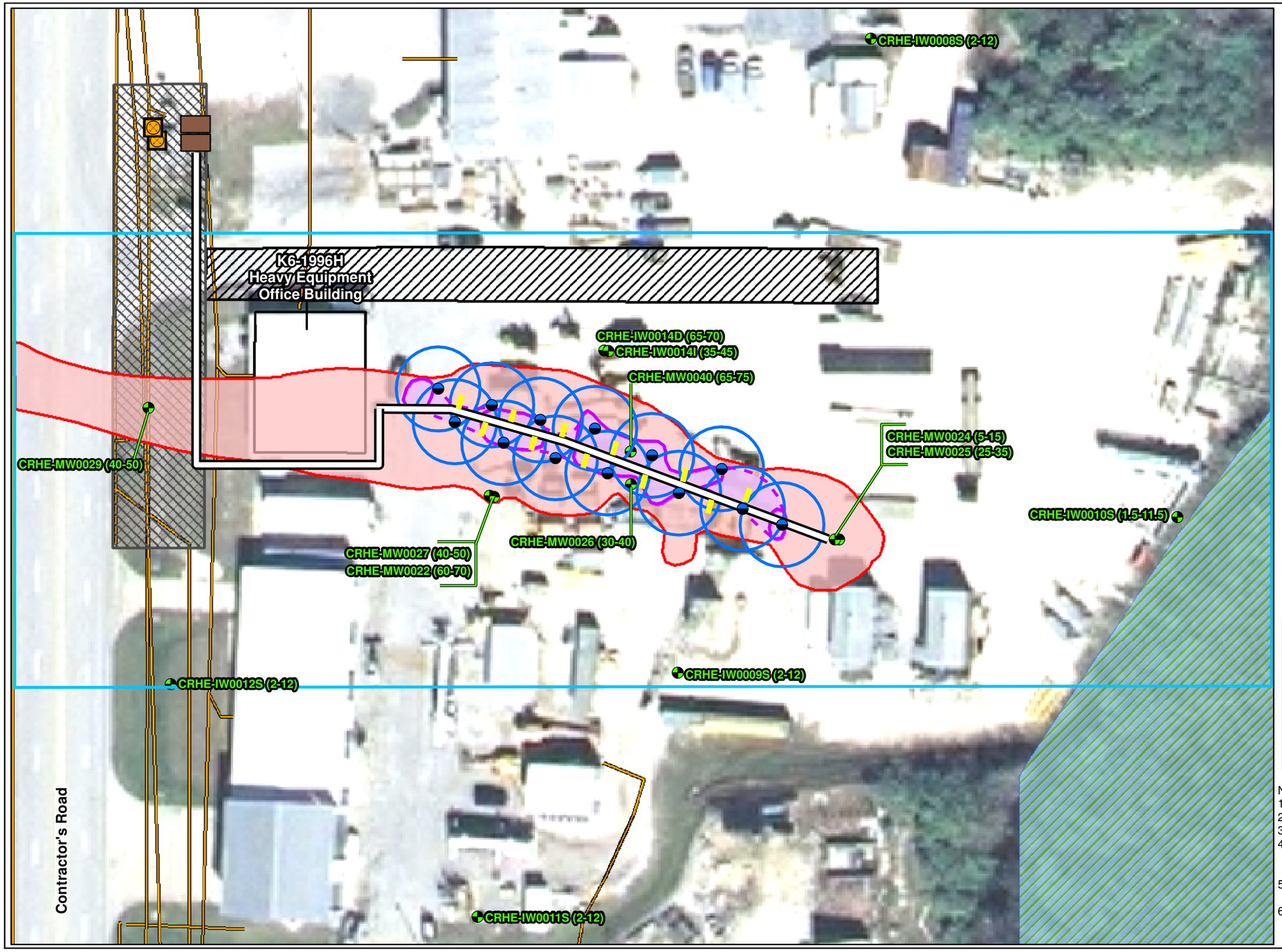
- Medium SANDS (SP) and silty SANDS (SM) of varying color
- Fine to medium SAND (SP/SW)/tan shell hash
- SAND (SP) fine-grained with shell 30 - 50%
- Silty SAND with varying amounts of clay and up to 10% shells
- Fine silty SAND (SM) with 20 - 30% shell fragments
- Inferred lithology
- Hot Spot 1 Area

Notes:

1. Results presented in micrograms per liter (µg/L).
2. * indicates analyzed sample was not diluted and result value is less than or equal to detection limit.
3. ft indicates feet.
4. ft msl indicates feet mean seal level.
5. GCTL indicates Florida Department of Environmental Quality Groundwater Cleanup Target Levels.
6. I indicates reported value is between the MDL and the practical quantitation limit.
7. L indicates value exceeds calibration range.
8. NADC indicates Florida Department of Environmental Quality Natural Attenuation Default Concentration.
9. U indicates not detected above method detection limit (MDL).
10. Soil boring locations were projected onto the transect.
11. All location IDs are abbreviated, full location IDs include "CRHE" prefix.

- Trichloroethene (TCE) (µg/L)
- cis-1,2-dichloroethene (cDCE) (µg/L)
- Vinyl Chloride (VC) (µg/L)

Figure 5
Lithologic Cross Section B to B' and CVOC Isocontours




N

50 25 0 50 Feet

**Legend**

- Monitoring Well Location (showing screen interval)
- Source Zone Air Sparge Well
- Source Zone Air Sparge Estimated 20 ft Radius of Influence (13 Locations)
- Pad Mounted Transformer
- Conceptual Primary Trench
- Soil Vapor Extraction Chamber
- Utility
- Inferred Source Zone (1% TCE Solubility Plume)
- Source Zone (1% TCE Solubility Plume)
- CVOC 10xNADC Isopleth
- Utility Corridor
- Area of Subsurface Obstructions
- Hot Spot 1 Area
- Wetlands
- Air Sparge and SVE Trailers
- Building Outline

| Hot Spot 1 Plumes | Hot Spot 1 Area (acres) |
|---|---|
| 10xNADC Zone (CVOC Concentrations Greater than 10xNADC) | 0.44 |
| Source Zone including Inferred 1% TCE Solubility (TCE Concentrations Greater than 11,000 µg/L) | 0.07 |

Notes:
1. µg/L indicates micrograms per liter.
2. TCE indicates trichloroethene.
3. GCTL indicates Groundwater Cleanup Target Level.
4. Chlorinated Volatile Organic Compound (CVOC) consist of TCE, cis-1,2-dichloroethene, and vinyl chloride.
5. NADC indicates Natural Attenuation Default Concentration.
6. The area of subsurface obstructions indicates the area we were unable to drill due to abnormally thick road base present to accommodate heavy equipment.

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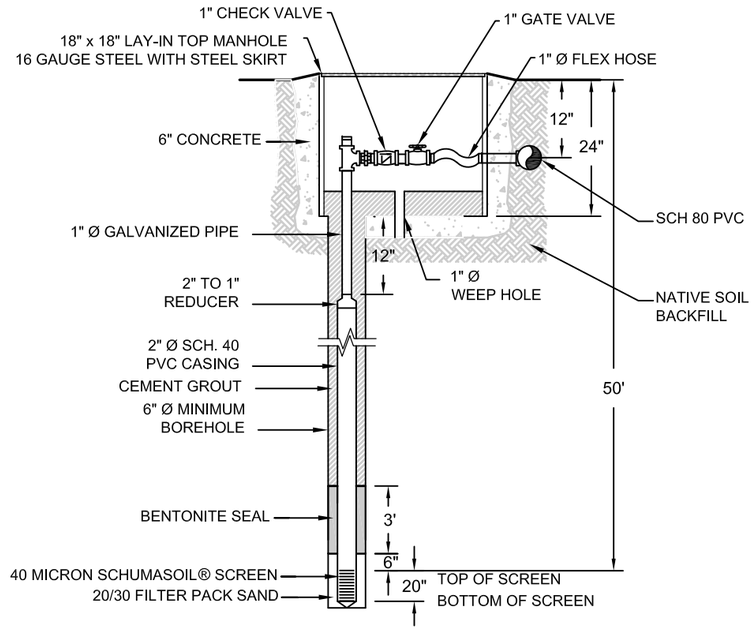
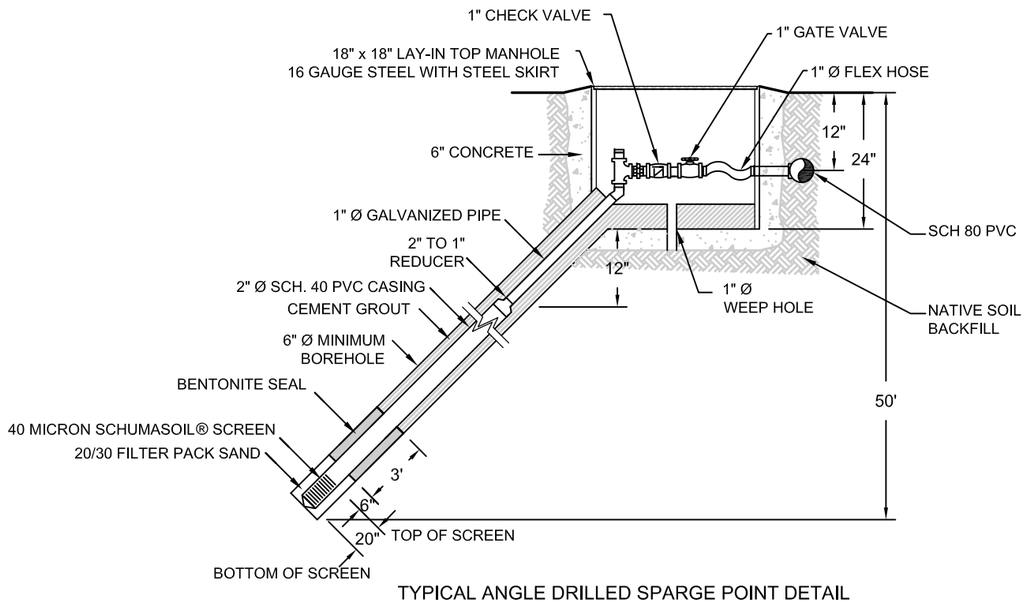
Figure 6
CRHE Area Hot Spot 1 Air Sparge/Soil Vapor Extraction for Source Zone




TYPICAL SPARGE POINT DETAIL

NOT TO SCALE




TYPICAL ANGLE DRILLED SPARGE POINT DETAIL

NOT TO SCALE

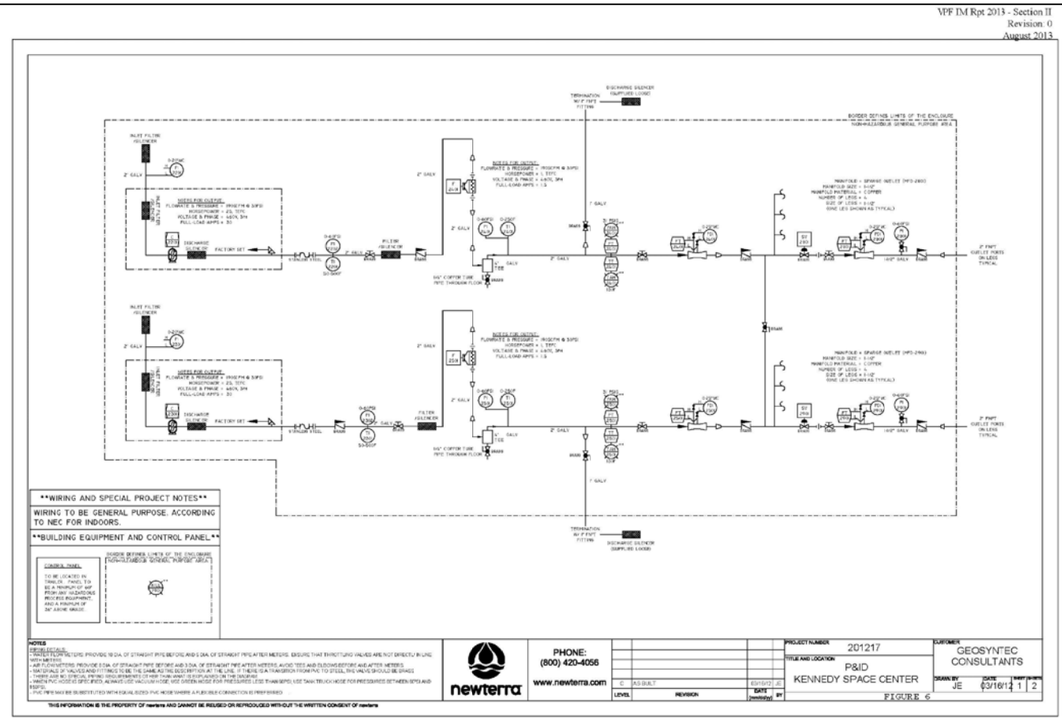



Figure 2-3
Air Sparge System Process and Instrumentation Diagram

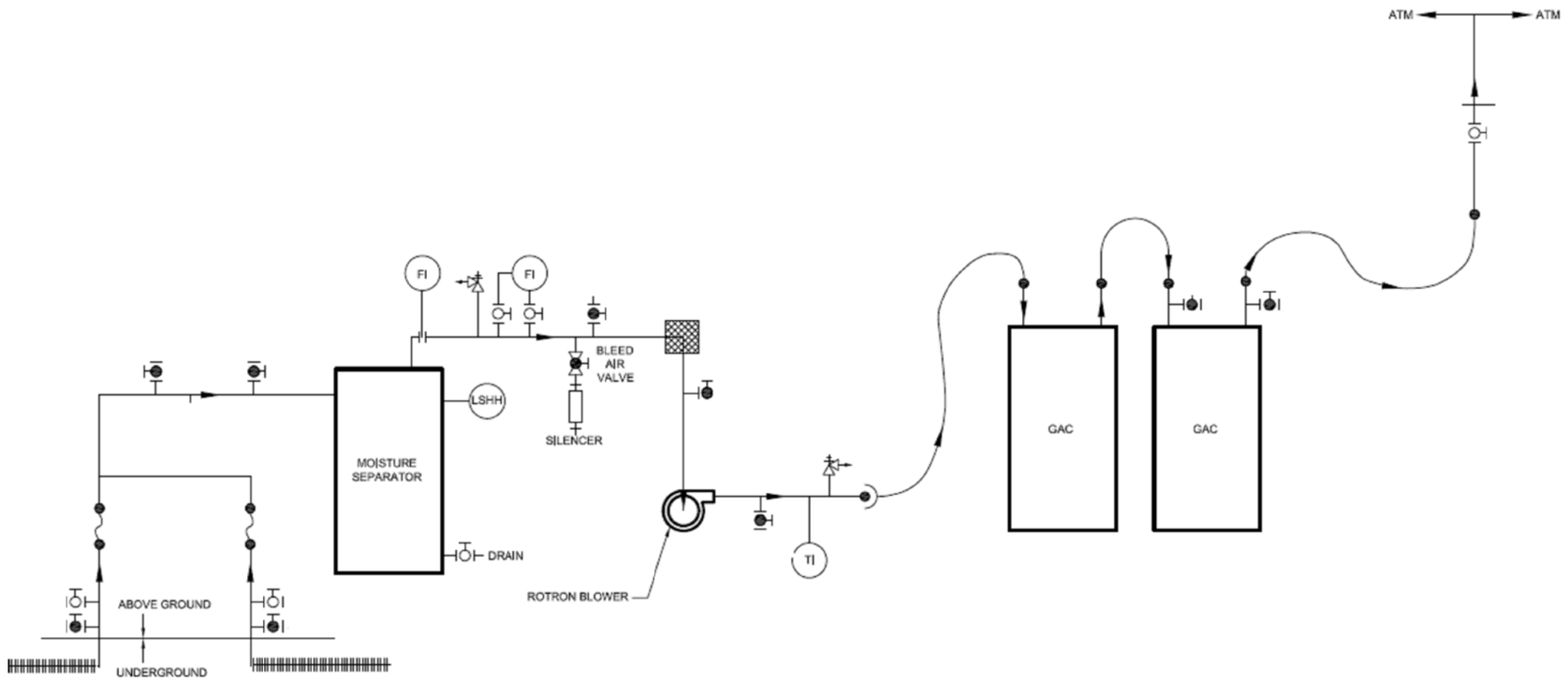
TRAILER MOUNTED AIR SPARGE PROCESS FLOW DIAGRAM (TYP)

NOT TO SCALE

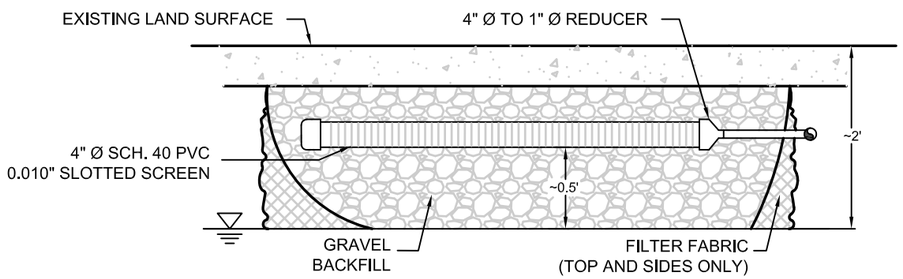
NOTES:

1. PROCESS AND INSTRUMENTATION DIAGRAM FOR NASA MOBILE AIR SPARGE UNIT # 2, SHOWN. ACTUAL UNIT USED MAY DIFFER.
2. TYPICAL AIR SPARGE FLOW RATES ARE UP TO 10 STANDARD CUBIC FEET PER MINUTE.
3. ANGLE DRILLED SPARGE POINTS WILL BE DRILLED AT A MAXIMUM 45 DEGREES.
4. SOURCE ZONE ALTERNATIVE DOES NOT INCLUDE ANGLE DRILLED SPARGE POINT.

Figure 7
Air Sparge Conceptual Process Flow Diagram and Sparge Well Construction Details




SOIL VAPOR EXTRACTION CONCEPTUAL PROCESS FLOW DIAGRAM
NOT TO SCALE




SOIL VAPOR EXTRACTION CHAMBER DETAIL
NOT TO SCALE

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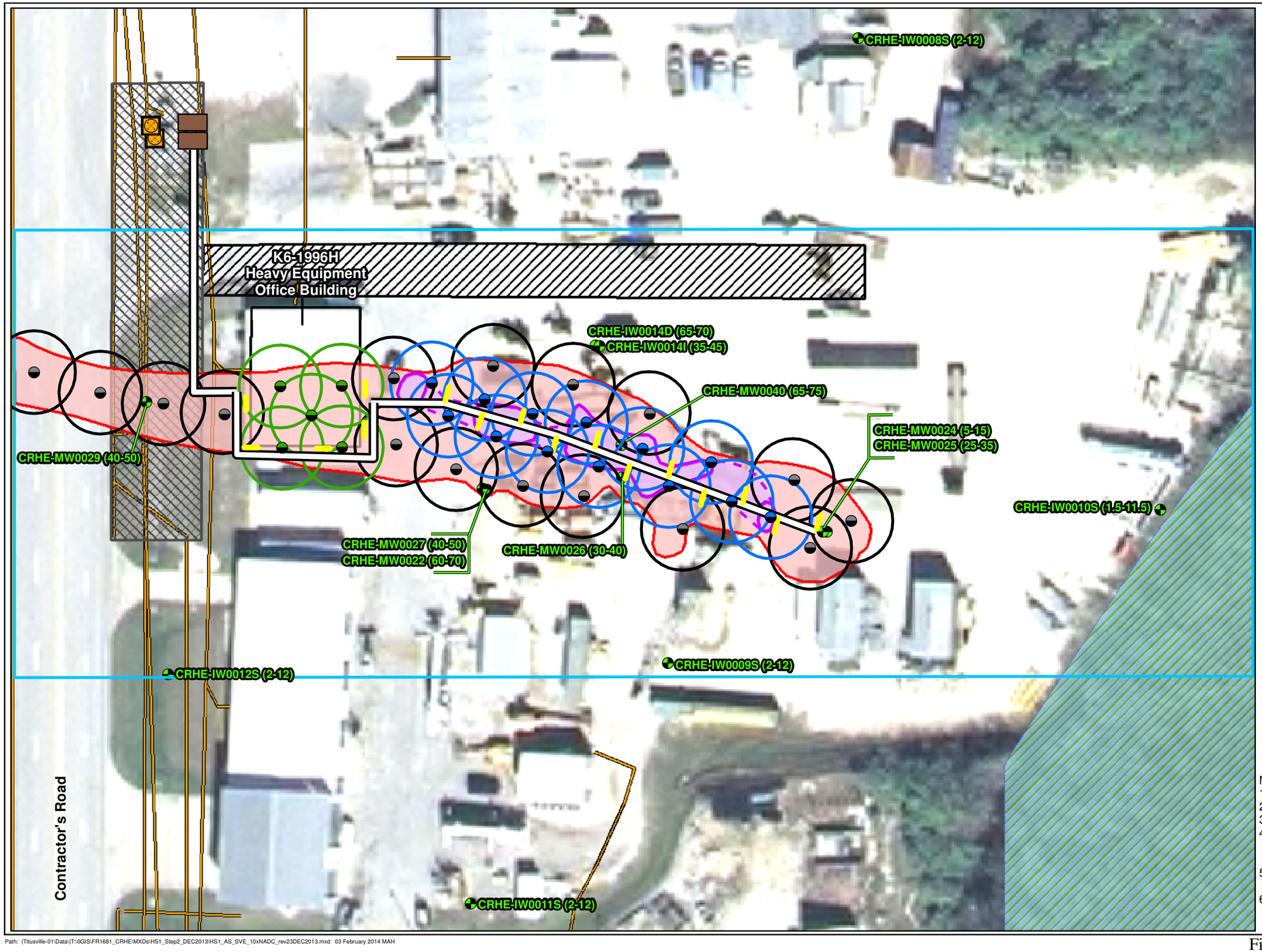
Figure 8
Soil Vapor Extraction Conceptual Process Flow Diagram and Chamber Construction Details




50 25 0 50 Feet

N

**Legend**

- Monitoring Well Location (showing screen interval)
- Angled Air Sparge Well
- Source Zone Air Sparge Well
- 10xNADC Air Sparge Well
- Angled Air Sparge Estimated 20 ft Radius of Influence (5 Locations)
- Source Zone Air Sparge Estimated 20 ft Radius of Influence (13 Locations)
- 10xNADC Air Sparge Estimated 20 ft Radius of Influence (16 Locations)
- Pad Mounted Transformer
- Conceptual Primary Trench
- Soil Vapor Extraction Chamber
- Utility
- Inferred Source Zone (1% TCE Solubility Plume)
- Source Zone (1% TCE Solubility Plume)
- CVOC 10xNADC Isopleth
- Utility Corridor
- Area of Subsurface Obstructions
- Hot Spot 1 Area
- Wetlands
- Air Sparge and SVE Trailers
- Building Outline

| Hot Spot 1 Plumes | Hot Spot 1 Area (acres) |
|---|---|
| 10xNADC Zone (CVOC Concentrations Greater than 10xNADC) | 0.44 |
| Source Zone including Inferred 1% TCE Solubility (TCE Concentrations Greater than 11,000 µg/L) | 0.07 |

Notes:
1. µg/L indicates micrograms per liter.
2. TCE indicates trichloroethene.
3. GCTL indicates Groundwater Cleanup Target Level.
4. Chlorinated Volatile Organic Compound (CVOC) consist of TCE, cis-1,2-dichloroethene, and vinyl chloride.
5. NADC indicates Natural Attenuation Default Concentration.
6. The area of subsurface obstructions indicates the area we were unable to drill due to abnormally thick road base present to accommodate heavy equipment.

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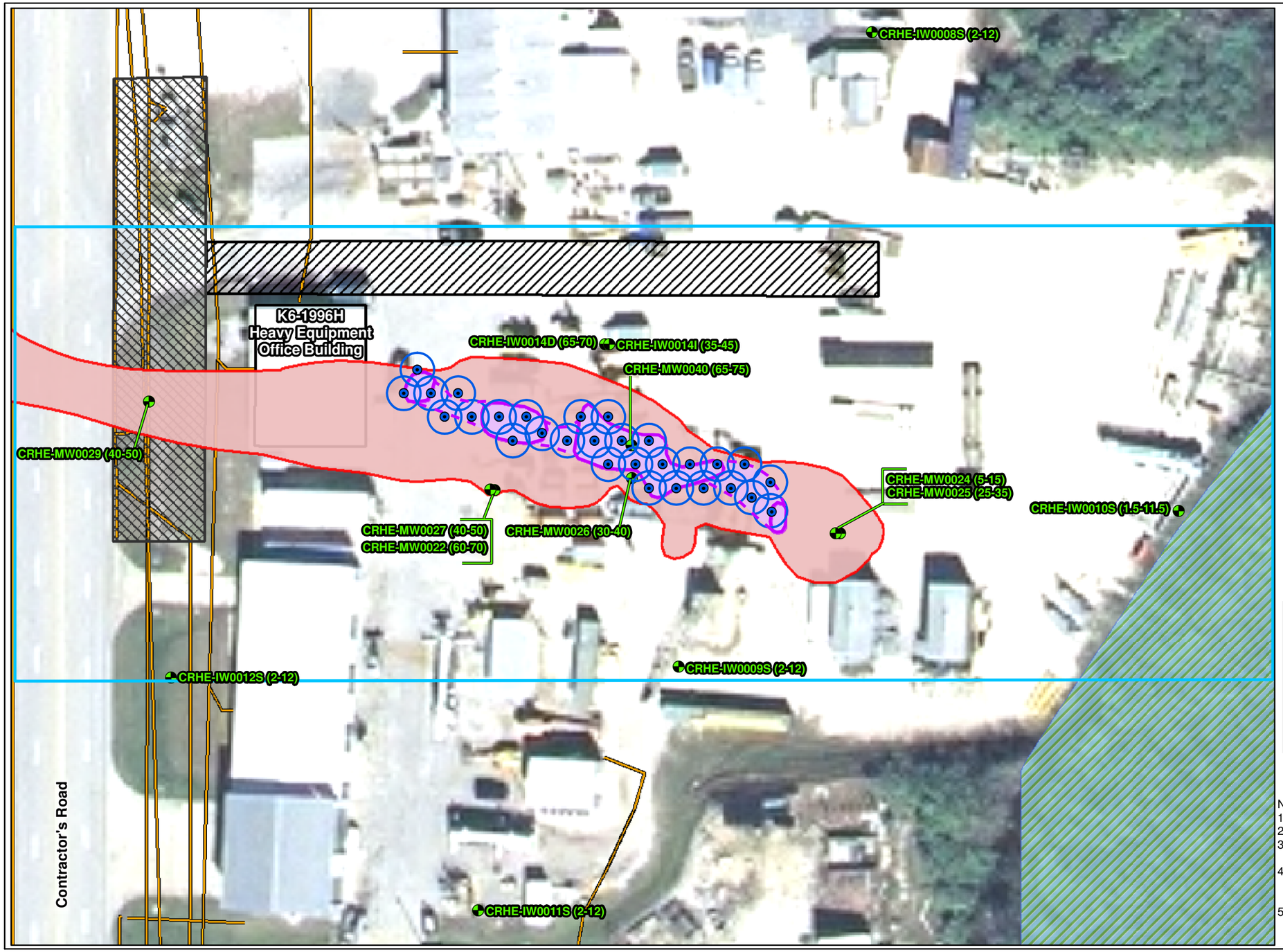
Figure 9
CRHE Area Hot Spot 1 Air Sparge/Soil Vapor Extraction for 10xNADC Plume




N

50 25 0 50

Feet

## Legend

- Monitoring Well Location (showing screen interval)
- Source Zone Injection Point
- Source Zone Injection Estimated 8 ft Radius of Influence (29 Locations)
- Utility
- Inferred Source Zone (1% TCE Solubility Plume)
- Source Zone (1% TCE Solubility Plume)
- CVOC 10xNADC Isopleth
- Utility Corridor
- Area of Subsurface Obstructions
- Hot Spot 1 Area
- Wetlands
- Building Outline

| Hot Spot 1 Plumes | Hot Spot 1 Area (acres) |
|---|---|
| 10xNADC Zone (CVOC Concentrations Greater than 10xNADC) | 0.44 |
| Source Zone including Inferred 1% TCE Solubility (TCE Concentrations Greater than 11,000 µg/L) | 0.07 |

Notes:
1. µg/L indicates micrograms per liter.
2. TCE indicates trichloroethene.
3. NADC indicates Natural Attenuation Default Concentration.
4. Chlorinated Volatile Organic Compound (CVOC) consist of TCE, cis-1,2-dichloroethene, and vinyl chloride.
5. The area of subsurface obstructions indicates the area we were unable to drill due to abnormally thick road base present to accommodate heavy equipment.

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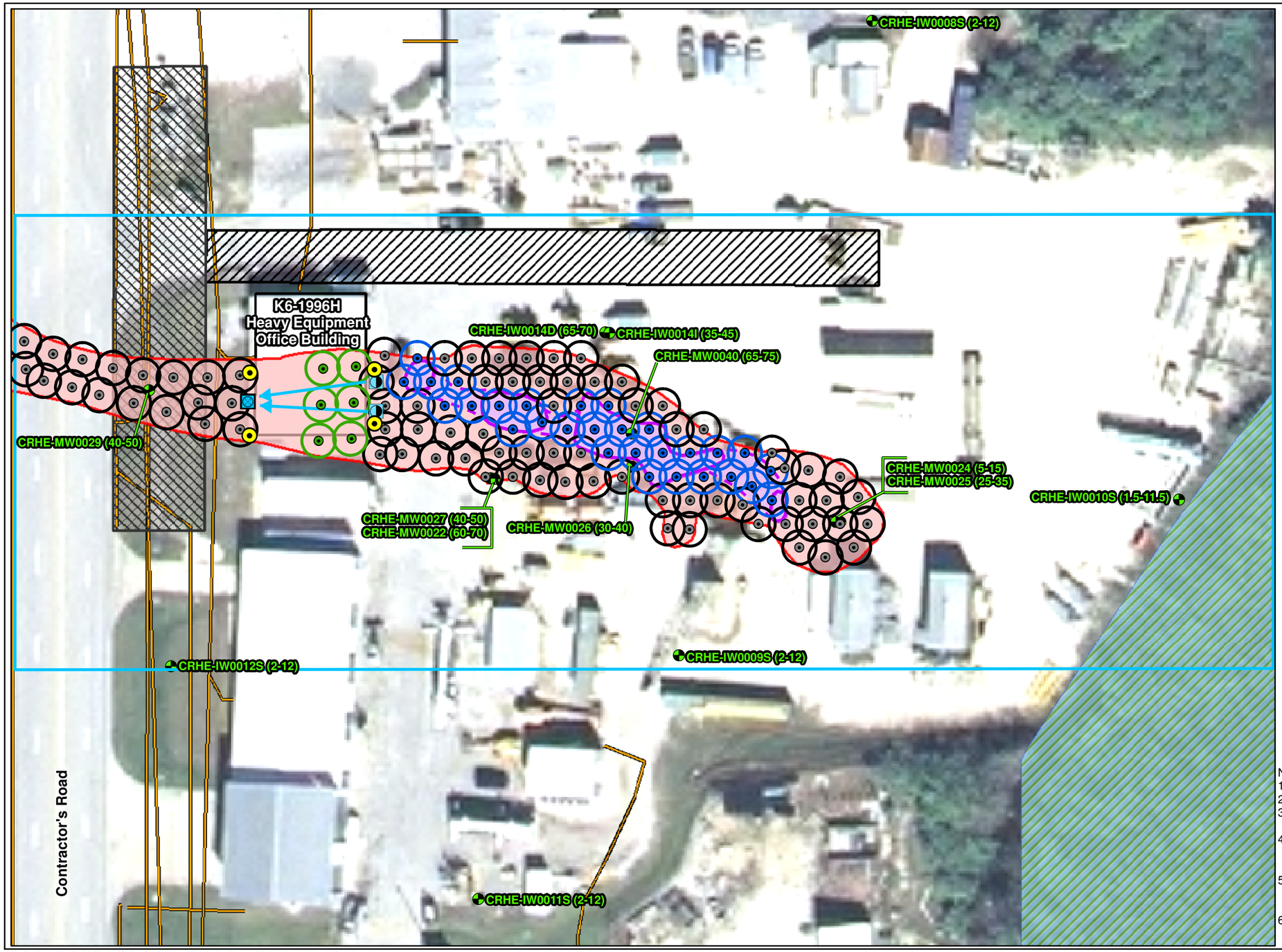
Figure 10
CRHE Area Hot Spot 1 Bioremediation of the Source Zone




N

50 25 0 50 Feet

## Legend

- Monitoring Well Location (showing screen interval)
- Groundwater Injection Well
- Groundwater Extraction Well
- Vapor Extraction Point
- Angled Injection Point
- Source Zone Injection Point
- 10xNADC Injection Point
- Angled Injection Estimated 8 ft Radius of Influence (6 Locations)
- Source Zone Injection Estimated 8 ft Radius of Influence (29 Locations)
- 10xNADC Injection Estimated 8 ft Radius of Influence (78 Locations)
- Estimated Extracted Groundwater Flow
- Utility
- Inferred Source Zone (1% TCE Solubility Plume)
- Source Zone (1% TCE Solubility Plume)
- CVOC 10xNADC Isopleth
- Utility Corridor
- Area of Subsurface Obstructions
- Hot Spot 1 Area
- Wetlands
- Building Outline

| Hot Spot 1 Plumes | Hot Spot 1 Area (acres) |
|---|---|
| 10xNADC Zone (CVOC Concentrations Greater than 10xNADC) | 0.44 |
| Source Zone including Inferred 1% TCE Solubility (TCE Concentrations Greater than 11,000 µg/L) | 0.07 |

Notes:
1. µg/L indicates micrograms per liter.
2. TCE indicates trichloroethene.
3. NADC indicates Natural Attenuation Default Concentration.
4. Chlorinated Volatile Organic Compound (CVOC) consist of TCE, cis-1,2-dichloroethene, and vinyl chloride.
5. The area of subsurface obstructions indicates the area we were unable to drill due to abnormally thick road base present to accommodate heavy equipment.
6. Vapor extraction points will be installed for vapor mitigation.

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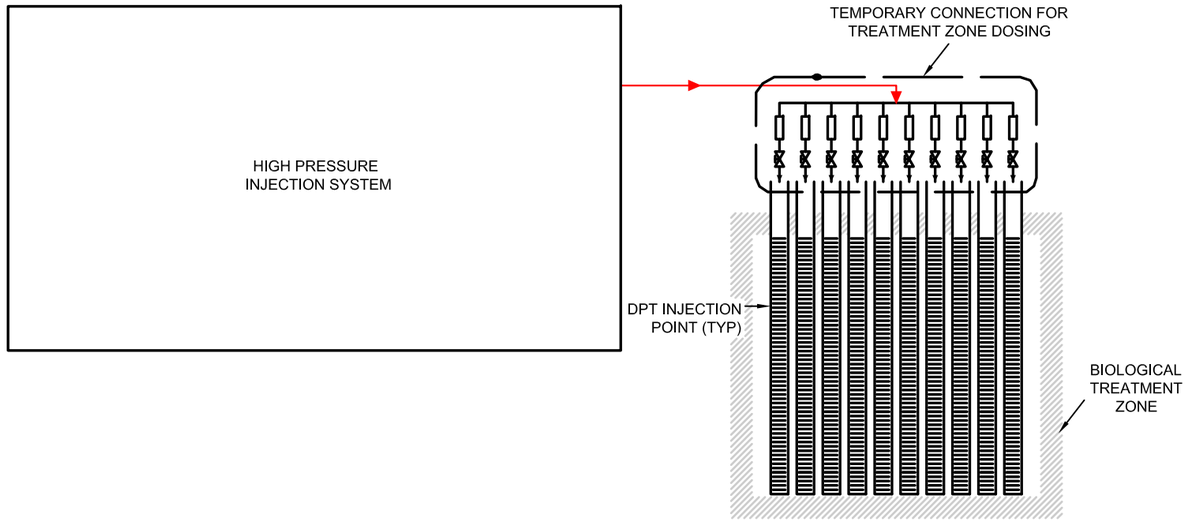
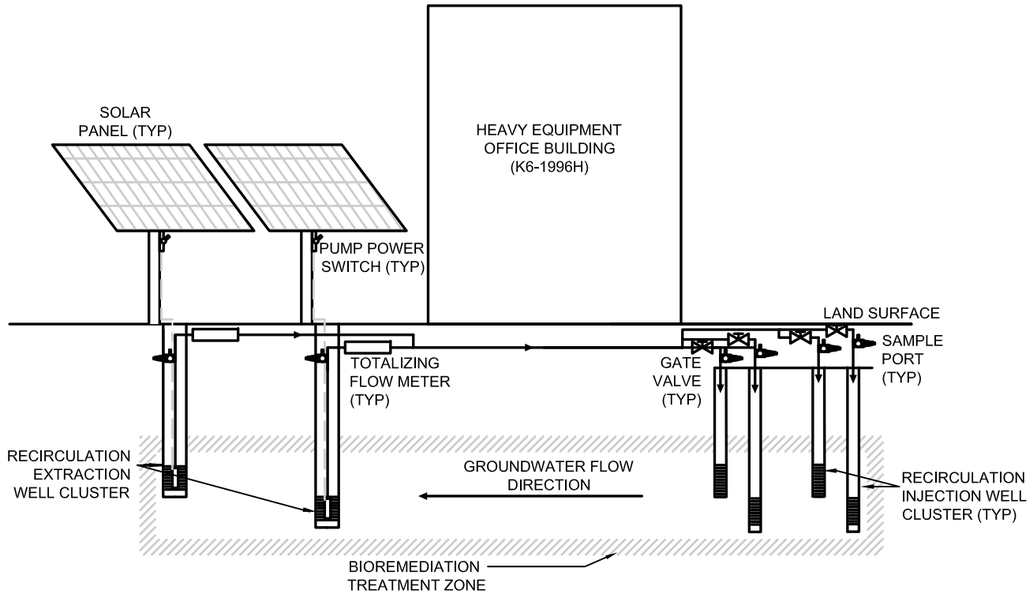
Figure 11
CRHE Area Hot Spot 1 Bioremediation of the 10xNADC Plume



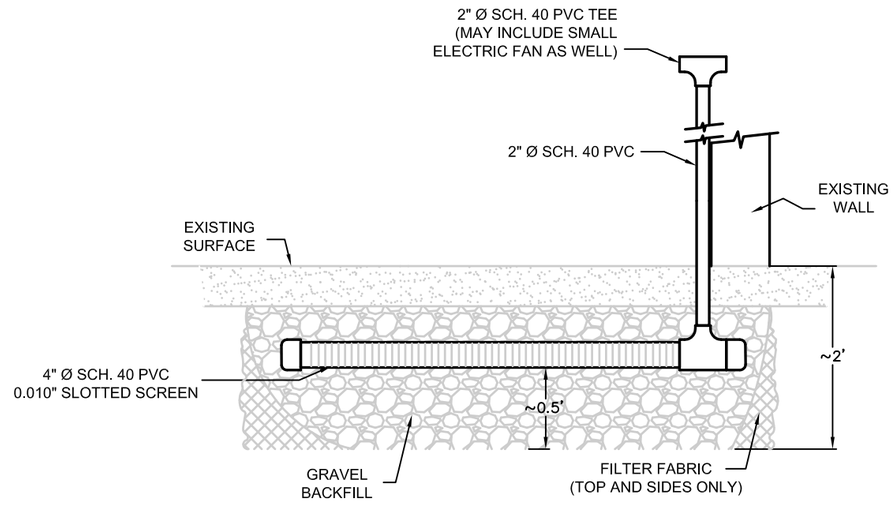

BIOREMEDIATION CONCEPTUAL PROCESS FLOW DIAGRAM

NOT TO SCALE




RECIRCULATION CONCEPTUAL PROCESS FLOW DIAGRAM

NOT TO SCALE




PASSIVE VENT CONSTRUCTION DETAILS

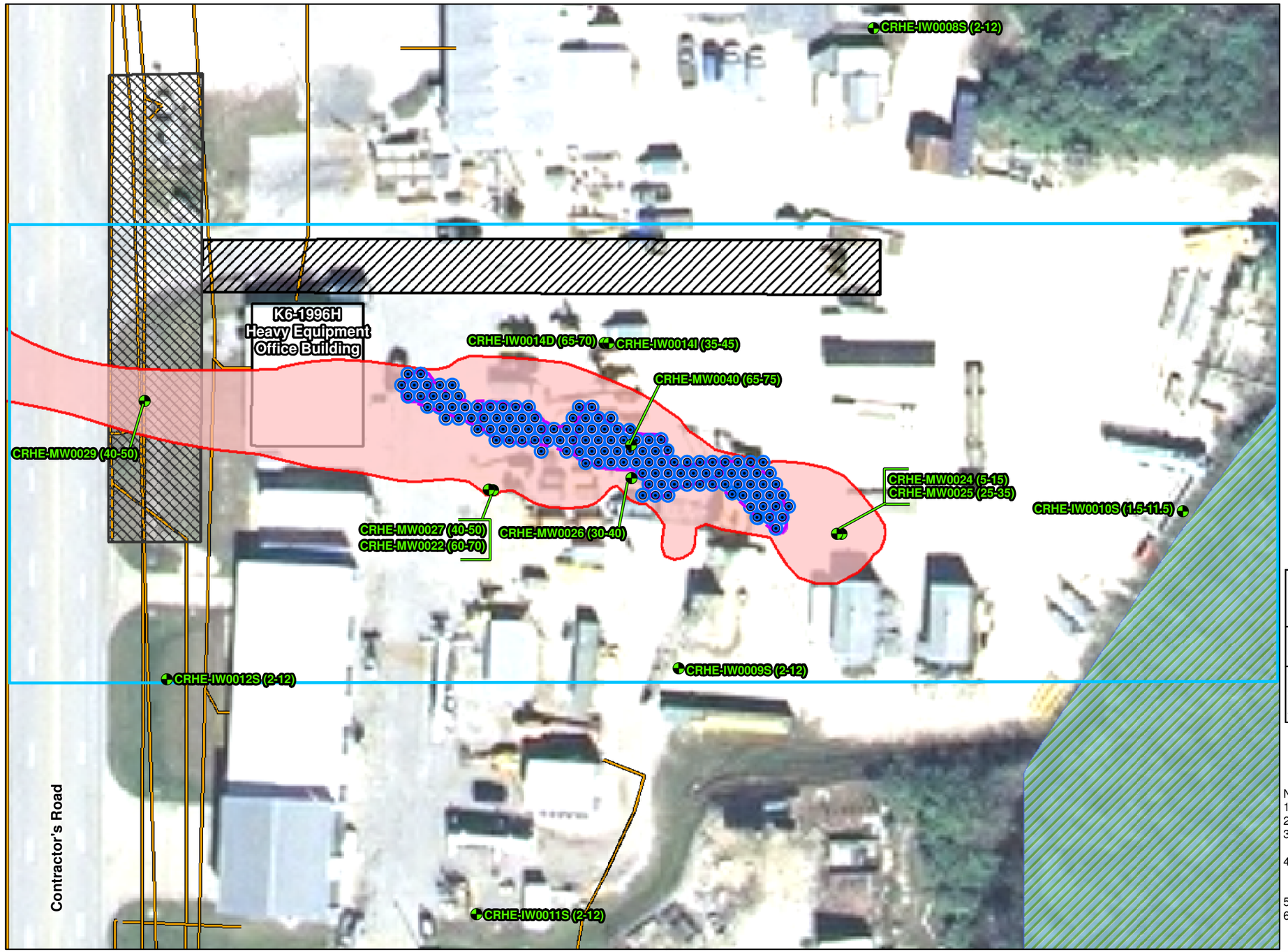
NOT TO SCALE

NOTE:

1. RECIRCULATION SYSTEM AND PASSIVE VENTS UTILIZED IN BIOREMEDIATION OF 10XNADC PLUME ONLY.

P:\CAD\FR16811\STEP 2 EE\PPD BIO HEADER VENT RECIRC.DWG (6 January 2014) ebawson

Figure 12
Bioremediation and Recirculation Conceptual Process Flow Diagrams and Passive Vent Construction Details




N

50 25 0 50

Feet

## Legend

- Monitoring Well Location (showing screen interval)
- Source Zone EZVI Injection Point
- Source Zone Injection Estimated 3 ft Radius of Influence (126 Locations)
- Utility
- Inferred Source Zone (1% TCE Solubility Plume)
- Source Zone (1% TCE Solubility Plume)
- CVOC 10xNADC Isopleth
- Utility Corridor
- Area of Subsurface Obstructions
- Hot Spot 1 Area
- Wetlands
- Building Outline

| Hot Spot 1 Plumes | Hot Spot 1 Area (acres) |
|---|---|
| 10xNADC Zone (CVOC Concentrations Greater than 10xNADC) | 0.44 |
| Source Zone including Inferred 1% TCE Solubility (TCE Concentrations Greater than 11,000 µg/L) | 0.07 |

Notes:
1. µg/L indicates micrograms per liter.
2. TCE indicates trichloroethene.
3. NADC indicates Natural Attenuation Default Concentration.
4. Chlorinated Volatile Organic Compound (CVOC) consist of TCE, cis-1,2-dichloroethene, and vinyl chloride.
5. EZVI indicates Emulsified Zero Valent Iron.
6. The area of subsurface obstructions indicates the area we were unable to drill due to abnormally thick road base present to accommodate heavy equipment.

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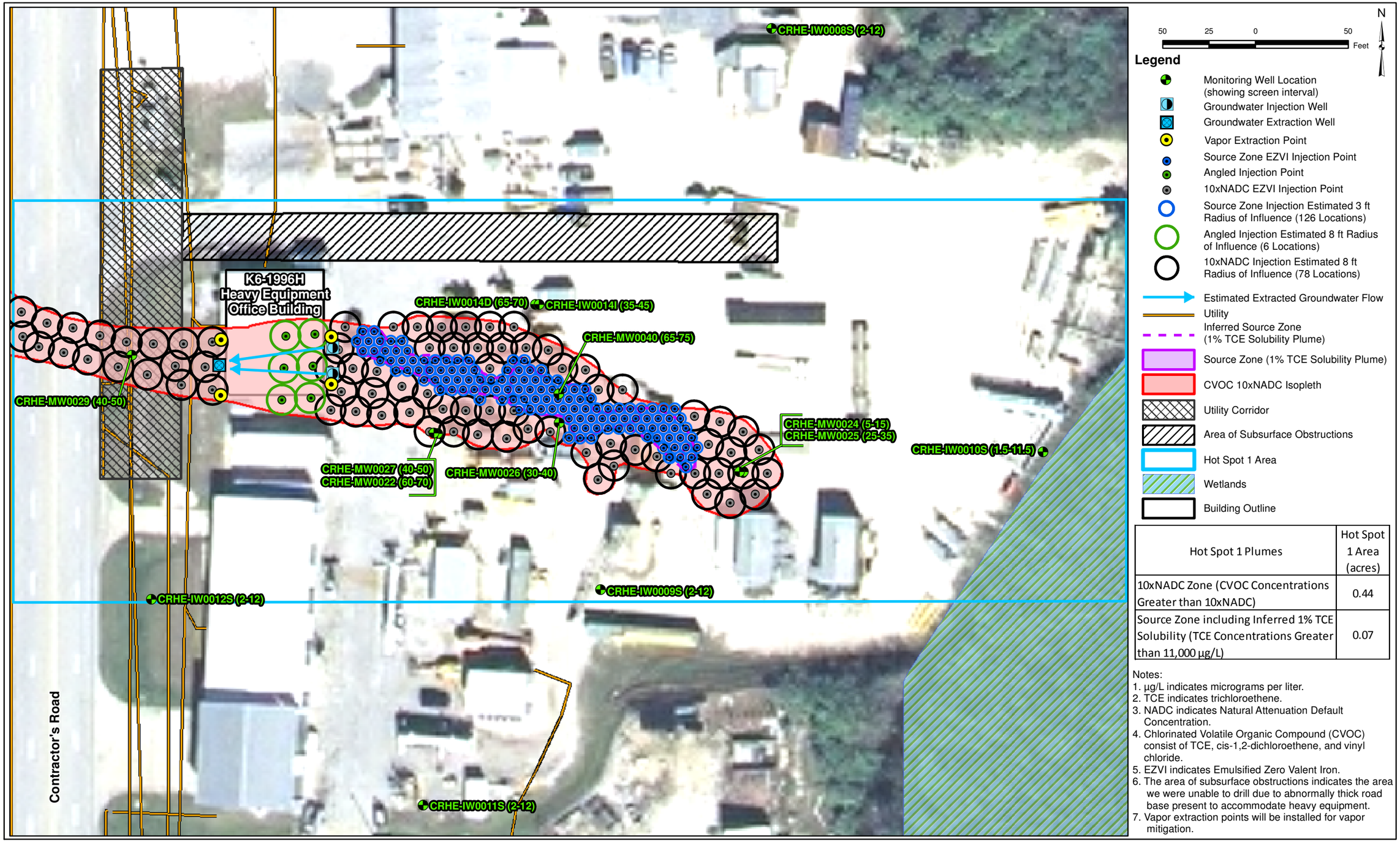
Figure 13
CRHE Area Hot Spot 1 EZVI of Source Zone




| Hot Spot 1 Plumes | Hot Spot 1 Area (acres) |
|---|---|
| 10xNADC Zone (CVOC Concentrations Greater than 10xNADC) | 0.44 |
| Source Zone including Inferred 1% TCE Solubility (TCE Concentrations Greater than 11,000 µg/L) | 0.07 |

Notes:
1. µg/L indicates micrograms per liter.
2. TCE indicates trichloroethene.
3. NADC indicates Natural Attenuation Default Concentration.
4. Chlorinated Volatile Organic Compound (CVOC) consist of TCE, cis-1,2-dichloroethene, and vinyl chloride.
5. EZVI indicates Emulsified Zero Valent Iron.
6. The area of subsurface obstructions indicates the area we were unable to drill due to abnormally thick road base present to accommodate heavy equipment.
7. Vapor extraction points will be installed for vapor mitigation.

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Figure 14
CRHE Area Hot Spot 1 Bioremediation of 10xNADC Plume and EZVI of Source Zone

Geosyntec consultants

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Titusville, Florida 32780
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www.geosyntec.com

# MEMORANDUM

| | |
|---|---|
| Date: | 6 February 2014 |
| To: | Anne Chrest |
| Copies to: | NASA Remediation Team |
| From: | Tom Peel, Ph.D., Rebecca Daprato, Ph.D., P.E., and Jill Johnson, P.G. |
| Subject: | Contractor's Road Heavy Equipment Area Hot Spot 1 Step 2 Engineering Evaluation – Response to Comments |

---

Comments on the Step 2 Engineering Evaluation were received and are addressed below. The comment is listed first and Geosyntec's response is listed in italics below the comment.

**Jacobs Comments:**

The ADP provided a good synopsis of known site conditions and is well-illustrated. The conceptualization of a continuous source zone is a very good approach. We offer the following comments for your consideration:

**Step 2 ADP**

1. Slide 24 (new slide 27) – For the CAO, please clarify what is meant by "concentrations which will support Long Term Monitoring." Since the CAO applies to a hot spot and source zone, it seems an HCP action would be a potential follow-on step as overall site cleanup progresses.

*Response: With the existing CAO, NASA, the KSC Remediation Team, and the A&E have the flexibility to evaluate performance and base a recommendation for follow-up action (if necessary) on the performance. If the CAO is to progress the site to an HCP action, it does not provide the same level of flexibility and decision making based on implementation results.*

2. Alternative 1A, SZ Air Sparge and SVE: General – The site conceptual model includes probable DNAPL in the SZ. There is little literature regarding reduction of DNAPL by air sparging, so citations of applicable studies would be helpful in evaluating the estimate for the time to achieve the CAO and in evaluating the likelihood of rebound. We recognize that

good information about air sparging performance in DNAPL source zones will be generated by the CCB Hot Spots 1 and 2 IM in the near future.

*Response:* *Based on the size of the source zone (0.04 acres – the non-inferred area), the likelihood of "pools" of DNAPL mass is relatively small. It is anticipated that the DNAPL mass present is likely smaller ganglia, which are easier to treat via AS. It has been documented that AS is a viable technology for sites that have low levels of DNAPL and LNAPL (not recoverable) as noted in the references below.*

- *Air Sparging Guidance Document (TR-2193-ENV) Naval Facilities Engineering Service Center, August 2001;*
- *Dense Nonaqueous Phase Liquids (DNAPL) Treatment Technologies (http://cluin.org/contaminantfocus/default.focus/sec/Dense_Nonaqueous_Phase_Liquids_%28DNAPLs%29/cat/Treatment_Technologies/) – developed by the EPA Ground Water Task Force.*
- *While not a specific literature reference, Geosyntec designed, installed, and operated an AS/SVE system at Lipham Cleaners in Longwood, Florida, which had PCE groundwater concentrations exceeding 10% of solubility (0.32 acres) and plume depth similar to CRHE (depth of sparge wells ~36 ft BLS). The AS operations at the site reduced groundwater concentrations to less than NADCs in 2.5 years.*

3. Alternative 1A, SZ Air Sparge and SVE: General – Where there is DNAPL, the free phase product (TCE in this case) typically occupies a significant portion of available pore space. Air will seek the path of least resistance, so it seems likely that air-to-DNAPL contact will be low. What is the expected mechanism for reduction of DNAPL mass by air sparging? Please include your assumptions about degradation rate and effectiveness. It is important to understand these in order to evaluate and confirm estimates of time to achieve NADCs and cost.

*Response:* *DNAPL mass reduction via AS can occur via two mechanisms: (i) the volatilization of the DNAPL via direct contact with the air; and (ii) the dissolution of DNAPL into the groundwater as the dissolved concentrations are removed via volatilization. The rate for direct volatilization of the DNAPL would be comparable to rates observed at other sites where AS has been implemented. The rate for dissolution of DNAPL into the groundwater would be slower. The time to achieve the CAO was estimated to be the time to reduce CVOCs to NADCs and was based on air sparging results at other sites (one to two years) with time added for the dissolution of the DNAPL into groundwater.*

*It should be noted that the conceptual layout also included a very robust air sparge well network in the area of potential DNAPL to create an aggressive environment (20 foot spacing of AS wells). Operation of the system in this environment would include an aggressive dynamic approach to maximize air-to-DNAPL contact.*

4. Alternative 1B, 10X NADC Plume Air Sparge and SVE: Slide 35 – The conceptual plan calls for angular drilling to deploy AS wells under the building, with SVE wells positioned along the perimeter. Please confirm the influence of the perimeter SVE network is adequate to capture vapors from beneath the building.

*Response: The estimated ROI of the SVE system is between 20 ft and 30 ft (as described in the Description of Alternatives). The layout of the SVE wells with the estimated ROI should be adequate to cover the area underneath the building (approximate size of 70 by 50 ft) – see updated figure in the ADP with estimated ROI presented on slide 50. The layout is more than adequate for a conceptual design and associated costing and the exact details of the SVE layout will be evaluated during the design phase, if AS/SVE is selected.*

5. Alternative 1B, 10X NADC Plume Air Sparge and SVE: Slide 40 (new slide 54) – The plastic cap described in the Alternatives Description is not included in the SVE chamber detail. We suggest it be added.

*Response: A note was added to the ADP to provide information about the plastic cap on the SVE chamber detail. The specific engineering details of the plastic cap (which may not be warranted at all locations) is a design detail which would be included in the Interim Measure design, if AS/SVE is selected.*

6. Alternative 2A, SZ Bioremediation: General – Emulsified oil is well-documented as a successful technology for enhanced reductive dechlorination of hot spots and areas affected by flux from DNAPL, particularly in aerobic environments, but literature regarding reduction of DNAPL mass is sparse. Citations of applicable studies would be helpful. We note the reference to the MLP/VAB Area and the successful treatment there, but also note that the highest TCE detection at that site was an order of magnitude below the highest detections at CRHE.

*Response: Bioremediation has been utilized at a number of DNAPL sites, including successful applications at three NASA sites where DNAPL has been present: LC34 (Demonstration of Biodegradation of DNAPL - 2004), LC34 Partitioning Electron Donor*

*IM Hot Spot 1, and MLP (biostimulation using ethyl lactate). It should also be noted that at facilities where EZVI has been applied (LC34, Hangar K and Paris Island) collected data and documents indicate that the mass reduction is due to both abiotic and biotic reductive dechlorination.*

*With regards to TCE concentrations at MLP, TCE was measured at a maximum concentration of 95,000 µg/L from DPT location MLP-PT6 in 2002 and a maximum soil concentration of 102 mg/kg of TCE was detected (MLP-RTS1). The referenced concentrations are indicators of the presence of DNAPL. Concentrations of all CVOCs were reduced to below NADCs (TCE and cDCE to below GCTL) and VC is the only COC that remains above the GCTL.*

*The LC34 PED IM was implemented in an area with a maximum TCE concentration of 141,000 µg/L, an average TCE concentration of 22,000 µg/L, and a maximum soil concentration of 56.2 mg/kg TCE.*

*The LC34 (Demonstration of Biodegradation of DNAPL) initial TCE concentration of 132,000 µg/L to 350,000 µg/L and complete dechlorination to ethene was observed, with a TCE mass removal of 98.5%. Complete dechlorination occurred with up to 92 mg/L ethene production observed.*

*Based on the above data, the use of MLP dechlorination rates is adequate to estimate a time to reach CAO for CRHE.*

*Additionally, there is an Interstate Technology and Regulatory Council guidance document that consider the bioremediation of DNAPL source zones viable and provide case studies: In Situ Bioremediation of Chlorinated Ethene: DNAPL Source Zones (BIODNAPL) – June 2008.*

7. Alternative 2A, SZ Bioremediation: General/Alternatives Description – Since contact with DNAPL is critical, please consider adding a discussion of the delivery mechanism for the emulsified oil. While the chase water will be beneficial in overall dispersion, it may be unlikely to enhance contact within DNAPL zones.

*Response: Direct contact of the oil with the DNAPL is not required for bioremediation to be successful. Mass removal of DNAPL during bioremediation is due to the microorganisms dechlorinating the CVOC mass (reducing concentrations) in the dissolved phase, which creates a concentration gradient and then dissolution of the DNAPL occurs. The emulsified*

*oil will be delivered via DPT injection (6 to 8 gpm and 30 to 45 psi) and the chase water will be used to create the desired radius of influence from each injection point.*

8. Alternative 2A, SZ Bioremediation: Slide 43 (new slide 59) – Was a case study or information from one of your other sites used to develop the conceptual design of a 0.5% initial/0.25% follow-up pore volume emulsified oil application?

*Response: The emulsified oil dosing that we have used successfully during bioremediation implementation is between the range of 0.1% to 1% of the pore space and usually for dissolved phase plumes is around 0.1 to 0.2% of the pore space. The dosing of 0.5% and 0.25% was selected within that range and above the vendor's recommendation to be conservative.*

9. Alternative 2A, SZ Bioremediation: Slide 43 (new slide 59)/Alternatives Description – We assume multiple lifts will be used to deliver emulsified oil through the treatment zone. What is the anticipated vertical area of influence for each lift?

*Response: Multiple lifts would occur to deliver the emulsified oil, continuously over the entire treatment interval. The anticipated vertical lift would be every 2 feet and emulsified oil and chase water would be injected to reach the desired ROI. The injection details will be decided during the design, if bioremediation is selected.*

10. Alternative 2A, SZ Bioremediation: Slide 46 (new slide 66) – Since the estimate of time to achieve CAO was based on MLP dechlorination rates, was a factor applied to account for the variance in TCE concentrations between the two sites?

*Response: A factor was not applied to account for the variance in concentrations between the two sites, since the TCE concentrations are similar – see response to Jacob's comment #6. TCE is generally not the rate limiting CVOC with regards to dechlorination (longest time to NADC); it is usually vinyl chloride. The time to reach CAO was based on the dechlorination rates for vinyl chloride from MLP. Using MLP rates, time to reach NADC for TCE was approximately 2 years, for cDCE was approximately 3.4 years and for vinyl chloride approximately 4.4 years; therefore, a range of 3 to 5 years was selected for this evaluation.*

11. Alternative 3A, SZ EZVI: Slide 54 (new slide 78) /Alternatives Description – What injection technique did Vironex use for development of the conceptual design? Will that technique be able to access the DNAPL pore space? Note that at Hangar K, a 6-ft. ROI was

achieved using the Badger© technology. (A 6-ft ROI was also assumed in the recent injections at the GSA Reclamation Yard, but we won't have confirmation of the ROI until the first performance monitoring event.) We are concerned both that the 3-ft. ROI assumed may be overly conservative, but – at the same time – injection cost may be understated since the injection technique is not described.

*Response: Vironex uses a high-performance double piston pump to inject EZVI, top down, at approximately 50 gpm to achieve lateral distribution of EZVI. The high frequency piston action of the pump helps to distribute the EZVI throughout the pore space to achieve contact with the DNAPL. Each injection interval is separated by 2 ft to help minimize creation of vertical flow paths.*

*The estimated 3 ft ROI was conservative, so we have also provided a less conservative costing based on an estimated 6-ft ROI. It should be noted that our definition of ROI involves achievement of complete distribution of injectate throughout the desired target interval (not an indicator of a seam of EZVI at 6 ft); accordingly, we used a more conservative 3 ft ROI since the ZVI component is dependent on contact to achieve the desired abiotic reductions intended to target DNAPL. This non-conservative costing resulted in a capital cost range of $673,000 to $734,000 and the second injection cost ranged from $306,000 to $336,000 (total cost reduction of $90,000). For the source zone, this would reduce the cost range from $1,240,000 to $1,340,000 to $1,149,000 to $1,249,000. For the 10X NADC area, this would reduce the cost range from $1,718,000 to $1,883,000 to $1,628,000 to $1,793,000. The cost driver for EZVI is the purchase of the material (~$700,000 for two injection events); accordingly, the less conservative 6 ft ROI does not have a significant bearing on the range of costs.*

12. Alternative 3A, SZ EZVI: Slide 57 (new slide 83) – Regarding time to achieve CAO based on results from Hangar K: At Hangar K, TCE concentrations were reduced by 88% six months after the first injection. After a pre-programmed second injection and a total elapsed time of 18 months from the first injection, TCE concentrations were reduced by 99%. It does not appear that NADC for all chlorinated VOCs will be reached within 5 years.

*Response: The concentrations at Hangar K were higher and the impacted area was larger than what is observed at CRHE; two 200 ppm TCE plumes were delineated that were approximately 3,000 and 6,200 square feet (with impacts from ~ 30 to 52 ft BLS).*

*To reduce the average CVOC concentrations to their NADCs in the SZ, a reduction in mass of 98.4% (VC), 98.5% (cDCE), and 99.6% (TCE) is required. If the removal is based on the maximum concentrations, a concentration reduction of 99.8% (TCE), 99.4% (cDCE) and 99.5% (VC) is required. Based on the site conditions, we believe a 5 year timeframe is adequate for these reductions.*

13. Alternative 3B, 10X NADC Plume EZVI and Bioremediation with Recirculation: General – EZVI was engineered specifically as a DNAPL technology. Consider reducing the footprint of the EZVI application in the inferred SZ. When using EZVI in combination with technologies that enhance biological degradation, please consider applying EZVI only in the zones where the TCE concentrations exceed 10% of solubility. At Hangar K, EZVI was applied in zones where TCE concentrations were ≥200 ppm.

*Response: There are only two locations at CRHE with TCE concentrations near 10% TCE solubility (110,000 µg/L): DPT0072 from 36 to 40 ft BLS (160,000 µg/L) and DPT0134 from 36 to 40 ft BLS (100,000 µg/L); therefore, adjusting the treatment area to encompass the 10% solubility would create a small treatment area. The footprint for EZVI injection was agreed upon in the Step 1 to evaluate the implementation in the area where TCE is greater than 1% solubility. A reduction of the vertical treatment interval, currently from 20 to 50 ft BLS, can be evaluated during the design phase, by utilizing the DPT sampling data to reduce the vertical treatment interval.*

14. Alternative 3B, 10X NADC Plume EZVI and Bioremediation with Recirculation: Slide 63 (new slide 90) – Similar to the note regarding Slide 57: At Hangar K, the HCP was treated using emulsified vegetable oil and lactate. Early indications are that the dissolved plume's decay has accelerated through the combination of SZ and HCP treatment, but it does not appear that NADC for all chlorinated VOCs will be reached within 5 years.

*Response: The calculation of time to reach NADC for each CVOC using enhanced bioremediation was based on MLP dechlorination rates and we feel this is an appropriate approximation.*

15. Technology Comparison and Technology Cost Comparisons – For SZ Alternatives 1A (air sparging) and 2A (emulsified oil), we are concerned that the lack of documented performance history for these technologies for DNAPL treatment may result in some understatement of both the estimated time to achieve CAO and the treatment cost. Treatment success at CRHE will largely depend on the amount of DNAPL present and how

efficiently that DNAPL mass is removed or controlled. Inclusion of applicable site or study information would be very helpful.

*Response: See responses to comment #2 and #6 above.*

**TetraTech Comments:**

Tetra Tech generally concurs with the information presented in the Contractor's Road Heavy Equipment (CRHE) Area Step 2 Engineering Evaluation (EE) – Hot Spot 1 advanced data package (ADP), except where noted within the following comments:

**Step 2 ADP**

1. Slide 16/17 – The inferred source zone is not indicated on the cross section, as it is on the plan view drawings. We suggest that the source zone interpretation also be applied to the cross sections within the Step 2 EE.

*Response: The inferred source zone was added to the cross sections in the ADP (Figures 4 and 5).*

2. Slide 18/19 (new slide 20/21) – The mass values deviate significantly from what was presented in the Step 1 EE. We suggest providing information to what influenced the increase in calculated mass from the Step 1 to 2 EE, the Geosyntec presentation response to Tetra Tech's Step 1 EE comment regarding mass does not parallel what is provided in the Step 2 EE.

*Response: The mass estimates from the Step 1 ADP have been added to the ADP. For the source zone, the TCE mass estimate was modified from what was presented in the Step 1 because the area increased (see note 2 of the table – increase from 1,742 sq ft to 3,049 sq ft). The mass of TCE in the source zone from the Step 1 was approximately 26 lbs (using the hand calculated values to be conservative) and the revised mass of TCE presented in the Step 2 is 45 lbs. The cDCE and VC mass estimates were not presented for the source area in the Step 1 ADP.*

*The mass estimate presented for the 10XNADC area is the same as the mass estimate that was presented in the revised Step 1 for cDCE and VC (using the hand calculated values, which are the most conservative). The TCE mass estimate for the 10XNADC area was modified because the area of the source zone increased. In the Step 1, the mass estimates*

*were presented as "rings" and not totals for the areas, so the 10XNADC estimate did not include the source zone TCE mass.*

3. Slide 28 (new slide 33) – Due to the nature of air sparging (AS) near occupied buildings, an ambient and soil vapor extraction (SVE) air sampling program should be integrated into the conceptual design (this comment is relevant for all AS alternatives). Please include this consideration and costs into the Step 2 EE.

*Response: We agree that an ambient air sparging program should be implemented, if AS/SVE is selected and implemented. A detailed description of the sampling plan will be provided in the Step 3 and costs are minimal and are considered to be included in the O&M cost provided.*

4. Slide 30 (new slide 36) – While the horizontal layout for the AS network is very conservative, it does not appear the vertical distribution of AS points is tailored to site conditions. In the source zone area near DPT0200, we suggest installing shallower AS wells or nesting wells to address the source zone at least 20 feet above the proposed screen intervals in order to provide a more focused approach (this comment is relevant for all source zone AS alternatives).

*Response: We feel that the current vertical layout is adequate for a conceptual design and the use of nested wells would be considered as part of the design, if AS/SVE is selected.*

5. Slide 27/32/35 (new slide 31/39/46) – Is there an assumed vacuum to be applied at the horizontal SVE points that was used for SVE sizing? We also suggest including a variable frequency drive on the blower/fan in order to dial in the blower to site conditions and/or perform SVE pilot testing, if alternatives with SVE are selected. Additionally, it is not clear in the details if the chambers shown on Slide 32 contain valve boxes/vaults in order to individually control the chambers. Please clarify.

*Response: It is anticipated that the SVE system will include a blower capable of greater than 360 scfm and operate at approximately 20-inches of water to minimize the extraction of water (likely a 15 Hp Ametek Rotron Regenerative Blower). We agree that a variable frequency drive blower should be considered during the design phase. A typical detail is provided for an SVE chamber; the details about operation of the chambers will be decided during the design, if AS/SVE is selected. Geosyntec has designed SVE chambers with remote valving (typical at drycleaners where the chambers are installed beneath the*

*drycleaner slab) and with valving within vault boxes. The specifics of the valving orientation associated with the SVE chambers is a design detail.*

6. Slide 38 (new slide 51) – Based on the presented ten times Natural Attenuation Default Criteria (10X NADC) plume, it is not clear what the AS wells to the western part of the cross section are treating and this interpretation does not match what is shown in plan view. We suggest revising the cross section to provide a closer correlation to the center line of the source zone/10X NADC plume (global comment).

*Response: The 10XNADC plume on the plan view is drawn by contouring the data on the west side of the building, which the cross section does not include. The 10XNADC contour has been updated on the cross sections in the presentation.*

7. Slide 41 (new slide 56)– A pre-packaged SVE enclosure may be more appropriate and less expensive than a mobile trailer. We suggest evaluating the use of an enclosure instead of a trailer.

*Response: If AS/SVE is selected as the remedial alternative, these suggestions will be taken into consideration with NASA during the design phase.*

8. Slide 45/60/56/61 (new slide 34/74/82/88) – Do the alternatives assume treatment of the entire area that is within the blue rectangle? If this is the case, the volumes used to calculate remedial additives may be substantially overestimated for treatment of the applicable plume interval. Please clarify.

*Response: AS/SVE will treat the entire interval from 20 ft to 50 ft; therefore, to compare the same treatment volume for all three technologies, the treatment interval for both enhanced bioremediation and EZVI was expanded to 20 to 50 ft BLS.*

9. Slide 49 (new slide 72) – The passive vents, as currently placed, do not clearly appear to provide protection of methane accumulation underneath the structure. Furthermore, will the venting cause secondary issues such as odor? We recommend the methane venting approach be revised.

*Response: We feel that the passive venting system is adequate for a Step 2 evaluation. The vents provide a path for any methane produced to be discharged at the roof level to the atmosphere. During the design phase, an evaluation would be performed if active venting is recommended (could add a radon type electric or solar fan, or a wind turbine to the vent*

*stack to make the system active). It is unlikely that the passive venting will cause any secondary issues. The approach proposed has been implemented at a number of bioremediation project sites in Florida without secondary odor issues.*

10. Slide 54/59 (new slide 78/86) – The injection radius of influence (ROI) of 3 feet is very conservative and may bias the costs of emulsified zero-valent iron (EZVI) alternatives. We suggest the spacing be revisited.

*Response: The costing was updated to evaluate a non-conservative 6 ft ROI and is included in the response to Jacobs' comment #11 above.*

11. Slide 71 (new slide 104) – Prior to concurring with the selection of bioremediation, we suggest that the EZVI alternatives be revisited per Comment 10. Although there is limited case study literature available regarding the efficacy of bioremediation of dense non-aqueous-phase liquid (DNAPL), the limitations of bioremediation may be understated in this ADP. Additionally, we suggest screening bioremediation substrates that contain ZVI as a supplement to the bioremediation alternatives.

*Response: The costing was revised using a 6 ft ROI and is included in the response to Jacob's comment #11 above. See comment #6 for discussion of bioremediation in DNAPL source zones. We feel that emulsified oil is the best substrate for implementing bioremediation at this site.*

12. Cost Estimate, Global Comment – The cost estimates do not clearly identify if direct or burdened costs are presented in the Step 2 EE. Please clarify.

*Response: The cost estimates are fully burdened.*

13. Cost Estimate, T-1 – The costs presented for a SVE system are significantly higher than what would be expected, considering the size of the system. Please clarify the $50,000 line item.

*Response: The cost for the SVE system was based off of vendor provided unit pricing (from Product Recovery Management) that includes the equipment trailer, blower, moisture separator with pump-out and controls, liquid-phase carbon, telemetry, delivery and start-up assistance. The estimated cost for the system, since the components have not been specifically selected was between $40,000 and $50,000, so the conservative $50,000 cost was utilized.*

14. Cost Estimate, T-1/T-2 – The electrical line installation line item cost appears low. Please revisit.

*Response: The cost for the electric line installation was scaled from the actual cost for the electric line installation performed in 2012 at VPF. The work at VPF included the installation of 50 feet of electric line and was approximately $5,000. Therefore, we felt that the identified line item cost was a conservative estimate for this Step 2, which assumed the installation of 30 ft of electric line.*

15. Description of Alternatives, Page 5 – The stated 60% oil substrate and 1:20 dilution results in an injection concentration of approximately 3%. Considering groundwater dilution and the suspected presence of DNAPL, the substrate dosage concentrations appear low. Please provide rationale for the bioremediation dosing.

*Response: The 1:20 dilution is within the recommend range of dilution from the vendor, so that the emulsion remains stable. See response to Jacob's comment #8 above for dosing information.*

# APPENDIX E

# STEP 3 FOR HS1
# ENGINEERING EVALUATION ADP
# (electronic copy only)

Geosyntec consultants

# Contractor's Road Heavy Equipment (CRHE) Area (SWMU055)

## Step 3 Engineering Evaluation – Hot Spot 1 IMWP

May 2014

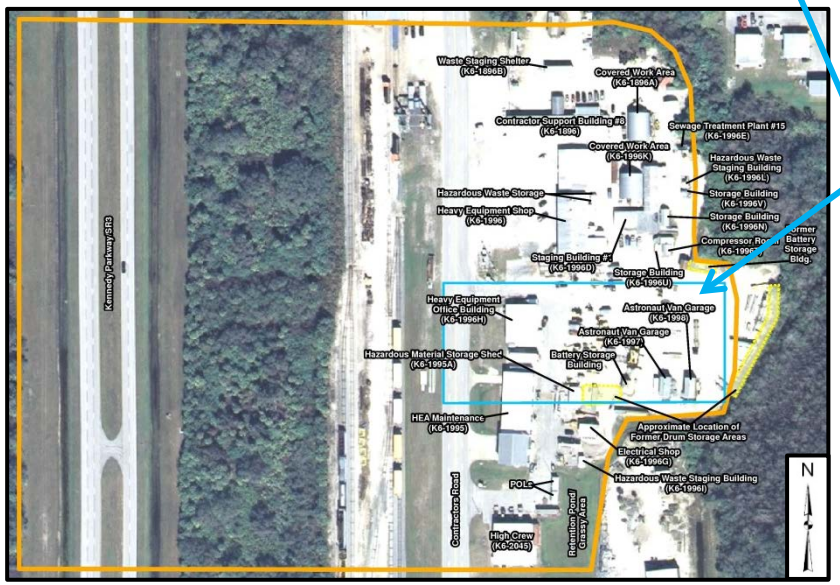
Geosyntec consultants

# Presentation Outline

- Site background
- Corrective Action Objective
- Bioremediation design details
- Performance monitoring
- Test consensus

# Site Background
## Site Overview

- HS1 features:
  - About 3 acres
  - Paved and gravel
  - Underground utility corridor east of Contractor's Road
  - Thick road base in northern part of HS1
  - Overall 10xNADC Plume runs beneath K6-1996H and Contractor's Road
  - Heavy equipment (up to 300,000 lbs) transported and stored in the area



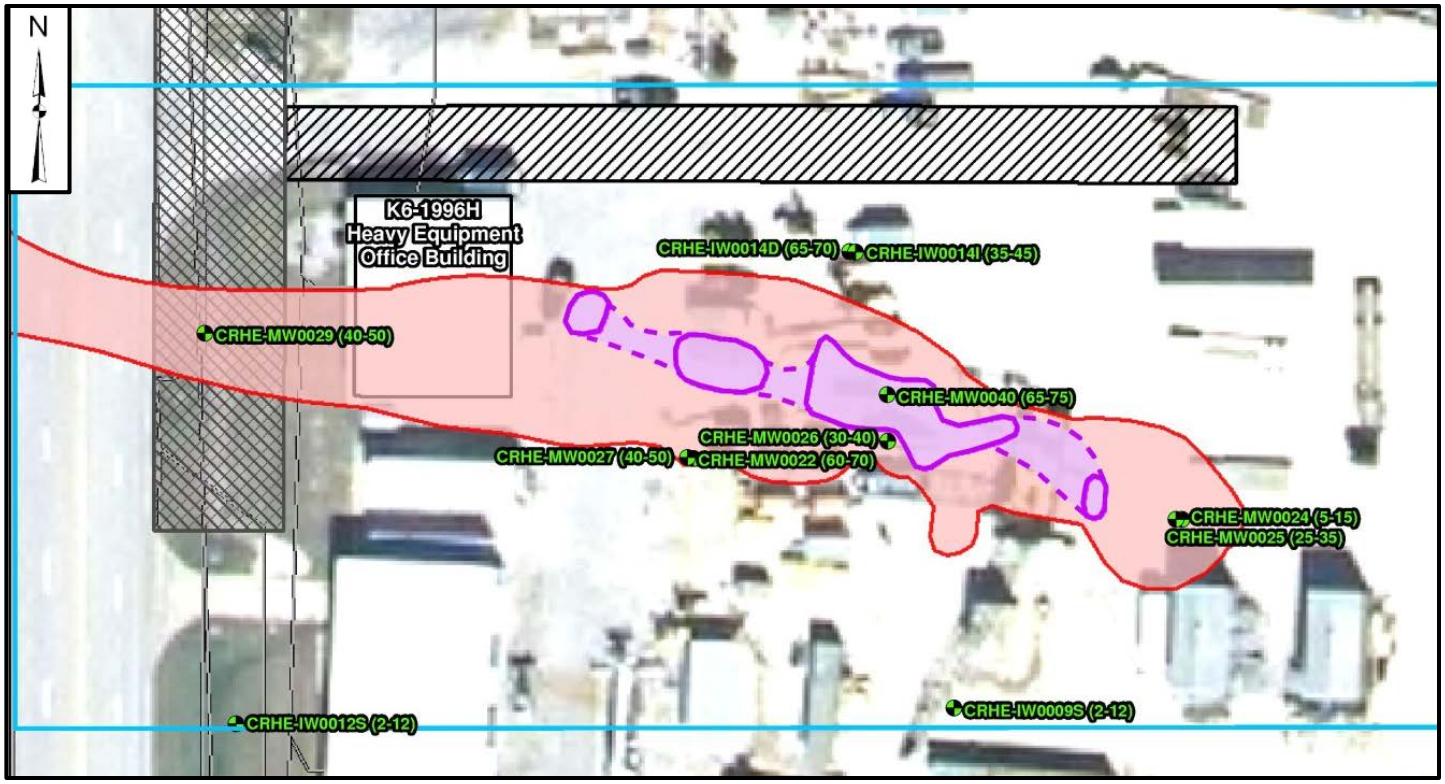

Hot Spot 1 Area

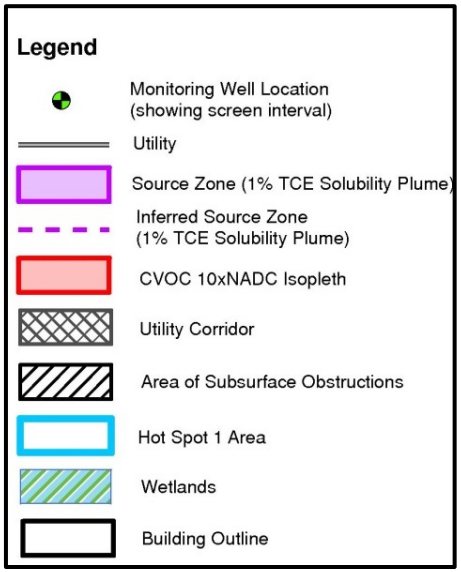
Geosyntec consultants

# Site Background

- 1997-1999: RFI (HSW, Inc.)
  - CVOC identified in groundwater above GCTLs
- 2000: Corrective Measures Study (CMS) (HSW, Inc.)
  - LTM selected remedy
- 2005 – 2009: site incorporated into VAB LTM program
- 2010: discontinued LTM until assessment is complete
- 2009 – 2013: supplemental site assessment
- 2013 December: Hot Spot 1 Step 1 EE
  - Delineation of Source Zone (TCE greater than 11,000 µg/L – 1% solubility) and CVOC 10xNADC plumes complete
  - recommended evaluation of bioremediation, emulsified zero valent iron (EZVI), and air sparge/soil vapor extraction (AS/SVE)
- 2014 February: Hot Spot 1 Step 2 EE
  - Bioremediation in SZ selected for IM

# Site Background
## Overall 10xNADC Plume and Source Zone




- 10xNADC Plume is the area with TCE, cDCE, and VC greater than 10xNADC
- Inferred Source Zone area: 0.07 acres (3,050 $ft^2$)

# Response to Comments

- Jacobs ADP Comment #2: Slide 5 (new slide 5) – Shows the SZ Area and 10x NADC exceedances area. Since this figure was based upon the DPT results presented in Slide 9, consider having the information on Slide 9 precede Slide 5.

- *Response: The location of this slide is to help aid in the discussion of treatment intervals and monitoring depth, the slide was not intended to be provided as background information.*

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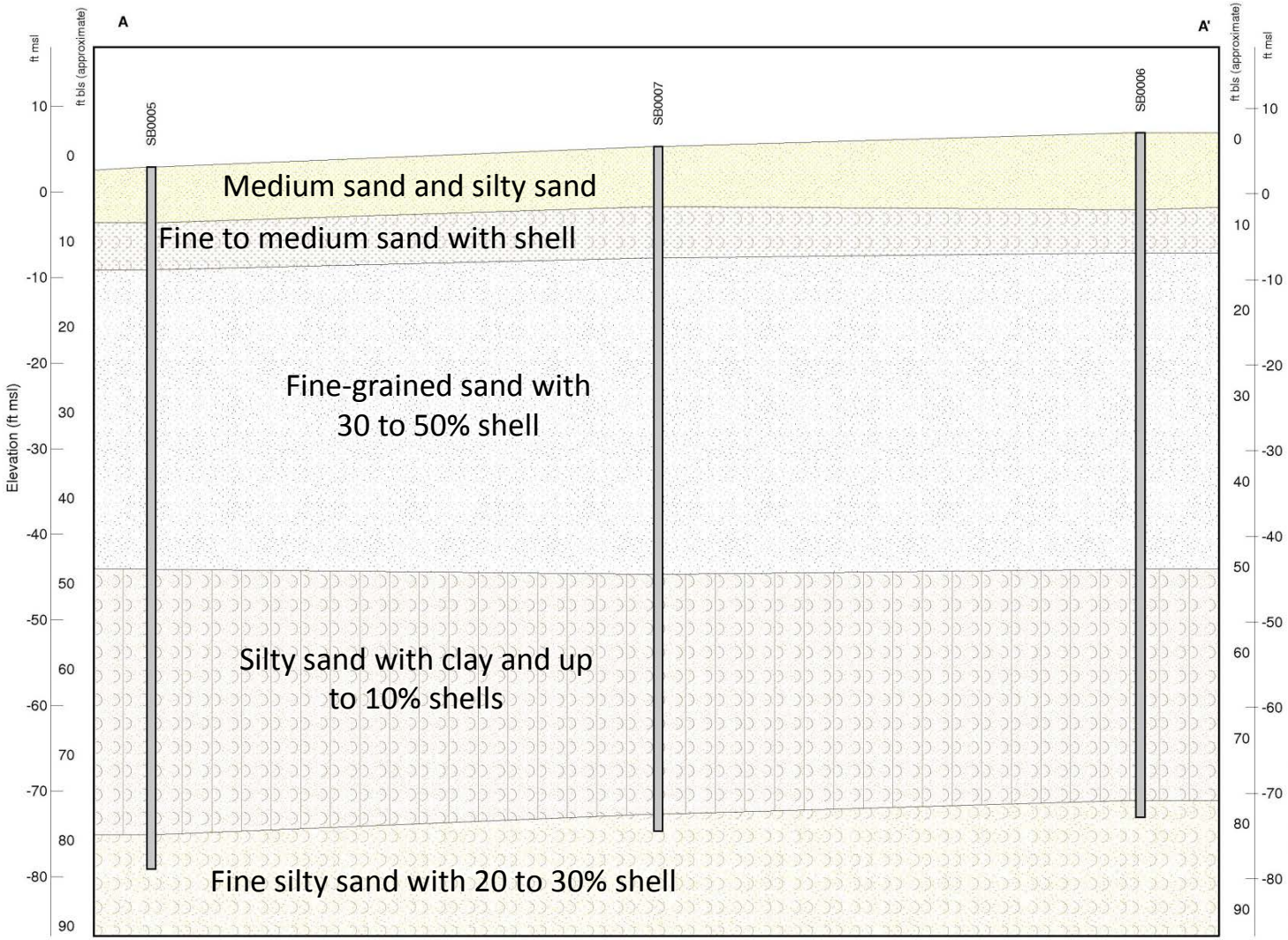
# Site Background Lithology



# Response to Comments

- TT IMWP Comment #2: Section 2.7 – It would be helpful in evaluating biological conditions if chloride data at the injection depth intervals is provided in this section. Overall, this section was very helpful in supporting the appropriateness of bioremediation at CRHE.

- *Response: Chloride data was not collected at this site. During the data gap sampling in December 2013, the salinity from monitoring wells MW0025 (0.77%) and MW0029 (1.5%), indicate that chloride should not affect Dhc. Additionally, ethene and ethane were detected at the site and that suggests that complete dechlorination is occurring.*

# Corrective Action Objective

- Corrective Action Objective to reduce CVOC concentrations to less than GCTLs using a treatment train approach
- IM objectives
  - to evaluate if bioremediation is effective at treating TCE concentrations that are greater than 1% of solubility (probable dense non-aqueous phase liquid)
  - to obtain data to evaluate the implementation of bioremediation in a larger treatment area

# Response to Comments

- TT IMWP Comment #1: Section 1.3 – Please verify if the objective the IM is to evaluate the effectiveness of bioremediation or to treat the plume to an endpoint (e.g., NADC, transition to MNA, etc.). As currently stated, the IM objectives appear worded towards a pilot study rather than an IM.

- *Response: The IM objective is as stated in the ADP and the IMWP and is worded this way because the IM is focused on the SZ (located within a larger plume).*

# Response to Comments

- TT ADP Comment #1: Slide 7 (new slide 9) – Please see IMWP comment regarding to IM objectives.

- *Response: See response to Tetra Tech IMWP comment #1.*

# Summary of Bioremediation

- Treatment area
  - SZ where TCE concentrations > 11,000 µg/L
  - Vertical treatment interval includes interval with CVOCs > 10xNADC (~15 to 50 ft BLS)
- Installation of eight monitoring wells
- DPT injection of 71 drums of SRS®-SD diluted 1:80 with potable water from on-site fire hydrant
- Semi-annual performance and UIC monitoring
- DPT groundwater sampling event post-injection (1 to 2 years)
  - To provide more robust understanding of CVOC concentrations
- *Dhc* and *vcrA* concentrations indicate that bioaugmentation not necessary
  - Information for optional bioaugmentation included in IMWP and UIC to prevent amendment to work plan, if site conditions change

# Response to Comments

- TT General Comment #2: Since CRHE is an active facility, it may be appropriate to provide a site layout/staging plan to provide locations where substrate, equipment, and tank staging are planned to be placed.

- *Response: We concur and believe this should be provided in the implementation work plan.*

# Response to Comments

- TT IMWP Comment #3: Section 3.1 – The inherent benefit of bioaugmenting may overweigh a "wait and see" approach. For the small capital expenditure, enhanced dechlorination may occur while biostimulation conditions are at their best and the appropriate microbial populations are present. We suggest adding the proposed KB-1 into the initial injection design to account for any uncertainty with the dechlorination potential of the indigenous populations. Alternately, microcosm testing prior to implementation of the IM may be beneficial to confirm full dechlorination and kinetics with the indigenous populations versus KB-1 bioaugmentation.

- *Response: Based upon our sampling results (presence of ethene and ethane and presence of Dhc and vcrA), we do not believe microcosm testing is necessary, since the results indicate that complete reductive dechlorination is occurring. We agree that bioaugmentation would be beneficial, but is not necessary. We propose that the decision to bioaugment be made based on the baseline sampling results. Groundwater samples will be analyzed for Dhc and vcrA from two proposed monitoring wells and if the Dhc and vcrA concentration is less than $10^6$ gene copies per liter, bioaugmentation will be performed.*

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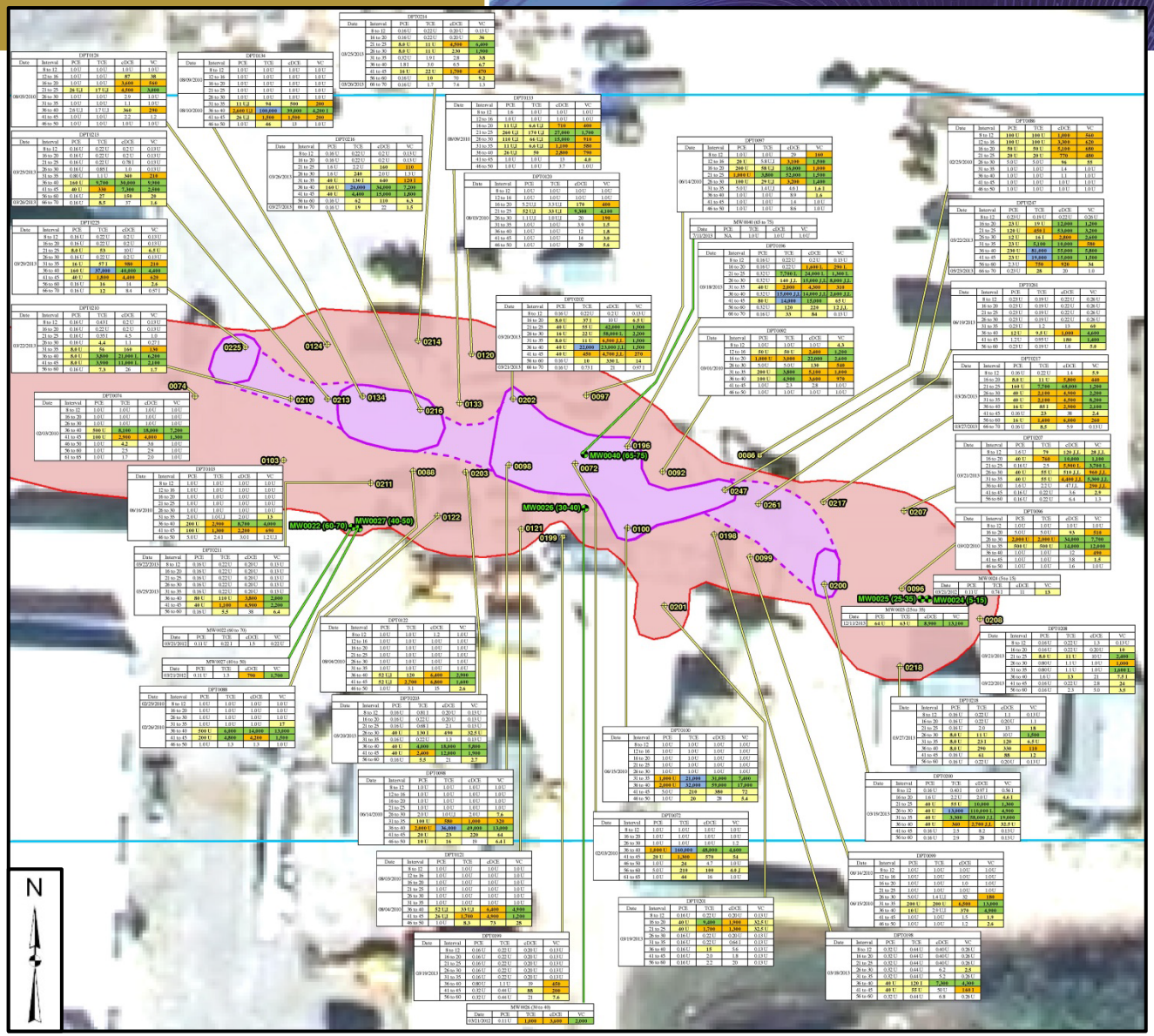
# Select DPT Groundwater Sampling Results




**Legend**

- DPT Sampling Location
- Monitoring Well Location (showing screen interval)
- Inferred Source Zone (1% TCE Solubility Plume)
- Source Zone (1% TCE Solubility Plume)
- CVOC 10xNADC Isopleth
- Hot Spot 1 Area

Figure 2-9

# Amendment Selection

- SRS®-SD from Terra Systems, Inc.
  - FDEP-approved substrate
  - 60% food grade soybean oil (slow release electron donor)
  - 4 to 7% potassium lactate (fast release electron donor)
  - 5 to 15% emulsifiers (proprietary) and nutrients (yeast extract, nitrogen and phosphorous to support microbial growth)
  - < 1% (minimum of 250 µg/L) vitamin B12 (important micronutrient for *Dhc*)
  - 6 to 8 grams per liter of sodium bicarbonate (to aid in buffering)
  - balance of water

# Response to Comments

- Jacobs IMWP Comment #3: Section 3 – Does SRS®-SD contain sodium bicarbonate or is the sodium bicarbonate an addition in the field? The SRS®-SD product information provided in Appendix C does not list sodium bicarbonate as an ingredient. If it is a field addition, and given the large amounts of water contemplated, is sodium bicarbonate addition at 6-8 g/L as a buffer necessary? We assume that the make-up and chase water will have a near neutral pH.

- *Response: SRS®-SD does not normally contain sodium bicarbonate, but it will be added by the manufacturer during the manufacturing process. The addition of the sodium bicarbonate is to provide additional buffering capacity to the aquifer to reduce the pH reduction that can occur as the substrate ferments while in the aquifer. There was no additional cost for the addition of sodium bicarbonate to the SRS®-SD.*

# Response to Comments

- TT IMWP Comment #4: Section 3.2 – It is our understanding that SRS-B contains ingredients for aquifer buffering (based on Terra Systems' website). Please confirm if sodium bicarbonate is in the costed product (SRS-SD) or if a custom formulation was derived for CRHE. Will any additives result in secondary UIC issues (e.g., addition of sodium bicarbonate forming sodium salts)?

- *Response: There was no additional cost for adding sodium bicarbonate to the SDS®-SD. SRS®-B is formulated for low pH aquifers and has 5 to 15% buffer. Per the FDEP Acceptance Letter provided in Appendix D of the IMWP, UIC monitoring associated with the injection of SRS®-SD requires monitoring of sodium, total dissolved solids, and total recoverable petroleum hydrocarbons. Since the UIC monitoring includes sodium, there should be no secondary UIC issues. Also, by approximating the resulting concentration of sodium in the 305,000 gallons of pore volume, the concentration of sodium in the aquifer due to the addition to 8 g/L of sodium bicarbonate to the SRS®-SD is less than 0.03 g/L, and the KSC Upper Range of Background for sodium is 15 g/L (FDEP GCTL is 0.16 g/L).*

# Response to Comments

- Jacobs ADP Comment #1: General – Please discuss the substitution of SRS®-SD for EOS®, and the flow-down changes (such as dilution), plus any other factors that were notably different between Step 2 assumptions and Step 3 design. This will provide the Remediation Program with clear documentation of the reason for the change in capital cost. We do not disagree with the selection of SRS®-SD, but since EOS® was presumed to yield representative costing for whatever amendment was developed in Step 3 and there was a notable increase in cost, the reason for selection should be described.

# Response to Comments

- *Response: The changes between the Step 2 and the Step 3 EE included the following: (i) modification of the electron donor from EOS® to SRS®-SD; (ii) increasing the dosing of the electron donor from 0.5% to 0.7%;(iii) the method of calculating the pore volume of the treatment area (considering overlap and drift outside the treatment area); and (iv) an increase in number of DPT sampling days from three to five. A description of our rationale for these modifications is provided below.*

  *The decision to substitute SRS®-SD for EOS® stemmed from our experience with both products. Over the past couple of years, the EOS® products have arrived at our sites with a pH that was less than 6, which is below neutral and can influence the pH of the aquifer. SRS®-SD has a neutral pH and we have had positive results.*

  *The SRS®-SD costing provided was their estimated 2015 costing ($940/drum), since NASA is anticipating this IM will not be implemented until 2015 (The estimated 2014 pricing is ~$882/drum). The cost for EOS provided in the Step 2 EE was an anticipated 2014 cost and they were not able to provide us an estimated cost for 2015. This change affected the cost because the cost of a drum of SRS®-SD is approximately $940/drum and the cost of a drum of EOS® was approximately $730/drum.*

  *The decision to increase the electron donor dosing from 0.5% to 0.7% was based on comments received during the Step 2 EE that were concerned that the dosing of 0.5% was low. As stated in the IMWP, Geosyntec generally recommends a dosing of 0.5% to 1% of pore volume (with oil); therefore, the dosing was increased to 0.7%. This change affected the cost because the volume of EVO increased. The cost increase is discussed below.*

  *During the Step 2 EE, the treatment volume was estimated by using the area of the SZ times the treatment interval (3,050 square feet x 30 feet). For the IMWP, since the treatment interval varied by location, the pore volume was calculated for each injection location (assuming an 8-foot radius of influence and a specific treatment interval), and then summed to provide a total treatment volume. This approach more accurately reflects the total treatment volume, since it includes the overlapping of the radius of influence (in addition to the treatment of some areas outside the specific SZ iso-contour). The change in this calculation increased the total treatment volume (from ~ 200,000 gallons to 300,000 gallons), which increased the amount of EVO solution required and increased the number of days that injections would occur.*

# Response to Comments

- *Response (cont.):*

  *The cost from the Step 2 EE and the Step 3 EE were compared based on the cost per cubic yard treated. A summary of the cost is provided below:*

  - *Step 2 EE cost*
    - *~$129/cy based on total cost for 3 years ($437,000) and cubic yards treated (3,390 cy)*
    - *~$164/cy based on total cost for 5 years ($557,000) and cubic yards treated (3,390 cy)*
  - *Step 3 EE cost*
    - *~$145/cy based on total cost for 3 years ($626,500) and cubic yards treated (4,317 cy)*
    - *~$164/cy based on total cost for 5 years ($708,700) and cubic yards treated (4,317 cy)*
  - *The costs summarized above show that from the Step 2 EE to the Step 3 EE, the treatment volume has increased, but that the cost per cubic yard is similar.*

Geosyntec consultants

# Bioremediation Layout Plan View

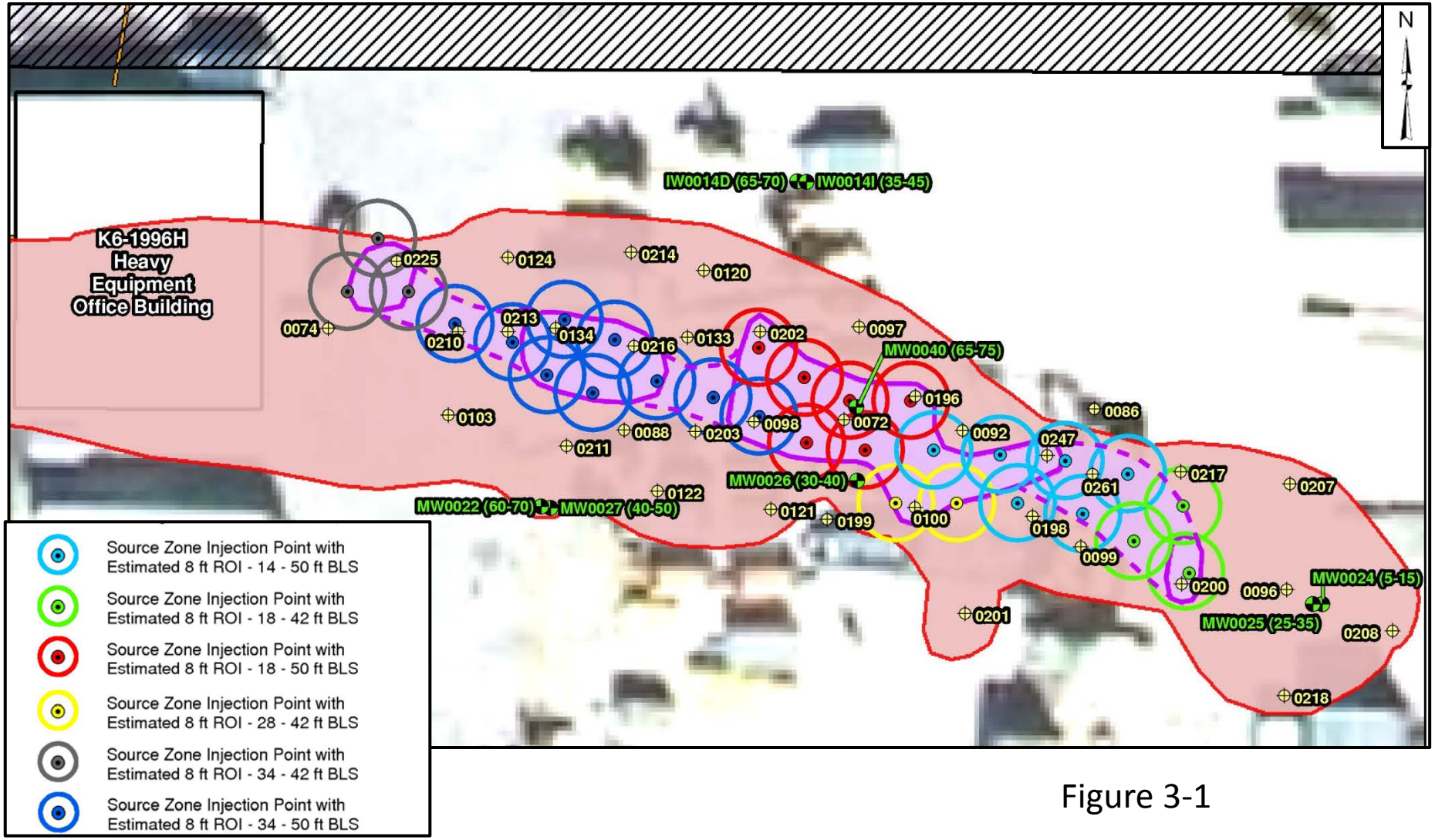



Figure 3-1

# Response to Comments

- TT ADP Comments #2: Slide 11 (new slide 23) – Suggest numbering DPT points and providing a reference injection calculation (See IMWP table)

- *Response: The DPT injection locations can be numbered as part of the IM Implementation Work Plan.*

# Response to Comments

- Jacobs IMWP Comment #9: Section 4 – MW0026 is located along the southern edge of the SZ treatment area. Due to its proximity to the treatment area, consider abandoning and re-installing MW0026 due to preferential pathway concerns and potential daylighting issues.

- *Response: If the injection technique proposed in the IMWP is utilized, we do not anticipate daylighting issues at monitoring well MW0026 (no daylighting issues occurred at LC34 Hot Spot 1 where we had monitoring wells [with secure caps] within 2 feet of injection locations). If an alternative injection vendor/technique is ultimately utilized, the abandonment of the well should be considered in the IM Implementation Work Plan.*

# Injection Interval Rationale

- Based on DPT groundwater sampling data
  - Injection interval expanded to include a couple of feet above and below sample interval
  - If no sample collected from 46 to 50 ft BLS, injection interval extended to 50 ft BLS
- 18 to 42 ft BLS for the injection locations around DPT0200
  - DPT0200 and DPT0217 - 10xNADC CVOC exceedances from 21 to 40 ft BLS
- 14 to 50 ft BLS for the injection locations around DPT0247
  - DPT0247 - 10xNADC CVOC exceedances from 16 to 45 ft BLS (no sample collected below 45 ft BLS)
- 18 to 50 ft BLS for the injection locations around DPT0196, DPT0072, and DPT0202
  - DPT0196 - 10xNADC CVOC exceedances from 21 to 45 ft BLS (no sample below 45 ft BLS)
- 28 to 42 ft BLS for the injection locations around DPT0100
  - DPT0100 - 10xNADC CVOC exceedances from 31 to 40 ft BLS
- 34 to 50 ft BLS for the injection locations around DPT0098, DPT0216, DPT0134
  - DPT0216 - 10xNADC exceedances from 36 to 45 ft BLS (no sample collected below 45 ft)
- 34 to 42 ft BLS for the injection locations around DPT0225
  - DPT0225 - 10XNADC CVOC exceedances from 36 to 40 ft BLS

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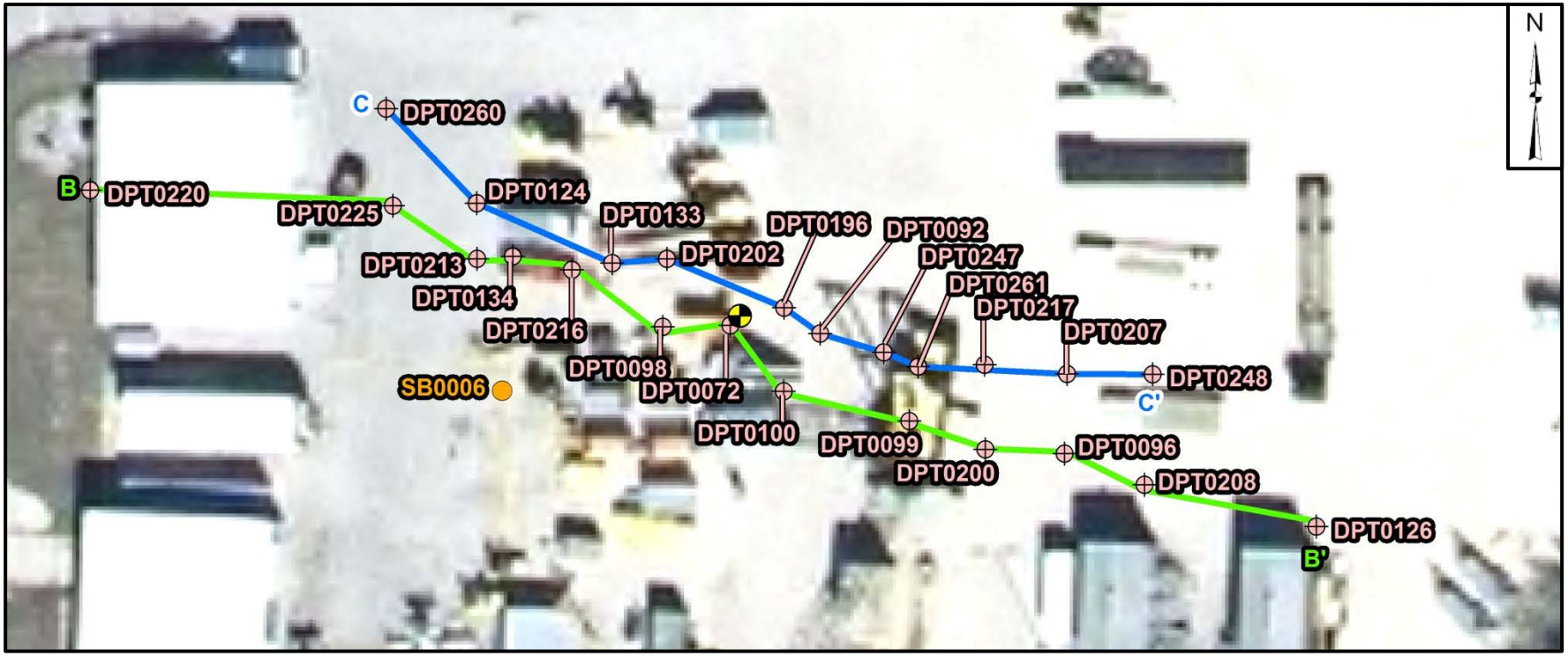
# Bioremediation Layout Cross Section Plan View




**Legend**

- Soil Boring Location
- DPT Sampling Location
- B-B' Transect
- C-C' Transect

# Bioremediation Layout Cross Section B-B′

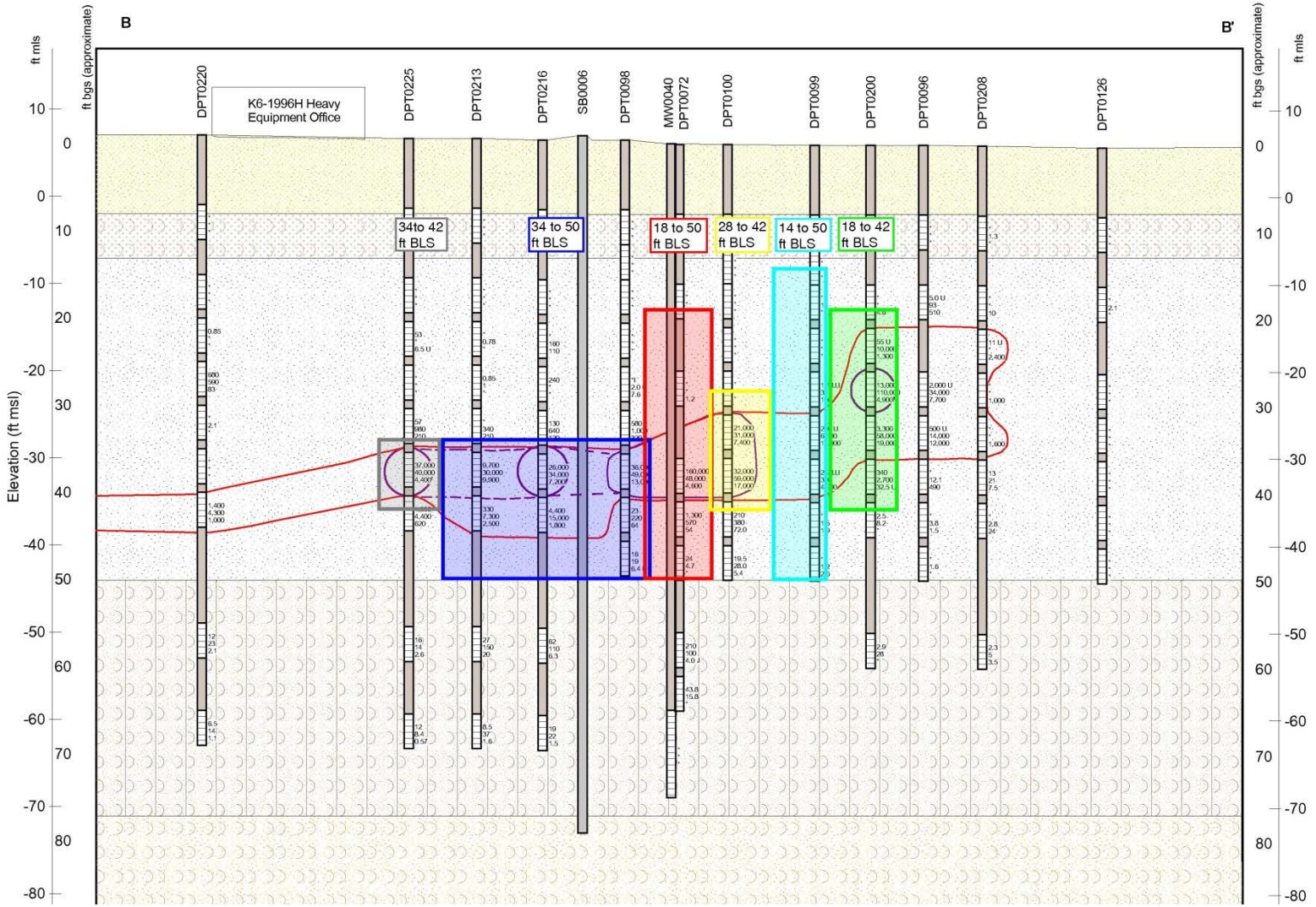



Figure 3-2

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# Bioremediation Layout Cross Section C-C′

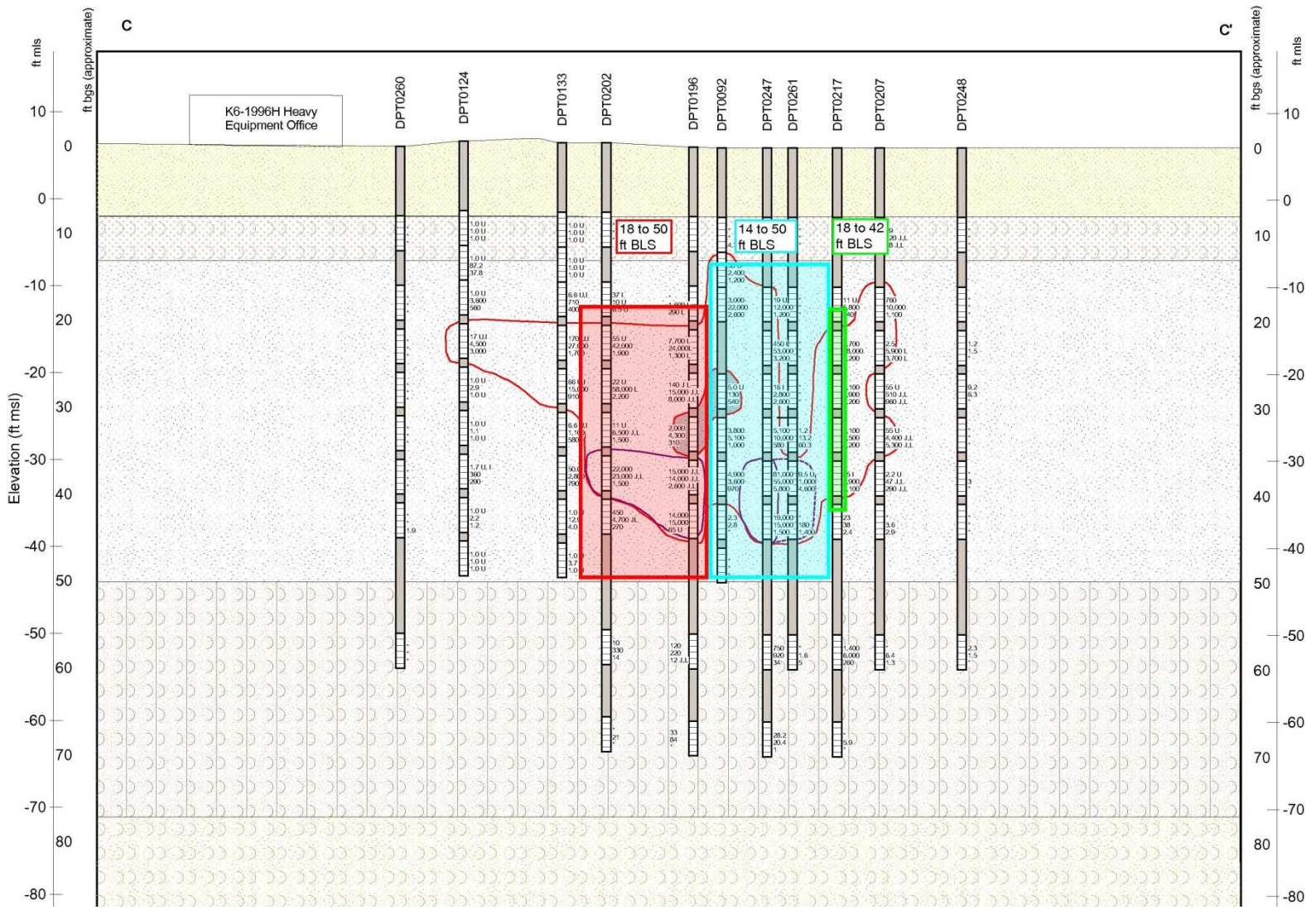


Figure 3-3

# Response to Comments

- Jacobs ADP Comment #3: Slide 14/15 (new slide 27/28) – Treatment depths on Figures 3-2 and 3-3 (slides 14 and 15) are presumably indicated by the color blocks, but there is no legend or key to that effect. Recommend adding a call-out or legend.

- *Response: A printing error caused the injection intervals to not be presented on Figures 3-2 and Figures 3-3. The figures are presented correctly in the ADP, and have been reprinted and provided to the Team.*

# Response to Comments

- TT ADP Comment #3: Slide 14/15 (new slide 27/28) – Figures 3-2 and 3-3 do not match these figures. Please revise, as commented in IMWP.

- *Response: See response to Jacob's ADP comment #3.*

# Response to Comments

- TT IMWP Comment #8: Figure 3-2/3-3 – It is not clear what this figure is presenting, as injection locations and intervals are not depicted. Please revise showing applicable injection locations and treatment interval within the cross section. See Slides 14 and 15 of the Step 3 EE.

- *Response: See response to Jacob's ADP comment #3.*

# Electron Donor Dosing Appendix E IMWP

- 71 drums of SRS®-SD diluted 1:80
  - ~298,000 gallons of SRS®-SD solution
  - Water will be treated with dechlorinator and made anaerobic by adding sodium sulfite, if necessary
- 50 gallons chase water per injection interval
  - ~3,250 gallons of chase water

| Treatment Interval | Number of Injection Points | Drums of SRS-SD (52.5 gal per drum; 60% EVO) | Volume of Diluted SRS®-SD Solution | Volume of Diluted SRS®-SD Solution per Location |
|---|---|---|---|---|
| (ft BLS) | N/A | N/A | (gal) | (gal) |
| 14 to 50 | 6 | 22 | 92,400 | 15,400 |
| 18 to 42 | 3 | 8 | 33,600 | 11,200 |
| 18 to 50 | 6 | 20 | 84,000 | 14,000 |
| 28 to 42 | 2 | 3 | 12,600 | 6,300 |
| 34 to 42 | 3 | 3 | 12,600 | 4,200 |
| 24 to 50 | 9 | 15 | 63,000 | 7,000 |
| **Total** | **29** | **71** | **298,200** | **---** |

# Response to Comments

- TT IMWP Comment #6: Section 3.3.3 - Were costs and time required for conditioning dilution and chase water included in the design? For example, how many and what size tanks will be required and how much dechlorinator and oxygen scavenger will be required.

- *Response: Yes, time was considered; however, it is minimal when using the sodium sulfite as presented in the IMWP. The number and size of tanks is an Implementation Work Plan Detail.*

  *Note that for the evaluation in the IMWP, the mixing was based upon the vendor using 250-gal mixing tanks as described in Section 3.3.3. As described in Section 3.3.3 of the IMWP, 0.24 g/gal of sodium sulfite would be added (calculations included in Appendix E). The amount of dechlorinator added would change based on product (or natural conditioning may be feasible).*

# Response to Comments

- Jacobs ADP Comment #4: Slide 16 (new slide 32) – Please include the assumptions used to generate the volume estimates in the chart on Slide 16 (porosity, pore space saturation, ROI, vertical thickness, etc.). We found these in Appendix E of the IMWP.

- *Response: Slide 16 is a summary of the information presented in Appendix E of the IMWP. A reference to Appendix E has been added to the slide, since the ADP and IMWP are meant to be complimentary documents.*

# Response to Comments

- Jacobs IMWP Comment #1: Section 3 - Agree with the injection locations and treatment intervals. Expanding the treatment zone where there was no 46-50 ft bls sample is a good, conservative approach.

  Please include a preliminary injection details table (understanding that this will be finalized in the implementation work plan). This table should include injection location identification, GPS coordinates of the injection location, injection depths/lifts, and volume of SRS®-SD/water solution per lift. The table should be inserted into Section 3 of the IMWP.

- *Response: A table detailing the injection details is provided in Appendix E. This table (Electron Donor Dosing and Injection Volume Calculations) provides details for the injection locations based on depth interval. The information provided includes the following: (i) treatment interval; (ii) the number of 2-foot injection lifts within this interval; and (iii) the volume of solution per lift. A table or figure providing the injection location GPS coordinates should be included in the IM Implementation Work Plan. To provide maximum flexibility to NASA for implementation, the injection details were kept generic such that the A&E/vendor implementing the project has the ability to tailor the implementation to their technical strategy/vendor equipment.*

# Response to Comments

**Appendix E. Electron Donor Dosing and Injection Volume Calculations**

| Treatment Interval (ft BLS) | Number of Injection Points | Porosity | Injection Point Area (8 ft ROI) $\pi*(ROI)^2$ ($ft^2$) | Injection Interval (feet) | Number of 2-foot Injection Intervals | Volume of Injection Area Area * Injection interval ($ft^3$) | Pore Volume of Injection Area Volume * Porosity * 7.480519 gal/$ft^3$ (gal) | Volume of SRS-SD Based on Filling 0.7% Pore Volume Pore Volume * 0.007 (gal) | Drums of SRS-SD (52.5 gal per drum; 60% EVO) Volume SRS-SD / 52.5 gal/ 0.6 | Volume of SRS-SD Solution (1:80 Dilution) Volume SRS-SD * 80 (gal) | Volume of SRS-SD Solution per Location Volume SRS-SD Solution / Number of Injection Points (gal) | Volume SRS-SD Solution per Injection Interval Volume of SRS-SD Solution per Location / Number of 2-foot Injection Intervals (gal) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 to 50 | 6 | 0.3 | 201 | 36 | 18 | 43,429 | 97,462 | 682 | 22 | 92,400 | 15,400 | 855.6 |
| 18 to 42 | 3 | 0.3 | 201 | 24 | 12 | 14,476 | 32,487 | 227 | 8 | 33,600 | 11,200 | 933.3 |
| 18 to 50 | 6 | 0.3 | 201 | 32 | 16 | 38,604 | 86,633 | 606 | 20 | 84,000 | 14,000 | 875.0 |
| 28 to 42 | 2 | 0.3 | 201 | 14 | 7 | 5,630 | 12,634 | 88 | 3 | 12,600 | 6,300 | 900.0 |
| 34 to 42 | 3 | 0.3 | 201 | 8 | 4 | 4,825 | 10,829 | 76 | 3 | 12,600 | 4,200 | 1050.0 |
| 24 to 50 | 9 | 0.3 | 201 | 16 | 8 | 28,953 | 64,975 | 455 | 15 | 63,000 | 7,000 | 875.0 |
| **Total** | 29 | --- | --- | --- | 65 | 135,918 | 305,021 | 2,135 | 71 | 298,200 | 58,100 | 893.8 |

# Response to Comments

- TT IMWP Comment #5: Section 3.3.1 – Please include a table/calculation (with figure referencing locations) showing the injection criteria and assumptions for each injection point. This would include information such as coordinates, treatment interval, groundwater volume, dosage concentration, substrate volume, chase water volume, lift length, lifts per boring, substrate and chase volume per lift, etc.

- *Response: See response to Jacobs's IMWP comment # 1.*

# Response to Comments

- TT IMWP Comment #13: Appendix E - Please provide entire calculation, as the provided hard copy calculation could not be reviewed since it only shows the outputs and inputs, assumptions, and calculations are not provided. Note that a CD was not received to check if this information was to be provided electronically.

- *Response: Appendix E provides the assumptions and calculations (the equations used in all the calculations are in the heading of each column) for each step for the Electron Donor Dosing and the ROI calculations. The substrate estimating tool was produced by ESTCP. The EE step process does not require that source files for all calculations, models, etc. be provided on a CD for review.*

# Injection Design

- Injection performed by DPT injection subcontractor
  - Two DPT rigs
  - 2-ft injection tool
  - Inject from bottom up
  - Inject at a max of 10 locations simultaneously
  - Manifolds to each injection location will have flow meter, flow controller and pressure gauge
- Injections anticipated to take approximately 18 days
  - 2 to 7 gpm (anticipated to average 4 gpm)
- Collect water level measurements during injection to monitor that significant mounding does not occur

# Response to Comments

- TT General Comment #1: – Per IMWP/Step 3 EE requirements, please provide a P&ID for bioremediation equipment (in this case, a PFD would be appropriate). Please also provide details for injection point manifolding and details relating to how each point will be lifted following injection at the multiple locations (stated at up to 10 injections simultaneously).

- *Response: P&ID and PFDs for bioremediation using DPT are vendor specific. Exact details about injection lifting and manifolding will be provided in the implementation work plan when a vendor is selected by the A&E implementing the project. We do not believe that providing details regarding how each injection point will be manifolded and how each point will be lifted following injection provides the level of flexibility desired by NASA. The referenced information should be included in the implementation work plan.*

# Response to Comments

- TT IMWP Comment #5: Section 3.3.1 – Since specific vendor and subcontractors cannot be selected at a design stage and contracting mechanisms require competitive bidding, please include "or approved equivalent" or similar language when specifying products and services.

- *Response: We assume this comment is referring to the following sentence:*

  *"The SRS®-SD amendment will be injected into the subsurface by a DPT injection subcontractor (worked scoped assumed the use of Vironex, Inc.)"*

  *We intended the above language in the text to allow for the use of any vendor (which was the intent). The text above was meant to provide information on how we costed and scoped the work. The text will be modified to also include the "or approved equivalent" language.*

# Response to Comments

- TT IMWP Comment #7: Section 3.3.3 – The text indicates that injection activities will occur at up to 10 locations, simultaneously. Can more information be provided to detail the specific approach for injections (i.e.: injection point sequencing, etc.)?

- *Response: Based on information provided by Vironex, they will provide the equipment to allow the injections to occur at up to 10 locations simultaneously. We believe it is best to determine the injection point sequencing in the field, since the number of locations that can be injected into simultaneously will be dependent on how the formation accepts the injectate, proximity to previously abandoned locations, etc.*

# Response to Comments

- Jacobs IMWP Comment #2: Section 3 – Were any other DPT injection techniques considered in addition to the drop-tip injection method? A technique that includes active pore space dilation or that induces more pressure may reduce the overall field time and would reduce the volume of water required, while still achieving the required 8 ft ROI.

- *Response: By active pore space dilation, we are assuming this terminology is referring to fluidizing and/or fracturing the formation (dilation of pore spaces) using high flow and pressure (kinetic energy) applications. We have used this approach (as well as others) at KSC, and elsewhere in Florida, as well as the Vironex system which is the system proposed in this IMWP (note the IMWP does not require the Vironex approach). The Vironex system achieved distribution objectives at LC34 Hot Spot 1 as a delivery system; therefore, we proposed the use of the Vironex system in the IMWP.*

# Response to Comments

- Jacobs IMWP Comment #4: Section 3 – Include a section regarding proper abandonment of injection boreholes. The implementation section should also include a strategy for how injections will occur around previous completed injection locations. Proper abandonment and injection strategy is imperative in minimizing the potential of daylighting, as you know.

- *Response: The injection boreholes will be abandoned by tremie grouting the boreholes, and this information will be added to the IMWP. Information on injection strategy should be included in the IM Implementation Work Plan, since it will ultimately be dependent on the equipment/vendor utilized for the injection work.*

# Response to Comments

- Jacobs ADP Comment #5: Slide 17(new slide 39) – Please call out the wells that will be monitored to ensure that mounding does not occur.

- *Response: Proposed monitoring wells MWA, MWC, MWF, and MWH and existing monitoring wells MW0024, MW0026 and IW0014I will be monitored for mounding. This information will be added to the IMWP.*

Geosyntec consultants

# Proposed Monitoring Wells

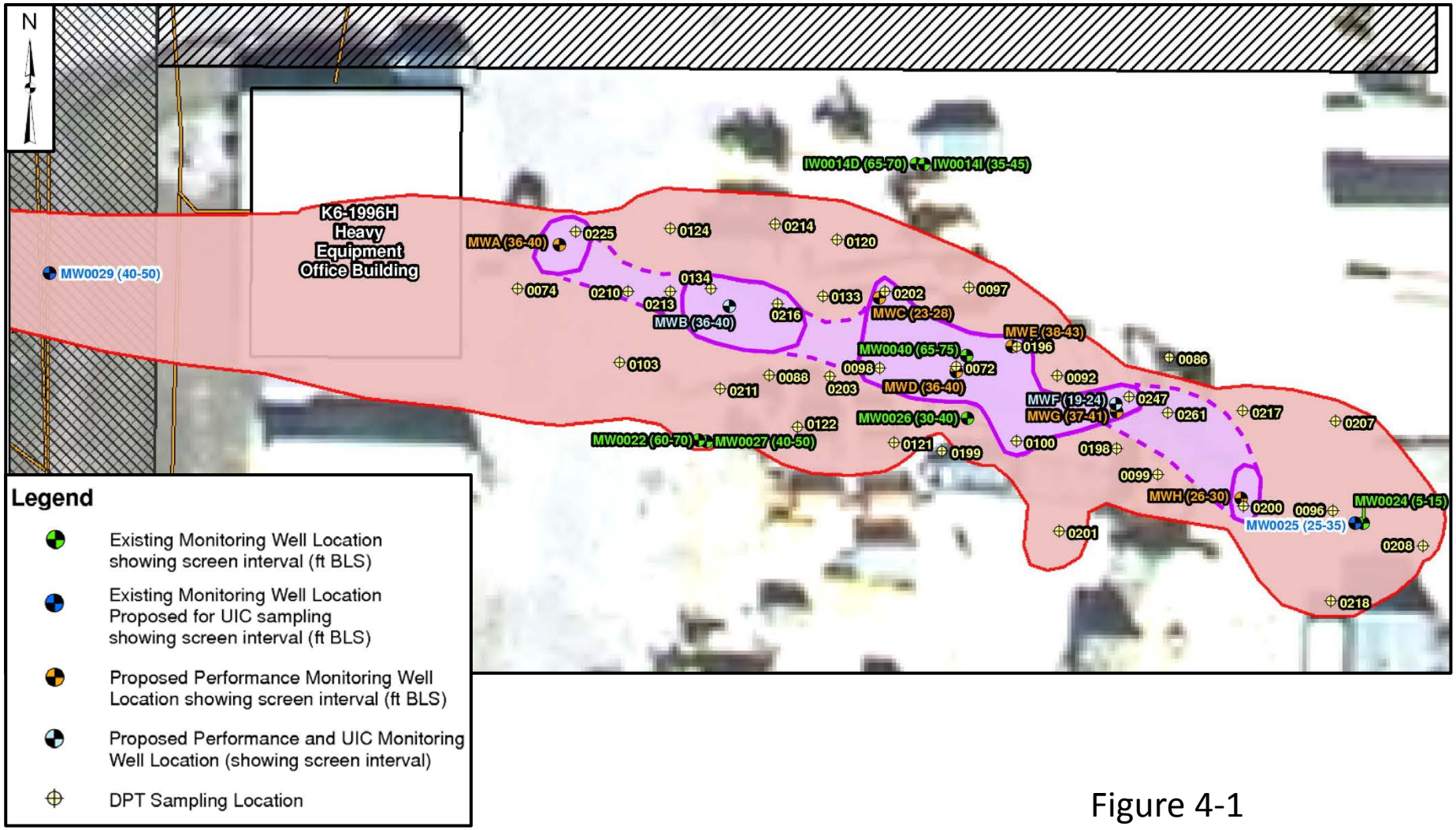


Figure 4-1

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# Proposed Monitoring Well Rationale

- MWA (36 to 40 ft BLS) – TCE concentration greater than 1% solubility from 36 to 40 ft BLS at DPT0225
- MWB (36 to 40 ft BLS) – TCE concentration greater than 1% solubility from 36 to 40 ft BLS at DPT0134 and DPT0216
- MWC (23 to 28 ft BLS) – CVOC concentrations greater than 10xNADC from 21 to 30 ft BLS at DPT0202
- MWD (36 to 40 ft BLS) – TCE concentrations greater than 1% solubility from 36 to 40 ft BLS at DPT0072
- MWE (38 to 43 ft BLS) – TCE concentrations greater than 1% solubility from 36 to 45 ft BLS at DPT0196
- MWF (19 to 24 ft BLS) – CVOC concentrations greater than 10xNADC from 16 to 25 ft BLS at DPT0247
- MWG (37 to 41 ft BLS) – TCE concentrations greater than 1% solubility from 36 to 45 ft BLS at DPT0247
- MWH (26 to 30 ft BLS) – TCE concentration greater than 1% solubility from 26 to 30 ft BLS at DPT0200

# Response to Comments

- Jacobs IMWP Comment #5: Section 4 – Overall, we agree with the location and intervals of the new performance monitoring wells. At DPT-202, 10x NADC exceedances are observed over the 21-30 ft bgs interval. TCE 1% solubility exceedances are observed over the 36-40 ft. interval. The IMWP only proposes installing a performance monitoring well at the 23-28 ft. bgs interval. Consider installing another performance monitoring well at this proposed location over the 36-40 ft. bgs interval.

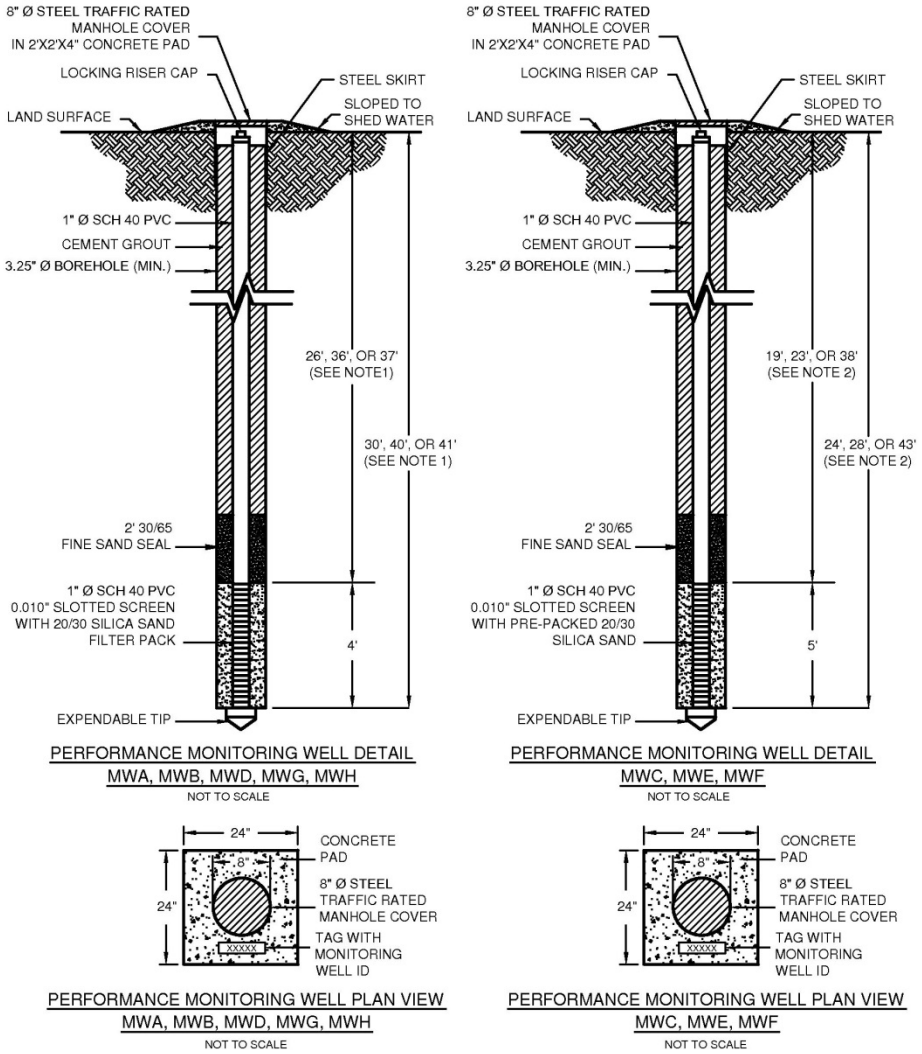
- *Response: The monitoring plan was designed with a minimum number of monitoring wells to reduce costs, while still providing adequate information to evaluate the bioremediation implementation (understanding that a robust DPT groundwater sampling event would also occur). The screen interval (23 to 28 ft BLS) for proposed monitoring well MWC at location DPT0202 was selected to monitor the shallow CVOC concentrations that are greater than 10XNADC in that area. There are six other proposed monitoring wells that are screened in the interval where TCE concentrations are greater than 1% solubility (MWA, MAB, MWD, MWE, MWG and MWH). Based on the rationale provided, we do not believe that a monitoring well screened from 36 to 40 ft BLS at DPT0202 is warranted.*

# Response to Comments

- Jacobs IMWP Comment #10: Section 4 – Due to preferential pathway concerns and potential daylighting issues, performance monitoring wells should be installed after groundwater injections are complete. DPT VOC concentrations can be used for baseline comparisons instead. MW0024, MW0025, and MW0026 could be used to monitor for mounding during injections.

- *Response: See response to comment #9. Proposed monitoring wells MWA, MWC, MWF, and MWH and existing monitoring wells MW0024, MW0026 and IW0014I will be monitored for mounding.*

# Monitoring Well Construction Details




- 1-inch SCH 40 PVC
- 4 or 5 ft screen interval
  - Focused on impacted interval
  - 20/30 sand pack
- 8-inch manhole
- 2′ x 2′ x 4 ″ concrete pad

Figure 4-2

# Response to Comments

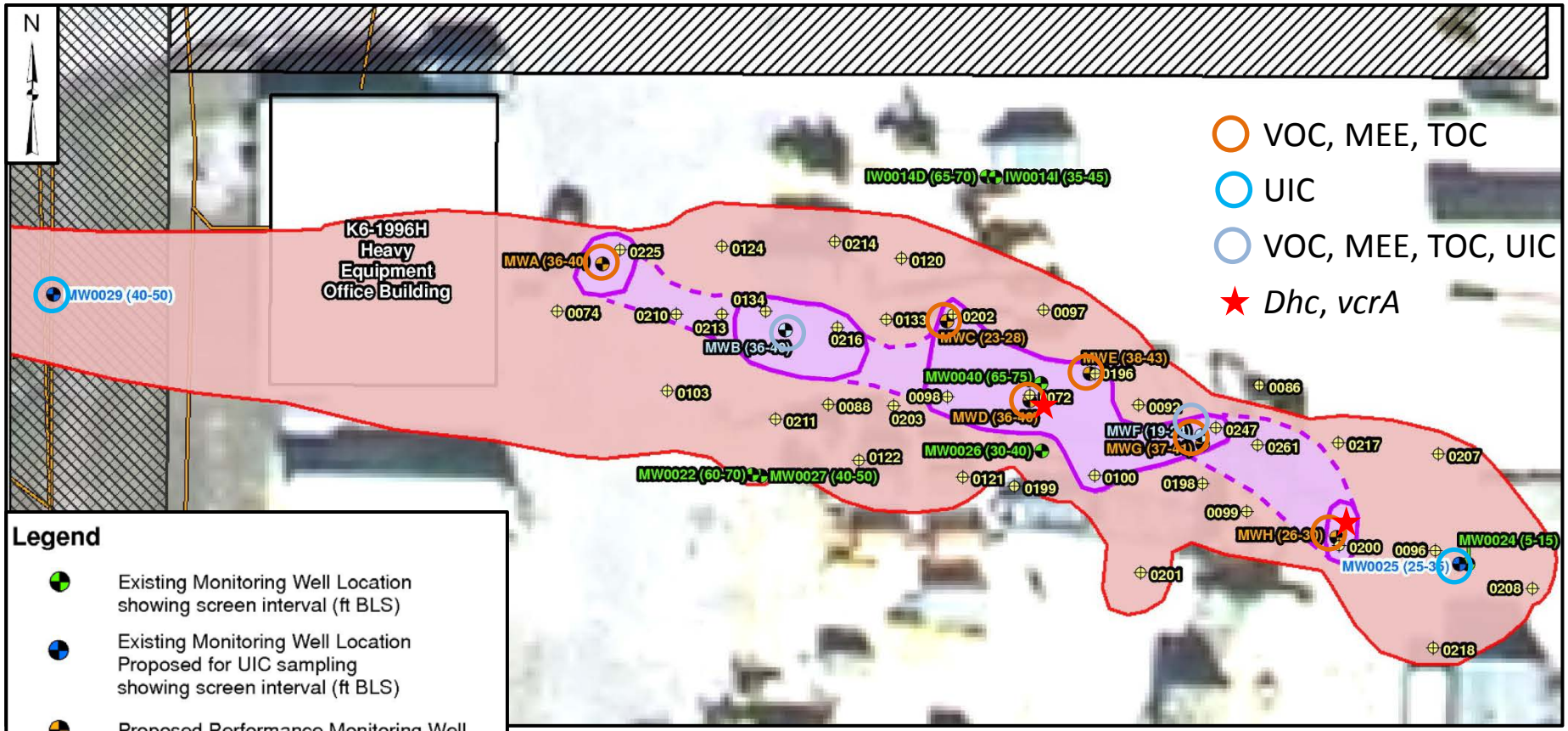
- Jacobs IMWP Comment #13: Section 4 – Monitoring wells at the GSA Reclamation Yard IM were installed with a 2' x 2' x 4" concrete pad and traffic vaults. Due to the heavy equipment traffic at GSRY, several of the pads and wells were damaged. Consider installing more robust pads (3' x 3' x 6" with reinforcement, or better) in an attempt to better withstand the heavy equipment traffic that will likely be present at CRHE.

- *Response: Geosyntec concurs and proposes to use 2′x2′x6″ reinforced pads and the IMWP will be updated to reflect this.*

# Performance Monitoring
## UIC Monitoring

- UIC monitoring is required with the injection of SRS®-SD
  - FDEP requires the monitoring of TDS, TRPH, and sodium
  - Four monitoring wells will be sampled for UIC parameters
    - Upgradient monitoring well - MW0025
    - Downgradient monitoring well - MW0029
    - Two proposed wells within the plume - MWB (36 to 40 ft BLS) and MWF (19 to 24 ft BLS)

# Performance Monitoring




**Legend**

- Existing Monitoring Well Location showing screen interval (ft BLS)
- Existing Monitoring Well Location Proposed for UIC sampling showing screen interval (ft BLS)
- Proposed Performance Monitoring Well Location showing screen interval (ft BLS)
- Proposed Performance and UIC Monitoring Well Location (showing screen interval)
- DPT Sampling Location

- Baseline sampling
- Semi-annual performance monitoring
- Semi-annual UIC monitoring

Table 4-1

# Response to Comments

- Jacobs IMWP Comment #12: Section 4 – If bioaugmentation is being considered as part of the remedial action, baseline sampling should include a *Dhc* census (including tceA and vcrA), at a minimum.

- *Response: Analysis of groundwater samples for Dhc and vcrA is proposed as part of the IM at proposed monitoring wells MWD (36 to 40 ft BLS) and MWH (26 to 30 ft BLS). The analysis for Dhc will provide information on the size of the Dhc population and the vcrA gene will provide information on the reductase gene responsible for VC to ethene dechlorination. The tceA gene is the Dhc reductase gene that is responsible for dechlorination of TCE to VC. We believe that quantifying the Dhc population and the vcrA gene provides valuable information and that quantifying the tceA gene is not necessary.*

# Response to Comments

- Jacobs IMWP Comment #6: Section 4 – All UIC sampling locations are located along the center line of the treatment area. No UIC sampling locations are located along the perimeter of the treatment area to monitor for any lateral movements that could potentially result from the groundwater injections. Consider adding MW0026 to the UIC sampling routine.

- *Response: We believe the upgradient (MW0025) and downgradient (MW0029) UIC monitoring wells are adequate to monitor if groundwater outside the injection area is impacted by the injectate.*

# Response to Comments

- Jacobs IMWP Comment #7: Section 4 – MW0029 is located approximately over 150 ft away from the treatment area and is screened below the treatment depths. Consider replacing MW0029 with IW0014I for UIC sampling or install a well over the 30-40 ft bgs interval west of the treatment area.

- *Response: Monitoring well MW0029 is included as a UIC well to evaluate if there is migration downgradient of the injection area. The injections will occur from 14 to 50 ft BLS; therefore, the screen interval of monitoring well MW0029 (40 to 50 ft BLS) is appropriate. We do not believe the addition of monitoring well IW0014I is necessary (see response to comment #6 above).*

# Response to Comments

- Jacobs IMWP Comment #8: Section 4 – The majority of the performance monitoring sampling is within the treatment the SZ treatment area. Consider adding monitoring wells that are outside the treatment area to better determine the overall effectiveness of the remedial action. Propose adding MW0025 and MW0027 to monitor the 10 x NADC exceedance areas. Also, consider adding MW0026 to the performance monitoring schedule to monitor the perimeter along the SZ treatment area.

- *Response: The area outside the SZ will be monitored as part of the Interim Groundwater Monitoring (IGM) program (The IGM Plan is currently being prepared and will be presented with the next Step 1 EE). Our primary monitoring focus for this IM is to evaluate the performance of bioremediation inside the source zone. It is anticipated that DPT sampling will be performed approximately 1 to 2 years following the injection, and groundwater samples can be collected from the CVOC 10X NADC area, if deemed appropriate.*

# Response to Comments

- Jacobs IMWP Comment #11: Section 4 – Consider sampling MWD and MWH for dissolved hydrogen gas on an annual basis during the performance monitoring sampling events.

- *Response: Dissolved hydrogen concentrations are not necessary for the evaluation of dechlorination of CVOCs. Hydrogen is the only electron donor that Dehalococcoides (Dhc) can utilize to dechlorinate CVOCs, but other information can be used to evaluate if dechlorination is occurring. As part of this IM, CVOCs, total organic carbon (provides information about electron donor), methane, ethane, and ethene (provides information on whether complete dechlorination is occurring), and Dhc and vinyl chloride-reductase (vcrA) (provides information on organisms and genes responsible for dechlorination) will be monitored. These constituents provide more than adequate information to evaluate the progress of microbial mediated reductive dechlorination.*

# Post-Injection Monitoring

- Supplemental DPT sampling
  - Anticipated to occur 1 to 2 years after injection
  - Provide a more robust understanding of CVOC concentrations
  - Aid in design of additional injection, if required
  - Sample at, or adjacent to, previous DPT locations an/or along centerline of plume

# Additional Injection

- Costing for an additional injection, if warranted, includes the following
  - 37 drums of SRS®-SD (~50% dosing)
  - Injection at all 29 locations and across same treatment interval
  - 298,000 gallons of SRS®-SD solution
  - Water will be treated with dechlorinator and made anaerobic if necessary
  - 50 gallons chase water per injection interval
    - ~3,250 gallons of chase water
  - Information included in UIC memo

# Response to Comments

- TT IMWP Comment #10: Section 6.3 – Information relating to a secondary injection event is not provided in detail. Since there is potential for a secondary injection event, please provide additional information.

- *Response: The details of a second injection event would be based on the results from the performance monitoring and the DPT groundwater sampling event; therefore, it the details of a second injection event have not been included in this IMWP.*

# Response to Comments

- TT IMWP Comment #11: Section 6.3 – If a secondary injection event is required, the monitoring duration would most likely extend to at least 5 years (i.e., ~2-3 years first injection, 2+ years second injection, 1+ years post-remediation monitoring). Please confirm monitoring durations.

- *Response: The monitoring duration is dependent on whether there is a second injection event and the results from the performance monitoring; therefore, the monitoring duration was not stated. Costs are included for monitoring up to 5 years to be conservative.*

# Cost Estimate

- Detailed costing included in Table 6-1
  - Capital Cost (including baseline sampling) - $280,000
  - Annual monitoring and reporting - $40,000 per year
  - Supplemental DPT sampling - $30,000
  - Additional injection event - $195,000

- Total implementation cost
  - 1 year of monitoring - $320,000
  - 3 years of monitoring - $630,000
  - 5 years of monitoring - $710,000

# Response to Comments

- TT IMWP Comment #12: Table 6-1 – The IMWP costs for bioremediation are approximately $80,000 higher than the highest-range costs for air sparging. Please add a slide refreshing the screening criteria between bioremediation and air sparging to validate proceeding with bioremediation in reference to the updated costs completed in the Step 3 EE. We acknowledge that bioremediation is preferred, since site interferences are decreased.

- *Response: The cost details are provided in the response to Jacobs's ADP comment #1.*

  *The technology evaluation summary from the Step 2 EE is provided below.*
  - *Why not air sparging?*
    - *Trenching at an active facility with large pieces of equipment and personnel that work in the area*
    - *Heavy equipment will likely require specialty vault boxes and geotech evaluation for trenching*
    - *Likely mounding from AS and possible entrainment issue with SVE*
    - *Scale up/expansion issues (when looking at plume as a whole) – due to presence of road/railroad yard and woods/wetland*
    - *Engineering solutions can be developed, but there are risks*
  - *Why Bioremediation?*
    - *Passive implementation*
    - *Ideal geochemistry*
    - *Reduced O&M&M (monitoring only)*
    - *Amenable to scaling*
    - *More cost effective than EZVI*

# Response to Comments

- TT ADP Comment #4: Slide 25 (new slide 63) – Based on site conditions and remedy assumptions, how long does Geosyntec anticipate monitoring most likely to be required (i.e., which implementation cost is most likely)? A second injection event is fairly typical as a polishing step and may be logically required, making the interim measure a 5+ year option realistic.

- *Response: Monitoring of the passive IM is anticipated to be 3 to 5 years. Additional monitoring of the area will likely be required and those costs are not included in this IMWP.*

# Cost Estimate

- TT IMWP Comment #9: Section 5 – It is our understanding that the Step 4B EE may not be a requirement for future IMs. We suggest Geosyntec discuss with the RPM whether to retain the Step 4 B EE.

- *Response: After discussion with the RPM, the Step 4B will be removed from the IMWP and the costing.*

# Test Consensus

- Test Consensus

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# MEMORANDUM

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| Date: | 13 May 2014 |
| To: | Anne Chrest |
| Copies to: | NASA Remediation Team |
| From: | Rebecca Daprato, Ph.D., P.E., Jim Langenbach, P.E., BCEE, and Jill Johnson, P.G. |
| Subject: | Contractor's Road Heavy Equipment Area Hot Spot 1 Step 3 Engineering Evaluation and IM Work Plan – Response to Comments |

Comments on the Step 3 Engineering Evaluation and IM Work Plan were received and are addressed below. The comment is listed first and Geosyntec's response is provided in italics below the comment.

**Jacobs Comments:**

Jacobs has reviewed the Step 3 Engineering Evaluation (EE) IM Work Plan (WP) and ADP for the CRHE Area. We generally concur with the Source Zone treatment preliminary design presented in the IMWP and ADP (SZ; TCE >11,000 ppb).

We have two general comments to suggest for Team discussion, rather than for Geosyntec to address. First, it is difficult to review the ADP without referring to the IMWP to fully understand the approach. Sometimes it is a simple thing (incomplete legends on ADP figures, probably in the interest of presentation on a slide). Others are technical; for example, dosing assumptions/calculations were found only in the IMWP. The Team should consider discussing the level of detail for a Step 3 ADP, or whether the Step 3 deliverable should be an IMWP only. Second, we noted that the estimated capital cost increased from $167k to $280K between the Step 2 and Step 3 ADPs. We can see that the amendment was changed and the dilution factor was changed, both contributing to the additional cost. The current cost estimate for bioremediation is about the same as the Step 2 ADP provided as a capital cost for air sparging. (Granted, there are construction concerns with air sparging, and cost is not the sole selection criterion for remedial approach.) Some discussion regarding the level of fidelity for Step 2 cost estimates would be helpful for us, as the newer members of KSC's Remediation Program.

We present the following specific comments for your consideration:

**IM Work Plan**

1. Section 3 – Agree with the injection locations and treatment intervals. Expanding the treatment zone where there was no 46-50 ft bls sample is a good, conservative approach.

   Please include a preliminary injection details table (understanding that this will be finalized in the implementation work plan). This table should include injection location identification, GPS coordinates of the injection location, injection depths/lifts, and volume of SRS®-SD/water solution per lift. The table should be inserted into Section 3 of the IMWP.

   *Response: A table detailing the injection details is provided in Appendix E. This table (Electron Donor Dosing and Injection Volume Calculations) provides details for the injection locations based on depth interval. The information provided includes the following: (i) treatment interval; (ii) the number of 2-foot injection lifts within this interval; and (iii) the volume of solution per lift. A table or figure providing the injection location GPS coordinates should be included in the IM Implementation Work Plan. To provide maximum flexibility to NASA for implementation, the injection details were kept generic such that the A&E/vendor implementing the project has the ability to tailor the implementation to their technical strategy/vendor equipment.*

2. Section 3 – Were any other DPT injection techniques considered in addition to the drop-tip injection method? A technique that includes active pore space dilation or that induces more pressure may reduce the overall field time and would reduce the volume of water required, while still achieving the required 8 ft ROI.

   *Response: By active pore space dilation, we are assuming this terminology is referring to fluidizing and/or fracturing the formation (dilation of pore spaces) using high flow and pressure (kinetic energy) applications. We have used this approach (as well as others) at KSC, and elsewhere in Florida, as well as the Vironex system which is the system proposed in this IMWP (note the IMWP does not require the Vironex approach). The Vironex system achieved distribution objectives at LC34 Hot Spot 1 as a delivery system; therefore, we proposed the use of the Vironex system in the IMWP.*

3. Section 3 – Does SRS®-SD contain sodium bicarbonate or is the sodium bicarbonate an addition in the field? The SRS®-SD product information provided in Appendix C does not list sodium bicarbonate as an ingredient. If it is a field addition, and given the large amounts of water contemplated, is sodium bicarbonate addition at 6-8 g/L as a buffer necessary? We assume that the make-up and chase water will have a near neutral pH.

   *Response: SRS®-SD does not normally contain sodium bicarbonate, but it will be added by the manufacturer during the manufacturing process. The addition of the sodium bicarbonate is to provide additional buffering capacity to the aquifer to reduce the pH*

*reduction that can occur as the substrate ferments while in the aquifer. There was no additional cost for the addition of sodium bicarbonate to the SRS®-SD.*

4. Section 3 – Include a section regarding proper abandonment of injection boreholes. The implementation section should also include a strategy for how injections will occur around previous completed injection locations. Proper abandonment and injection strategy is imperative in minimizing the potential of daylighting, as you know.

   *Response: The injection boreholes will be abandoned by tremie grouting the boreholes, and this information will be added to the IMWP. Information on injection strategy should be included in the IM Implementation Work Plan, since it will ultimately be dependent on the equipment/vendor utilized for the injection work.*

5. Section 4 – Overall, we agree with the location and intervals of the new performance monitoring wells. At DPT-202, 10x NADC exceedances are observed over the 21-30 ft bgs interval. TCE 1% solubility exceedances are observed over the 36-40 ft. interval. The IMWP only proposes installing a performance monitoring well at the 23-28 ft. bgs interval. Consider installing another performance monitoring well at this proposed location over the 36-40 ft. bgs interval.

   *Response: The monitoring plan was designed with a minimum number of monitoring wells to provide adequate information to evaluate the bioremediation implementation (understanding that a robust DPT groundwater sampling event would also occur). The screen interval (23 to 28 ft BLS) for proposed monitoring well MWC at location DPT0202 was selected to monitor the shallow CVOC concentrations that are greater than 10XNADC in that area. There are six other proposed monitoring wells that are screened in the interval where TCE concentrations are greater than 1% solubility (MWA, MAB, MWD, MWE, MWG and MWH). Based on the rationale provided, we do not believe that a monitoring well screened from 36 to 40 ft BLS at DPT0202 is warranted.*

6. Section 4 – All UIC sampling locations are located along the center line of the treatment area. No UIC sampling locations are located along the perimeter of the treatment area to monitor for any lateral movements that could potentially result from the groundwater injections. Consider adding MW0026 to the UIC sampling routine.

   *Response: We believe the upgradient (MW0025) and downgradient (MW0029) UIC monitoring wells are adequate to monitor if groundwater outside the injection area is impacted by the injectate.*

7. Section 4 – MW0029 is located approximately over 150 ft away from the treatment area and is screened below the treatment depths. Consider replacing MW0029 with IW0014I for UIC sampling or install a well over the 30-40 ft bgs interval west of the treatment area.

*Response: Monitoring well MW0029 is included as a UIC well to evaluate if there is migration downgradient of the injection area. The injections will occur from 14 to 50 ft BLS; therefore, the screen interval of monitoring well MW0029 (40 to 50 ft BLS) is appropriate. We do not believe the addition of monitoring well IW0014I is necessary (see response to comment #6 above).*

8. Section 4 – The majority of the performance monitoring sampling is within the treatment the SZ treatment area. Consider adding monitoring wells that are outside the treatment area to better determine the overall effectiveness of the remedial action. Propose adding MW0025 and MW0027 to monitor the 10 x NADC exceedance areas. Also, consider adding MW0026 to the performance monitoring schedule to monitor the perimeter along the SZ treatment area.

   *Response: The area outside the SZ will be monitored as part of the Interim Groundwater Monitoring (IGM) program (The IGM Plan is currently being prepared and will be presented with the next Step 1 EE). Our primary monitoring focus for this IM is to evaluate the performance of bioremediation inside the source zone. It is anticipated that DPT sampling will be performed approximately 1 to 2 years following the injection, and groundwater samples can be collected from the CVOC 10X NADC area, if deemed appropriate.*

9. Section 4 – MW0026 is located along the southern edge of the SZ treatment area. Due to its proximity to the treatment area, consider abandoning and re-installing MW0026 due to preferential pathway concerns and potential daylighting issues.

   *Response: If the injection technique proposed in the IMWP is utilized, we do not anticipate daylighting issues at monitoring well MW0026 (no daylighting issues occurred at LC34 Hot Spot 1 where we had monitoring wells [with secure caps] within 2 feet of injection locations). If an alternative injection vendor/technique is ultimately utilized, the abandonment of the well should be considered in the IM Implementation Work Plan.*

10. Section 4 – Due to preferential pathway concerns and potential daylighting issues, performance monitoring wells should be installed after groundwater injections are complete. DPT VOC concentrations can be used for baseline comparisons instead. MW0024, MW0025, and MW0026 could be used to monitor for mounding during injections.

    *Response: See response to comment #9. Proposed monitoring wells MWA, MWC, MWF, and MWH and existing monitoring wells MW0024, MW0026 and IW0014I will be monitored for mounding*

11. Section 4 – Consider sampling MWD and MWH for dissolved hydrogen gas on an annual basis during the performance monitoring sampling events.

*Response:* *Dissolved hydrogen concentrations are not necessary for the evaluation of dechlorination of CVOCs. Hydrogen is the only electron donor that Dehalococcoides (Dhc) can utilize to dechlorinate CVOCs, but other information can be used to evaluate if dechlorination is occurring. As part of this IM, CVOCs, total organic carbon (provides information about electron donor), methane, ethane, and ethene (provides information on whether complete dechlorination is occurring), and Dhc and vinyl chloride-reductase (vcrA) (provides information on organisms and genes responsible for dechlorination) will be monitored. These constituents provide more than adequate information to evaluate the progress of microbial mediated reductive dechlorination.*

12. Section 4 – If bioaugmentation is being considered as part of the remedial action, baseline sampling should include a *Dhc* census (including tceA and vcrA), at a minimum.

    *Response:* *Analysis of groundwater samples for Dhc and vcrA is proposed as part of the IM at proposed monitoring wells MWD (36 to 40 ft BLS) and MWH (26 to 30 ft BLS). The analysis for Dhc will provide information on the size of the Dhc population and the vcrA gene will provide information on the reductase gene responsible for VC to ethene dechlorination. The tceA gene is the Dhc reductase gene that is responsible for dechlorination of TCE to VC. We believe that quantifying the Dhc population and the vcrA gene provides valuable information and that quantifying the tceA gene is not necessary.*

13. Section 4 – Monitoring wells at the GSA Reclamation Yard IM were installed with a 2' x 2' x 4" concrete pad and traffic vaults. Due to the heavy equipment traffic at GSRY, several of the pads and wells were damaged. Consider installing more robust pads (3' x 3' x 6" with reinforcement, or better) in an attempt to better withstand the heavy equipment traffic that will likely be present at CRHE.

    *Response:* *Geosyntec concurs and proposes to use 2′x2′x6″ reinforced pads and the IMWP will be updated to reflect this.*

**Step 3 EE ADP**

1. General – Please discuss the substitution of SRS®-SD for EOS®, and the flow-down changes (such as dilution), plus any other factors that were notably different between Step 2 assumptions and Step 3 design. This will provide the Remediation Program with clear documentation of the reason for the change in capital cost. We do not disagree with the selection of SRS®-SD, but since EOS® was presumed to yield representative costing for whatever amendment was developed in Step 3 and there was a notable increase in cost, the reason for selection should be described.

    *Response:* *The changes between the Step 2 and the Step 3 EE included the following: (i) modification of the electron donor from EOS® to SRS®-SD; (ii) increasing the dosing of*

*the electron donor from 0.5% to 0.7%;(iii) the method of calculating the pore volume of the treatment area (considering overlap and drift outside the treatment area); and (iv) an increase in number of DPT sampling days from three to five. A description of our rationale for these modifications is provided below.*

*The decision to substitute SRS®-SD for EOS® stemmed from our experience with both products. Over the past couple of years, the EOS® products have arrived at our sites with a pH that was less than 6, which is below neutral and can influence the pH of the aquifer. SRS®-SD has a neutral pH and we have had positive results.*

*The SRS®-SD costing provided was their estimated 2015 costing ($940/drum), since NASA is anticipating this IM will not be implemented until 2015 (The estimated 2014 pricing is ~$882/drum). The cost for EOS provided in the Step 2 EE was an anticipated 2014 cost and they were not able to provide us an estimated cost for 2015. This change affected the cost because the cost of a drum of SRS®-SD is approximately $940/drum and the cost of a drum of EOS® was approximately $730/drum.*

*The decision to increase the electron donor dosing from 0.5% to 0.7% was based on comments received during the Step 2 EE that were concerned that the dosing of 0.5% was low. As stated in the IMWP, Geosyntec generally recommends a dosing of 0.5% to 1% of pore volume (with oil); therefore, the dosing was increased to 0.7%. This change affected the cost because the volume of EVO increased. The cost increase is discussed below.*

*During the Step 2 EE, the treatment volume was estimated by using the area of the SZ times the treatment interval (3,050 square feet x 30 feet). For the IMWP, since the treatment interval varied by location, the pore volume was calculated for each injection location (assuming an 8-foot radius of influence and a specific treatment interval), and then summed to provide a total treatment volume. This approach more accurately reflects the total treatment volume, since it includes the overlapping of the radius of influence (in addition to the treatment of some areas outside the specific SZ iso-contour). The change in this calculation increased the total treatment volume (from ~ 200,000 gallons to 300,000 gallons), which increased the amount of EVO solution required and increased the number of days that injections would occur.*

*The cost from the Step 2 EE and the Step 3 EE were compared based on the cost per cubic yard treated. A summary of the cost is provided below:*

- *Step 2 EE cost*
    - *~$129/cy based on total cost for 3 years ($437,000) and cubic yards treated (3,390 cy)*

- *~$164/cy based on total cost for 5 years ($557,000) and cubic yards treated (3,390 cy)*

- *Step 3 EE cost*
  - *~$145/cy based on total cost for 3 years ($626,500) and cubic yards treated (4,317 cy)*
  - *~$164/cy based on total cost for 5 years ($708,700) and cubic yards treated (4,317 cy)*

*The costs summarized above show that from the Step 2 EE to the Step 3 EE, the treatment volume has increased, but that the cost per cubic yard is similar.*

2. Slide 5 – Shows the SZ Area and 10x NADC exceedances area. Since this figure was based upon the DPT results presented in Slide 9, consider having the information on Slide 9 precede Slide 5.

   *Response: The location of this slide is to help aid in the discussion of treatment intervals and monitoring depth, the slide was not intended to be provided as background information.*

3. Figures 3-2 and 3-3 – Treatment depths on Figures 3-2 and 3-3 (slides 14 and 15) are presumably indicated by the color blocks, but there is no legend or key to that effect. Recommend adding a call-out or legend.

   *Response: A printing error caused the injection intervals to not be presented on Figures 3-2 and Figures 3-3. The figures are presented correctly in the ADP, and have been reprinted and provided to the Team.*

4. Slide 16 – Please include the assumptions used to generate the volume estimates in the chart on Slide 16 (porosity, pore space saturation, ROI, vertical thickness, etc.). We found these in Appendix E of the IMWP.

   *Response: Slide 16 is a summary of the information presented in Appendix E of the IMWP. A reference to Appendix E has been added to the slide, since the ADP and IMWP are meant to be complimentary documents.*

5. Slide 17 – Please call out the wells that will be monitored to ensure that mounding does not occur.

   *Response: Proposed monitoring wells MWA, MWC, MWF, and MWH and existing monitoring wells MW0024, MW0026 and IW0014I will be monitored for mounding. This information will be added to the IMWP.*

**Tetra Tech's Comments:**

Tetra Tech generally concurs with the information presented in the Contractor's Road Heavy Equipment Area (SMWU 055) Interim Measure Work Plan (IMWP) with the below comments. Overall, the package was well written and completed with a high level of thoroughness and was clearly presented.

**IMWP**

1. Section 1.3 – Please verify if the objective the IM is to evaluate the effectiveness of bioremediation or to treat the plume to an endpoint (e.g., NADC, transition to MNA, etc.). As currently stated, the IM objectives appear worded towards a pilot study rather than an IM.

   *Response: The IM objective is as stated in the ADP and the IMWP and is worded this way because the IM is focused on the SZ (located within a larger plume).*

2. Section 2.7 – It would be helpful in evaluating biological conditions if chloride data at the injection depth intervals is provided in this section. Overall, this section was very helpful in supporting the appropriateness of bioremediation at CRHE.

   *Response: Chloride data was not collected at this site. During the data gap sampling in December 2013, the salinity from monitoring wells MW0025 (0.77%) and MW0029 (1.5%), indicate that chloride should not affect Dhc. Additionally, ethene and ethane were detected at the site and that suggests that complete dechlorination is occurring.*

3. Section 3.1 – The inherent benefit of bioaugmenting may overweigh a "wait and see" approach. For the small capital expenditure, enhanced dechlorination may occur while biostimulation conditions are at their best and the appropriate microbial populations are present. We suggest adding the proposed KB-1 into the initial injection design to account for any uncertainty with the dechlorination potential of the indigenous populations. Alternately, microcosm testing prior to implementation of the IM may be beneficial to confirm full dechlorination and kinetics with the indigenous populations versus KB-1 bioaugmentation.

   *Response: Based upon our sampling results (presence of ethene and ethane and presence of Dhc and vcrA), we do not believe microcosm testing is necessary, since the results indicate that complete reductive dechlorination is occurring. We agree that bioaugmentation would be beneficial, but is not necessary. We propose that the decision to bioaugment be made based on the baseline sampling results. Groundwater samples will be analyzed for Dhc and vcrA from two proposed monitoring wells and if the Dhc and vcrA concentration is less than $10^6$ gene copies per liter, bioaugmentation will be performed.*

4. Section 3.2 – It is our understanding that SRS-B contains ingredients for aquifer buffering (based on Terra Systems' website). Please confirm if sodium bicarbonate is in the costed product (SRS-SD) or if a custom formulation was derived for CRHE. Will any additives result in secondary UIC issues (e.g., addition of sodium bicarbonate forming sodium salts)?

   *Response: There was no additional cost for adding sodium bicarbonate to the SDS®-SD. SRS®-B is formulated for low pH aquifers and has 5 to 15% buffer. Per the FDEP Acceptance Letter provided in Appendix D of the IMWP, UIC monitoring associated with the injection of SRS®-SD requires monitoring of sodium, total dissolved solids, and total recoverable petroleum hydrocarbons. Since the UIC monitoring includes sodium, there should be no secondary UIC issues. Also, by approximating the resulting concentration of sodium in the 305,000 gallons of pore volume, the concentration of sodium in the aquifer due to the addition to 8 g/L of sodium bicarbonate to the SRS®-SD is less than 0.03 g/L, and the KSC Upper Range of Background for sodium is 15 g/L (FDEP GCTL is 0.16 g/L).*

5. Section 3.3.1 – Since specific vendor and subcontractors cannot be selected at a design stage and contracting mechanisms require competitive bidding, please include "or approved equivalent" or similar language when specifying products and services.

   *Response: We assume this comment is referring to the following sentence:*

   *"The SRS®-SD amendment will be injected into the subsurface by a DPT injection subcontractor (worked scoped assumed the use of Vironex, Inc.)"*

   *We intended the above language in the text to allow for the use of any vendor (which was the intent). The text above was meant to provide information on how we costed and scoped the work. The text will be modified to also include the "or approved equivalent" language.*

   Section 3.3.1 – Please include a table/calculation (with figure referencing locations) showing the injection criteria and assumptions for each injection point. This would include information such as coordinates, treatment interval, groundwater volume, dosage concentration, substrate volume, chase water volume, lift length, lifts per boring, substrate and chase volume per lift, etc.

   *Response: See response to Jacobs's IMWP comment # 1.*

6. Section 3.3.3 – Were costs and time required for conditioning dilution and chase water included in the design? For example, how many and what size tanks will be required and how much dechlorinator and oxygen scavenger will be required.

*Response:* *Yes, time was considered; however, it is minimal when using the sodium sulfite as presented in the IMWP. The number and size of tanks is an Implementation Work Plan Detail.*

*Note that for the evaluation in the IMWP, the mixing was based upon the vendor using 250-gal mixing tanks as described in Section 3.3.3. As described in Section 3.3.3 of the IMWP, 0.24 g/gal of sodium sulfite would be added (calculations included in Appendix E). The amount of dechlorinator added would change based on product (or natural conditioning may be feasible).*

7. Section 3.3.3 – The text indicates that injection activities will occur at up to 10 locations, simultaneously. Can more information be provided to detail the specific approach for injections (i.e.: injection point sequencing, etc.)?

   *Response:* *Based on information provided by Vironex, they will provide the equipment to allow the injections to occur at up to 10 locations simultaneously. We believe it is best to determine the injection point sequencing in the field, since the number of locations that can be injected into simultaneously will be dependent on how the formation accepts the injectate, proximity to previously abandoned locations, etc.*

8. Figure 3-2/3-3 – It is not clear what this figure is presenting, as injection locations and intervals are not depicted. Please revise showing applicable injection locations and treatment interval within the cross section. See Slides 14 and 15 of the Step 3 EE.

   *Response:* *See response to Jacobs's IMWP comment #3.*

9. Section 5 – It is our understanding that the Step 4B EE may not be a requirement for future IMs. We suggest Geosyntec discuss with the RPM whether to retain the Step 4 B EE.

   *Response:* *After discussion with the RPM, the Step 4B will be removed from the IMWP and the costing.*

10. Section 6.3 – Information relating to a secondary injection event is not provided in detail. Since there is potential for a secondary injection event, please provide additional information.

    *Response:* *The details of a second injection event would be based on the results from the performance monitoring and the DPT groundwater sampling event; therefore, it the details of a second injection event have not been included in this IMWP.*

11. Section 6.3 – If a secondary injection event is required, the monitoring duration would most likely extend to at least 5 years (i.e., ~2-3 years first injection, 2+ years second injection, 1+ years post-remediation monitoring). Please confirm monitoring durations.

*Response: The monitoring duration is dependent on whether there is a second injection event and the results from the performance monitoring; therefore, the monitoring duration was not stated. Costs are included for monitoring up to 5 years to be conservative.*

12. Table 6-1 – The IMWP costs for bioremediation are approximately $80,000 higher than the highest-range costs for air sparging. Please add a slide refreshing the screening criteria between bioremediation and air sparging to validate proceeding with bioremediation in reference to the updated costs completed in the Step 3 EE. We acknowledge that bioremediation is preferred, since site interferences are decreased.

    *Response: The cost details are provided in the response to Jacobs's ADP comment #1.*

    *The technology evaluation summary from the Step 2 EE is provided below.*

    - *Why not air sparging?*
        - *Trenching at an active facility with large pieces of equipment and personnel that work in the area*
        - *Heavy equipment will likely require specialty vault boxes and geotech evaluation for trenching*
        - *Likely mounding from AS and possible entrainment issue with SVE*
        - *Scale up/expansion issues (when looking at plume as a whole) – due to presence of road/railroad yard and woods/wetland*
        - *Engineering solutions can be developed, but there are risks*
    - *Why Bioremediation?*
        - *Passive implementation*
        - *Ideal geochemistry*
        - *Reduced O&M&M (monitoring only)*
        - *Amenable to scaling*
        - *More cost effective than EZVI*

13. Appendix E – Please provide entire calculation, as the provided hard copy calculation could not be reviewed since it only shows the outputs and inputs, assumptions, and calculations are not provided. Note that a CD was not received to check if this information was to be provided electronically.

    *Response: Appendix E provides the assumptions and calculations (the equations used in all the calculations are in the heading of each column) for each step for the Electron Donor Dosing and the ROI calculations. The substrate estimating tool was produced by*

*ESTCP. The EE step process does not require that source files for all calculations, models, etc. be provided on a CD for review.*

**Step 3 EE**

The following comments for the Step 3 EE ADP are in addition to those commented on the IMWP above:

1. Slide 7 – Please see IMWP comment regarding to IM objectives.

   *Response: See response to Tetra Tech IMWP comment #1.*

2. Slide 11 – Suggest numbering DPT points and providing a reference injection calculation (See IMWP table)

   *Response: The DPT injection locations can be numbered as part of the IM Implementation Work Plan.*

3. Slide 14/15 – Figures 3-2 and 3-3 do not match these figures. Please revise, as commented in IMWP.

   *Response: See response to Jacob's ADP comment #3.*

4. Slide 25 – Based on site conditions and remedy assumptions, how long does Geosyntec anticipate monitoring most likely to be required (i.e., which implementation cost is most likely)? A second injection event is fairly typical as a polishing step and may be logically required, making the interim measure a 5+ year option realistic.

   *Response: Monitoring of the passive IM is anticipated to be 3 to 5 years. Additional monitoring of the area will likely be required and those costs are not included in this IMWP.*

**General Comments**

1. Per IMWP/Step 3 EE requirements, please provide a P&ID for bioremediation equipment (in this case, a PFD would be appropriate). Please also provide details for injection point manifolding and details relating to how each point will be lifted following injection at the multiple locations (stated at up to 10 injections simultaneously).

   *Response: P&ID and PFDs for bioremediation using DPT are vendor specific. Exact details about injection lifting and manifolding will be provided in the implementation work plan when a vendor is selected by the A&E implementing the project. We do not believe that providing details regarding how each injection point will be manifolded and how each point will be lifted following injection provides the level of flexibility desired*

*by NASA. The referenced information should be included in the implementation work plan.*

2. Since CRHE is an active facility, it may be appropriate to provide a site layout/staging plan to provide locations where substrate, equipment, and tank staging are planned to be placed.

   *<u>Response:</u> We concur and believe this should be provided in the implementation work plan.*

# APPENDIX F

# STEP 1 FOR HS2, HCP and LCP ENGINEERING EVALUATION ADP (electronic copy only)

# Contractor's Road Heavy Equipment (CRHE) Area (SWMU055)

## Step 1 Engineering Evaluation

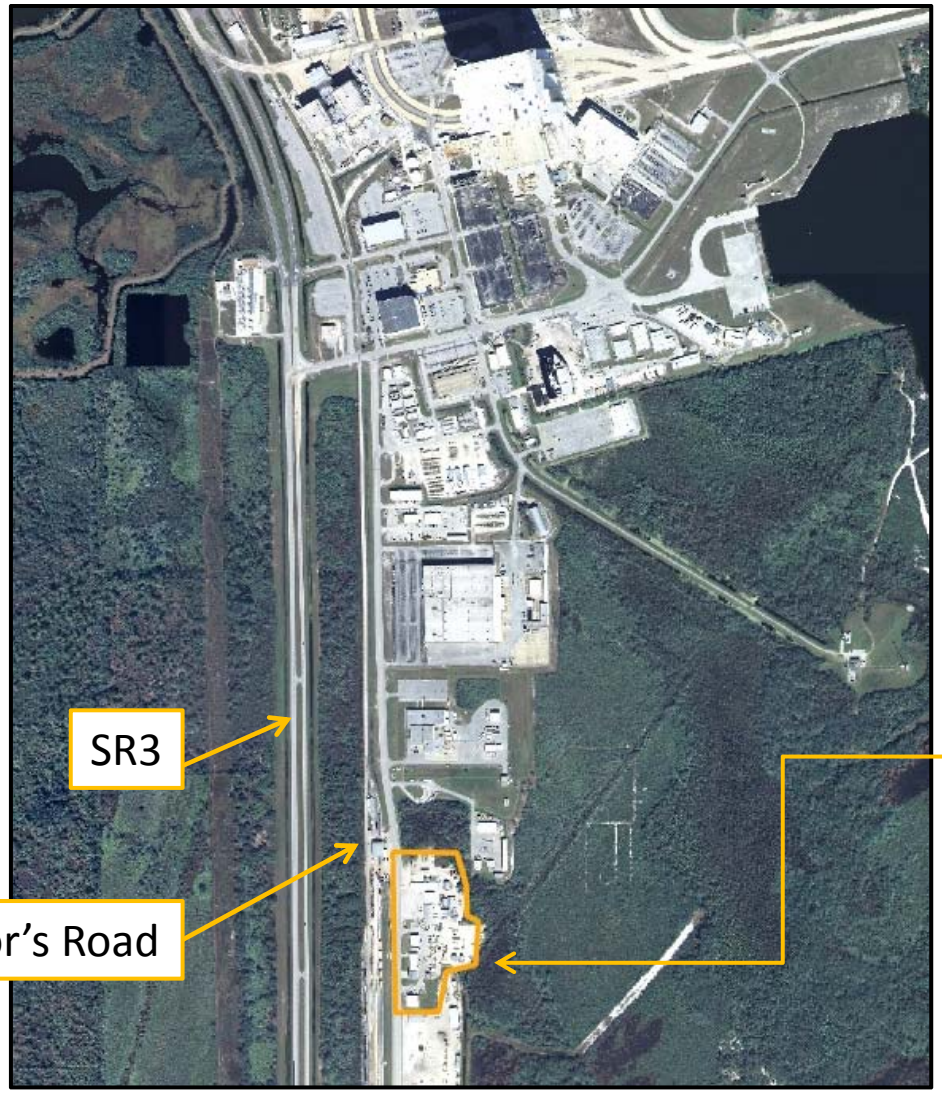
April 2015

# Objectives of Today's Presentation

- Present Step 1A & 1B Engineering Evaluation for
  - Hot Spot 2 (HS2),
  - Low Concentration Plume (LCP),
  - High Concentration Plume (HCP), and
  - Interim Groundwater Monitoring Plan (Section 1C).
- Obtain team consensus on horizontal and vertical delineation for HS2, HCP, and LCP.
- Obtain team consensus on technologies retained for Step 2 evaluation.
- Present the interim groundwater monitoring plan (IGWMP).

Geosyntec consultants

# Site Location



# Site Overview

- Numerous buildings and support structures on eastern portion of site
- Utility corridor adjacent to Contractor's Rd
- RR tracks, wetlands, and heavy vegetation in HS2
- Kennedy Parkway (SR3) borders site to the west

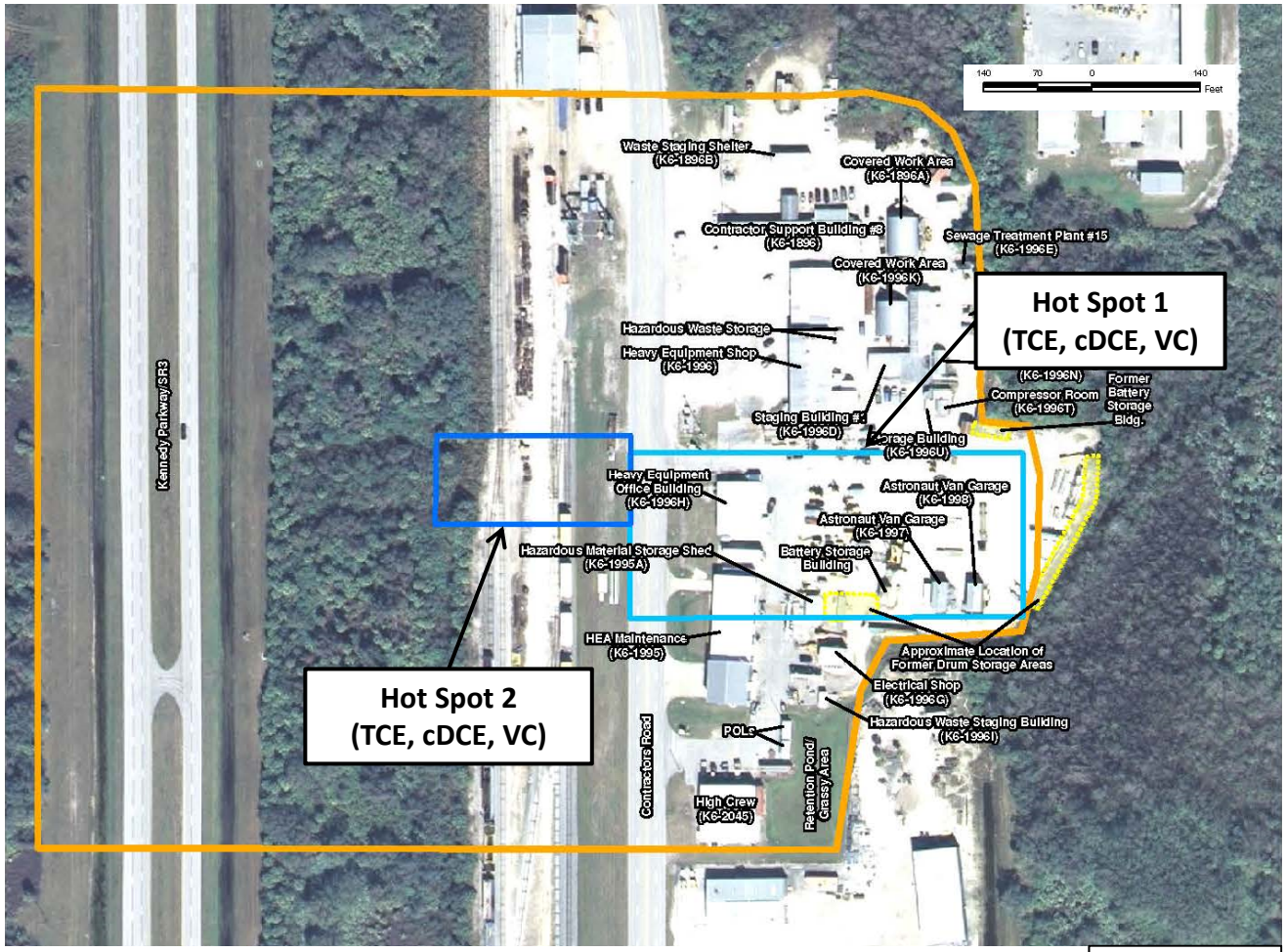



Figure 1

# Site History

- Overall site features:
  - About 23 acres
  - Paved portions
  - Majority of site is gravel and dense woods
  - Many underground utilities
  - Thick road base in some areas to support heavy equipment
- Historical site use:
  - Hazardous Waste Storage/Staging
  - Printed Circuit Board Manufacturing
  - Domestic Wastewater Treatment
  - Heavy Equipment Maintenance/Storage (historical and current use)

*Photograph of heavy equipment storage at CRHE; view facing south from the Contractor's Road entrance driveway, with Heavy Equipment Office Building (K6-1996H) shown on far right.*

# Assessment Background

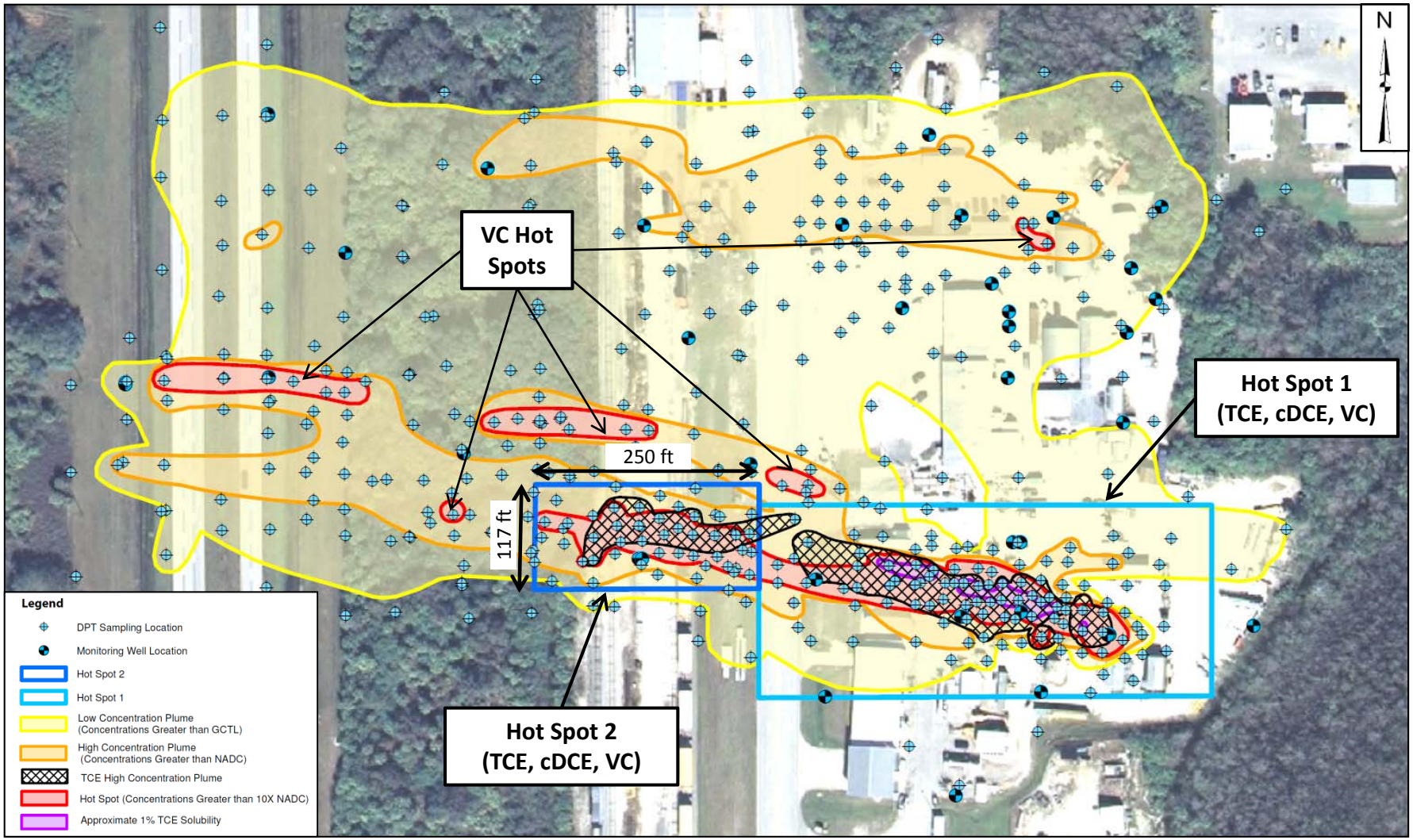
- 1994: Preliminary assessment (EG&G, Inc.)
  - Identified CVOCs and metals in GW
  - Recommended additional assessment
- 1997-1999: RFI (HSW, Inc.)
  - Identified CVOCs and metals in GW
  - VC up to 370 µg/L in northern area (waterloo profiler)
  - TCE up to 41 µg/L (in IW-4I); 0.4 µg/L by end of RFI activities
  - Highest concentrations between about 15 and 45 ft BLS
- 2000: Corrective Measures Study (CMS) (HSW, Inc.)
  - Site clean up goals established for industrial setting
  - LUCIP for GW
  - No active corrective measures recommended
  - LTM program to monitor natural attenuation of CVOCs in GW
  - 10 year estimated timeframe to reach cleanup goals

# Assessment Background

- 2000 – 2005: Semi-annual GW sampling in 7 wells
- 2005 – 2009: Site incorporated into VAB LTM program
- 2010 May: Team approved discontinuing LTM program at the Site until assessment is complete
- 2009 – 2014: Supplemental Site Assessment
- 2013 Dec: HS1 Step 1 approved
- 2014 Feb: HS1 Step 2 approved
- 2014 May: HS1 Step 3 approved

Geosyntec consultants

# Overall Site and Identification of Hot Spots



# Review of HS1

- HS1 features
  - About 3 acres
  - Paved and gravel areas
  - Buildings
  - Underground utility corridor east of Contractor's Road
  - Thick road base in northern part of HS1
  - Heavy equipment (up to 300,000 lbs) transported and stored in the area
  - Overall 10xNADC Plume runs beneath K6-1996H and Contractor's Road

# Review of HS1

- HS1 Step 1 EE – December 2013
- Impacts generally from 8 to 50 ft BLS
- MIP001 installed in HS1 – February 2010
  - Results consistent with DPT groundwater concentrations
- Max concentrations (µg/L)
  - TCE = 160,000 (DPT72, 36 to 40 ft BLS)
  - cDCE = 110,000 (DPT200, 26 to 30 ft BLS)
  - VC = 19,000 (DPT200, 31 to 35 ft BLS)
- SZ contaminant mass is mainly 30 to 46 ft BLS (60%)
- Lithology
  - primarily sand until ~40 to 45 ft BLS
  - below ~ 40 to 45 ft BLS, lithology is silty sand, with varying amounts of clay (semi-confining layer)
- Vertical delineation in source zone confirmed with monitoring well – MW0040

# Review of HS1

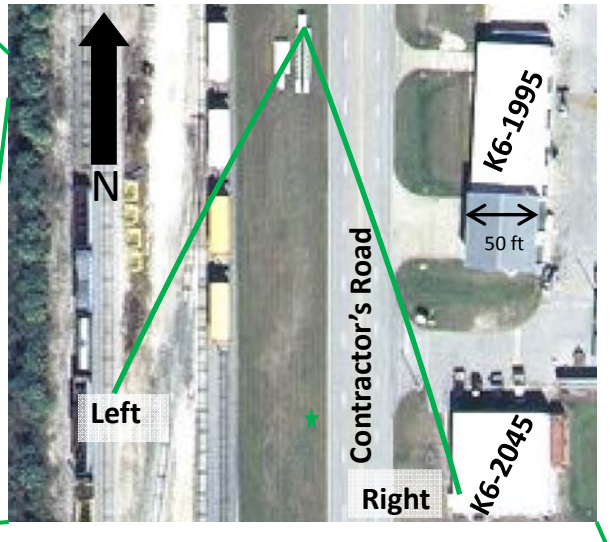
- Team consensus for HS1 Step 1
  - Delineation complete for:
    - SZ (TCE greater than 11,000 µg/L)
    - Hot Spot (TCE and cDCE greater than 10xNADC)
    - HCP (concentration of TCE greater than NADC)
    - LCP (concentration of TCE greater than GCTL)
  - cDCE HCP and LCP are co-mingled with adjacent HS areas; delineation within HS1 is complete
  - VC Hot Spot, HCP and LCP are co-mingled with adjacent HS areas; delineation within HS1 is complete
- Recommended evaluation of bioremediation, emulsified zero valent iron (EZVI), and air sparge/soil vapor extraction (AS/SVE)
- Team Consensus for HS1 Step 2
  - Move forward with design for bioremediation within SZ
- Team Consensus for HS1 Step 3
  - Bioremediation design within SZ (injection of emulsified vegetable oil)

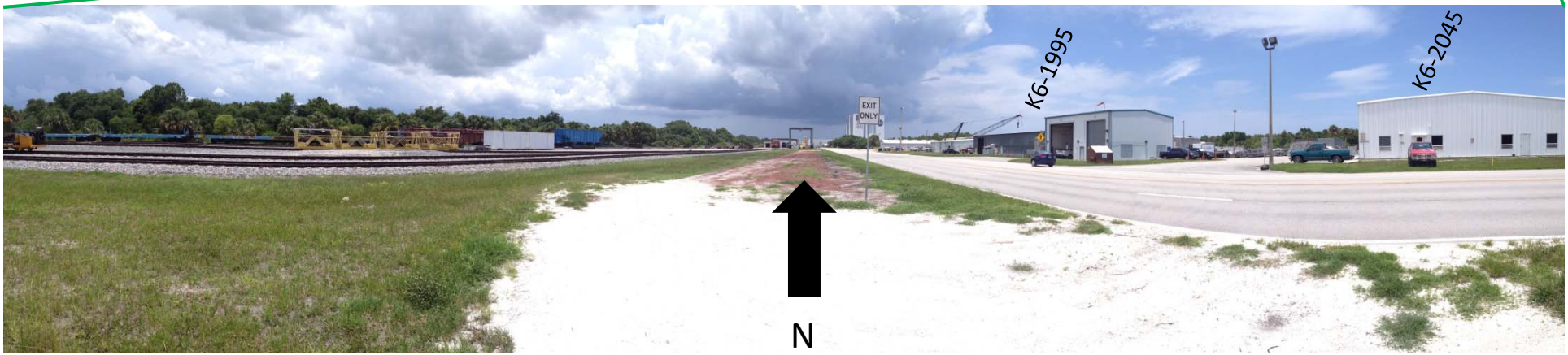
TetraTech Comment #1: Slide 12 (new Slide 13) – Suggest showing the site conditions for the HS2 area, as photos show conditions of HS1.

*Response: Comment noted; pictures of HS2 included.*

# Site Conditions

- Lithology
- Hydrogeologic characteristics



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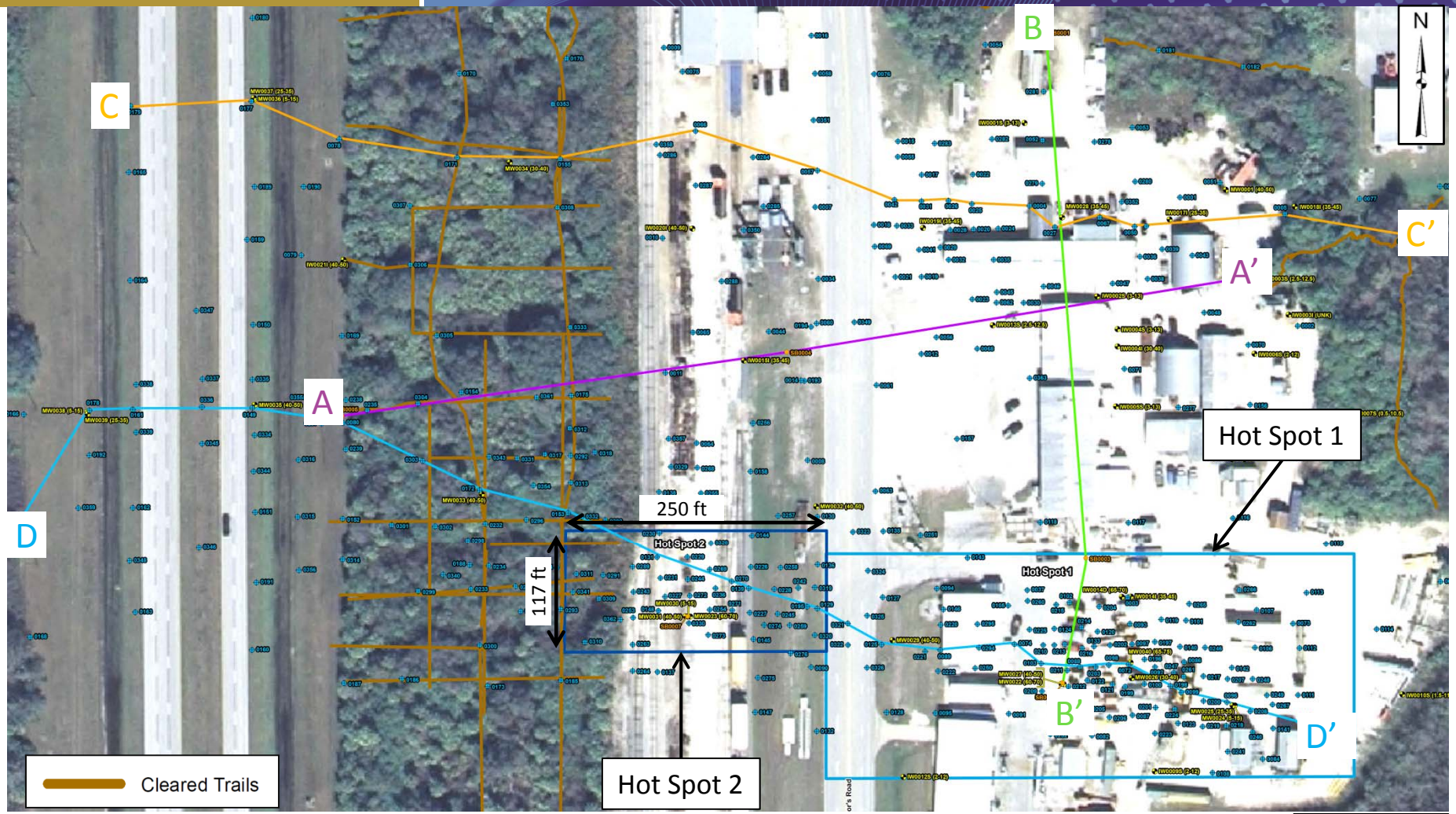
# Lithologic Cross Section Location Map




Note: Cross sections A to A' and B to B' display lithology only; cross sections C to C' and D to D' display subsurface plume profiles.

Figure 2

# Response to Comment

TetraTech Comment #2: Slide 14 (new Slide 16) - Is the lithologic unit present from approximately 48 to 78 feet bls a continuous silty sand with clay unit? Suggest showing any details that may relate to confining/semi-confining conditions, as a relatively thin unit with higher clay content is typically present where the top of this layer is depicted (global to cross sections).

*Response: Comment noted; see revised cross section notes.*

# Lithology A to A'

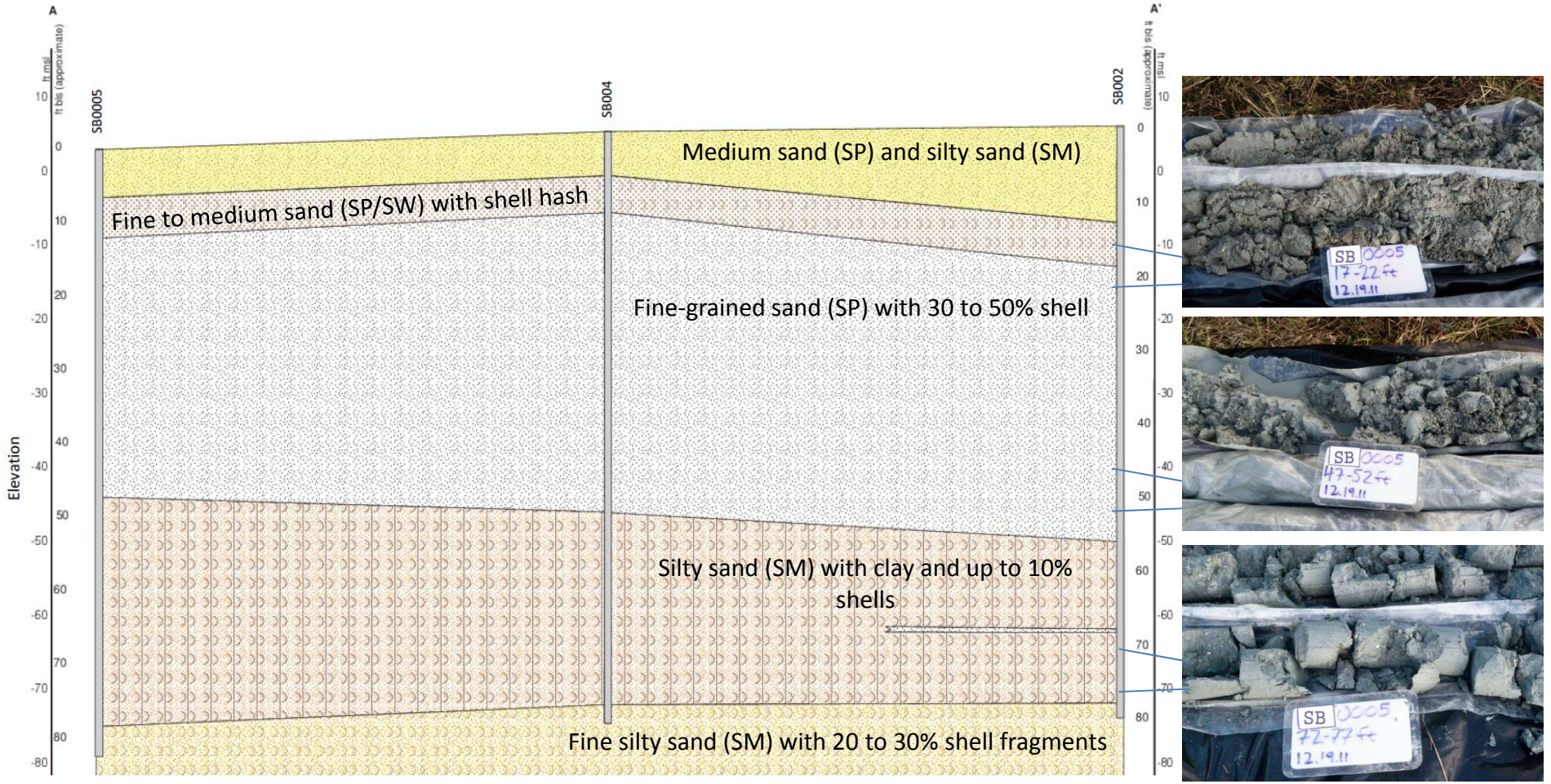



Figure 3

# Lithology B to B'

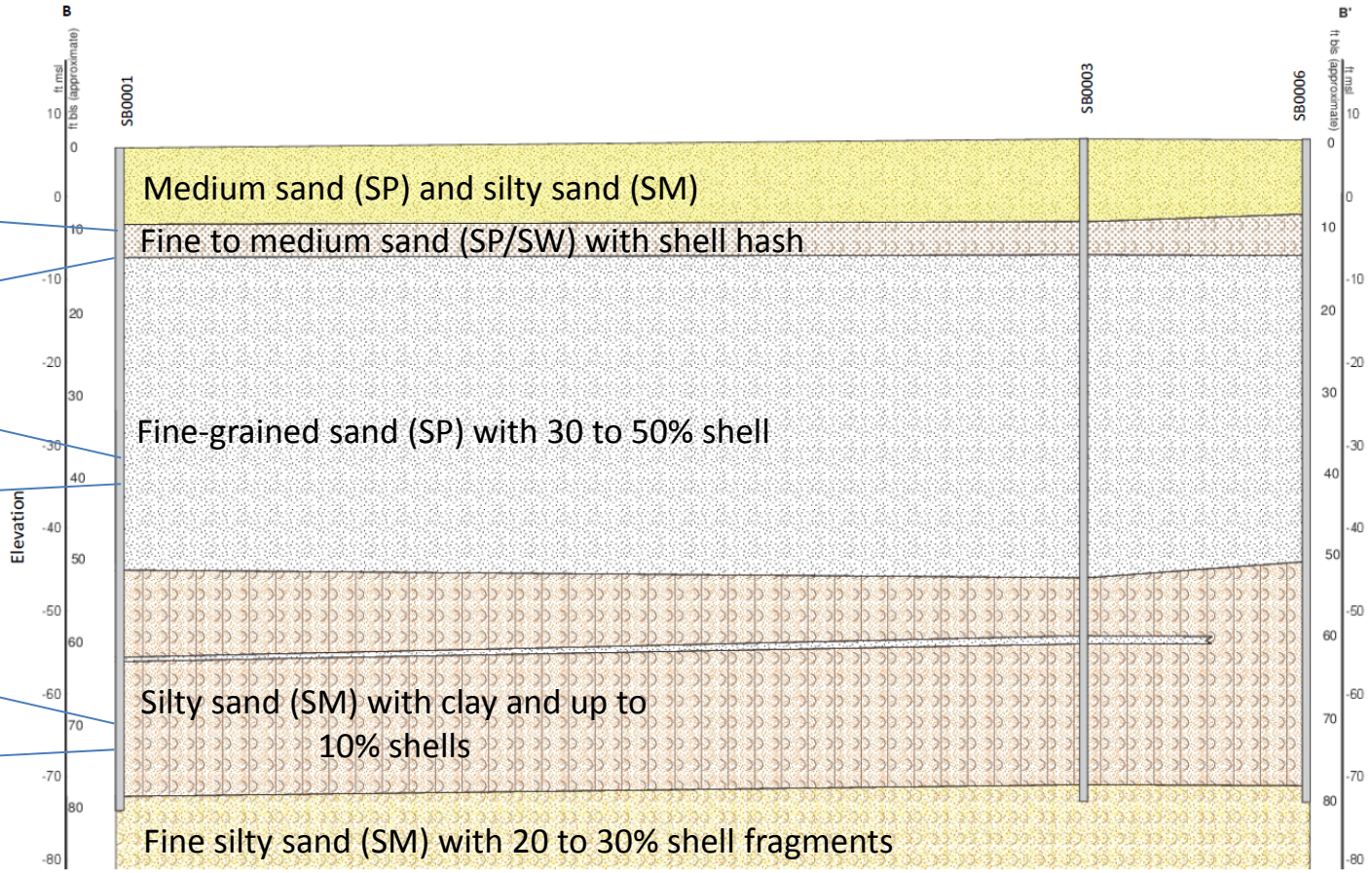



Figure 4

# Hydrogeologic Characteristics

- General groundwater flow direction
  - Shallow: west
  - Intermediate: west
  - Deep: southeast (March 2012) and southwest (July 2013)
- Depth to groundwater 2 to 6 ft BLS
- K of 7.6 ft/d (2,774 ft/yr) from specific capacity tests on shallow and intermediate wells during RFI

| GW Zone | Approx. Depth (ft, BLS) | Av Gradient (ft/ft) | Est. GW Flow Velocity (ft/y)* |
|---|---|---|---|
| Shallow | <15 | 0.002 | 28 ft/y** |
| Intermediate | 15 to 55 | 0.005 | 69 ft/y** |
| Deep | >60 | 0.002 | -- |

*Based on an assumed effective porosity of 0.2.

**Actual groundwater flow velocity is likely highly variable with higher K plume transport intervals and lower K mass storage intervals.

# Current Monitoring Well Network

- 9 shallow (<15 ft BLS) (yellow)
- 21 intermediate (25 to 50 ft BLS) (blue)
- 4 deep wells (>60 ft BLS) (orange)

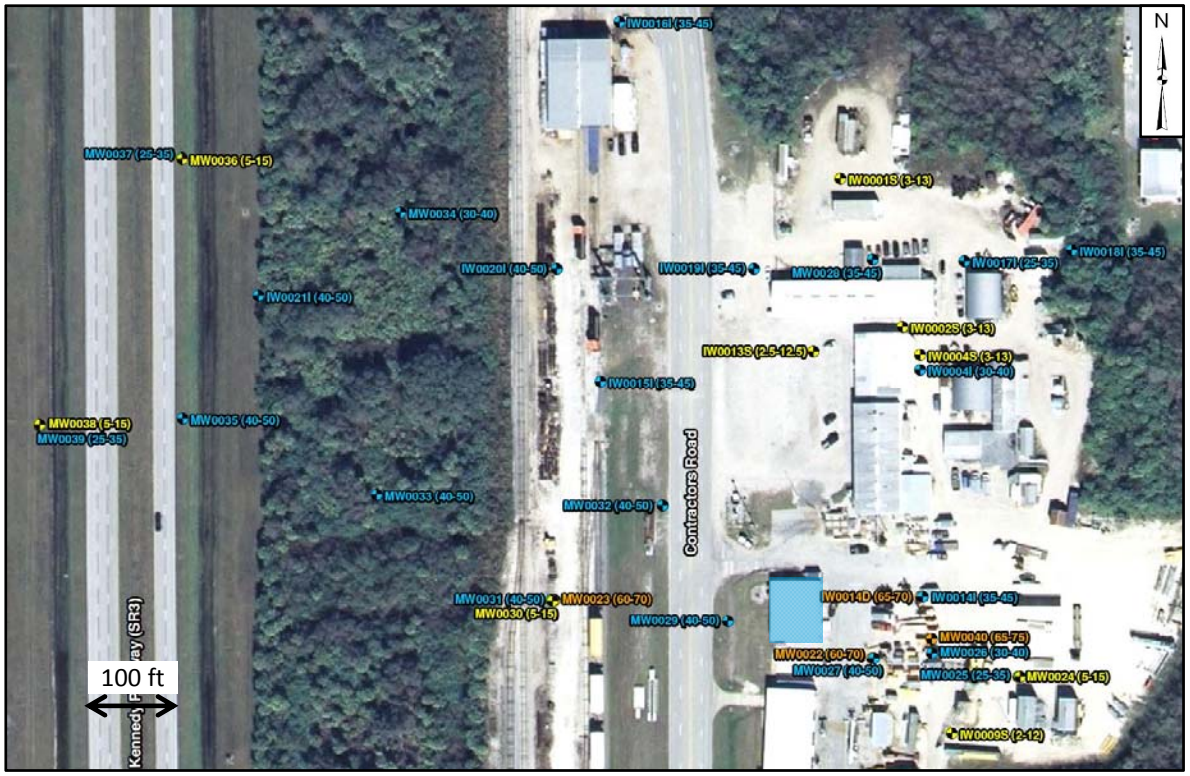
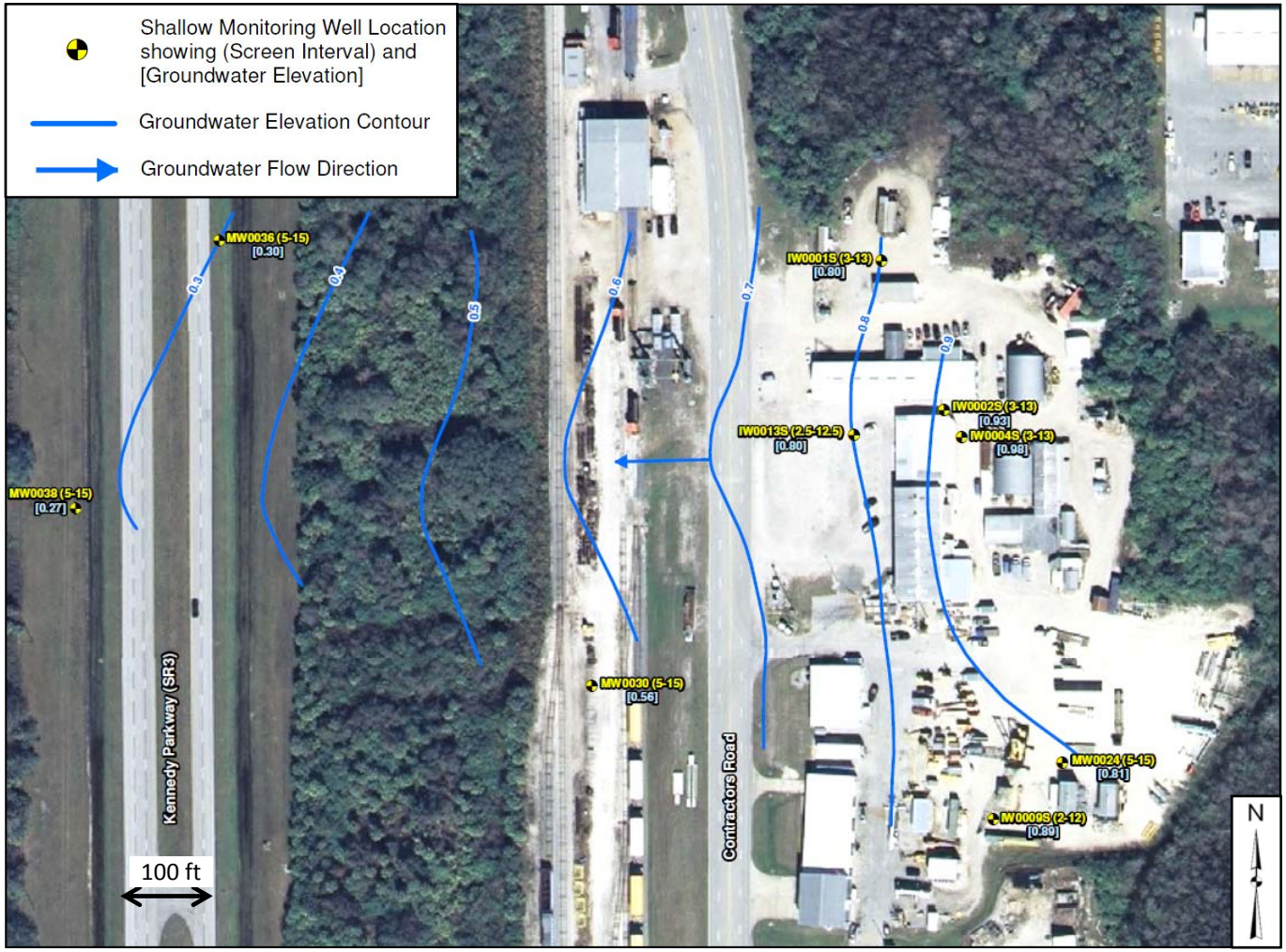



Figure 5

# Shallow GW Flow – March 2012




Note:

1. Screen interval is presented in feet, below land surface (ft, BLS).
2. Groundwater elevation is presented in ft and is referenced to the North American Datum of 1988.

Figure 6

# Intermediate GW Flow – March 2012

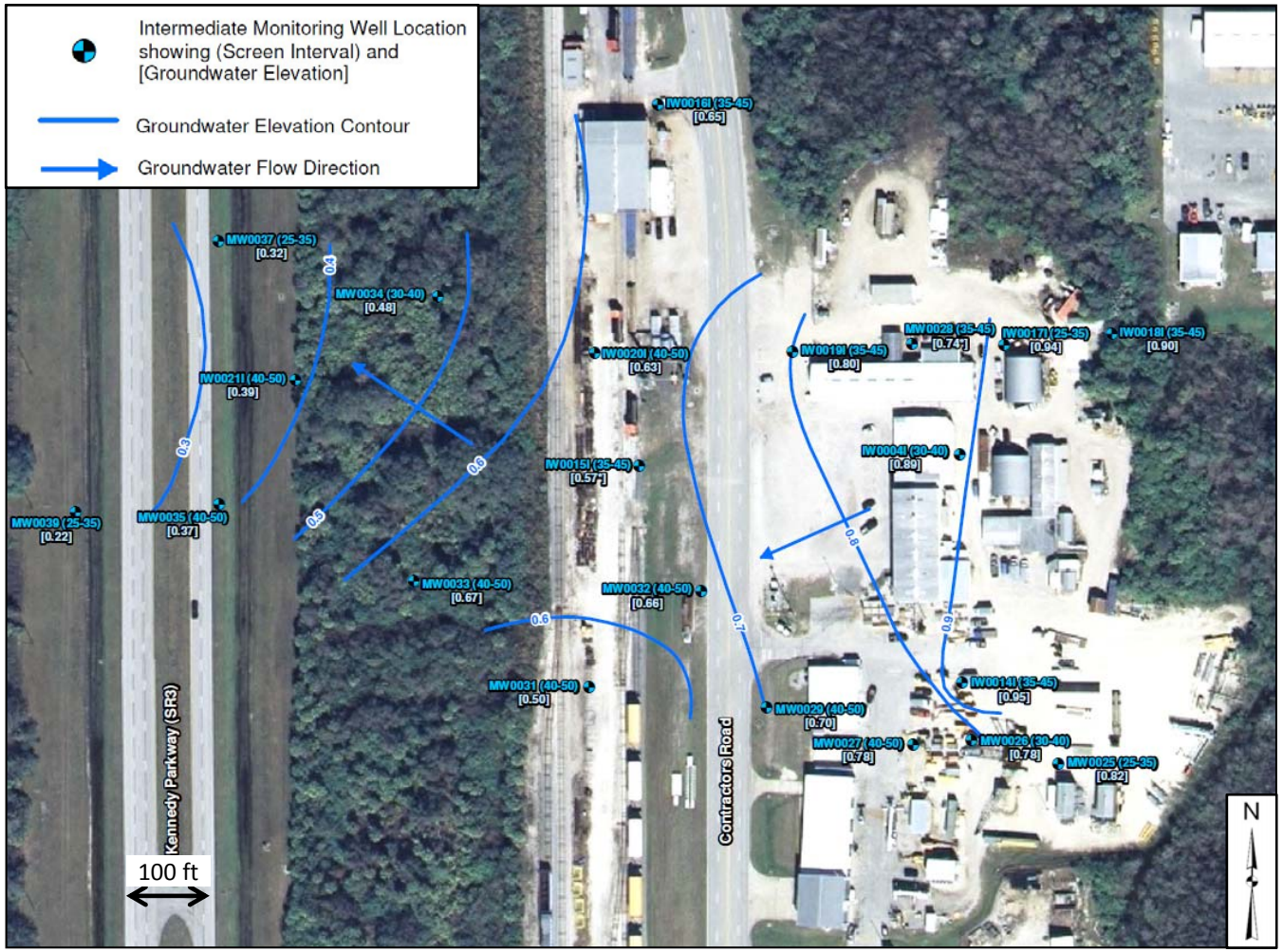



Figure 7

Note:

1. Screen interval is presented in feet, below land surface (ft, BLS).
2. Groundwater elevation is presented in ft and is referenced to the North American Datum of 1988.

# Deep GW Flow

March 2012

July 2013

Note:

1. Screen interval is presented in feet, below land surface (ft, BLS).
2. Groundwater elevation is presented in ft and is referenced to the North American Datum of 1988.
3. MW0040 was installed in July 2013.

Figure 8

# Monitor Well Sampling

- Site-wide groundwater sampling event completed in March 2012
  - 24 monitor wells sampled
  - Detected concentration ranges:
    - TCE: 0.6 I to 1,000 µg/L in 8 wells
    - cDCE: 0.44 I to 9,700 µg/L in 19 wells
    - VC: 13 to 7,600 µg/L in 17 wells
- HS1 focused sampling and gauging event in July 2013
  - MW0040 sampled
  - 17 wells gauged
- Data gap event sampling in December 2013
  - MW0025; MW0035; MW0029; and IW0019I
  - VOCs, 1,4-dioxane, methane, ethane, ethene, sulfate, sulfide, DHc, and vcrA

# Summary of Assessment Activities

- DPT groundwater sampling performed
  - May & July 2006
  - June, July, & August 2009
  - January to March, June, August, & October 2010
  - October 2011
  - January, February, & October 2012
  - March to April & May to June 2013
  - May to June, August, September, & November 2014
- 2,338 samples from 363 DPT locations
  - Generally sampled from 16 to 60 ft BLS at 4 ft intervals
  - Some sampling to 70 ft BLS for vertical delineation

# Assessment Activities - 2014

- Activities completed since Step 1 HS1 include:
  - 781 DPT groundwater samples from 97 locations
  - Data gap sampling
  - Implemented MOT plan for sample collection along Kennedy Pkwy and Contractors Rd
  - Land clearing East of Kennedy Pkwy for delineation of HS2

# Maximum Site-Wide COC Concentrations

| Depth Interval (ft BLS) | Maximum TCE Concentration in µg/L (DPT#) | Maximum cDCE Concentration in µg/L (DPT#) | Maximum VC Concentration in µg/L (DPT#) |
|---|---|---|---|
| 8 to 12 | 79 (0207) | 1,000 (0086) | 560 (0086) |
| 12 to 16 | ND | 3,300 (0086) | 1,500 (0097) |
| 16 to 20 | 9,400 (0201) | 22,000 (0092) | 2,600 (0092) |
| 21 to 28 | 7,700 (0196, 0217) | 68,000 (0217) | 6,400 (0214) |
| 26 to 30 | 13,000 (0200) | 110,000 (0200) | 8,000 (0196) |
| 31 to 35 | 21,000 (0100) | 58,000 (0200) | 19,000 (0200) |
| 34 to 40 | 160,000 (0072) | 59,000 (0100) | 17,000 (0100) |
| 41 to 46 | 19,000 (0247) | 15,000 (0196, 0216, 0247) | 4,800 (0089) |
| 46 to 50 | 3,400 (0139) | 8,100 (0228) | 2,500 (0271) |
| 51 to 55 | 1,200 (0139) | 1,600 (0139) | 380 (0330) |
| 56 to 60 | 1,400 (0217) | 6,000 (0217) | 270 (0362) |
| 61 to 65 | 43.8 (0072) | 140 (0020) | 120 (0020) |
| 66 to 70 | 33 (0196) | 84 (0196) | 1.6 (0213) |
| 67 to 71 | ND | ND | ND |
| 71 to 75 | ND | ND | ND |

- Highest detected concentrations are highlighted orange

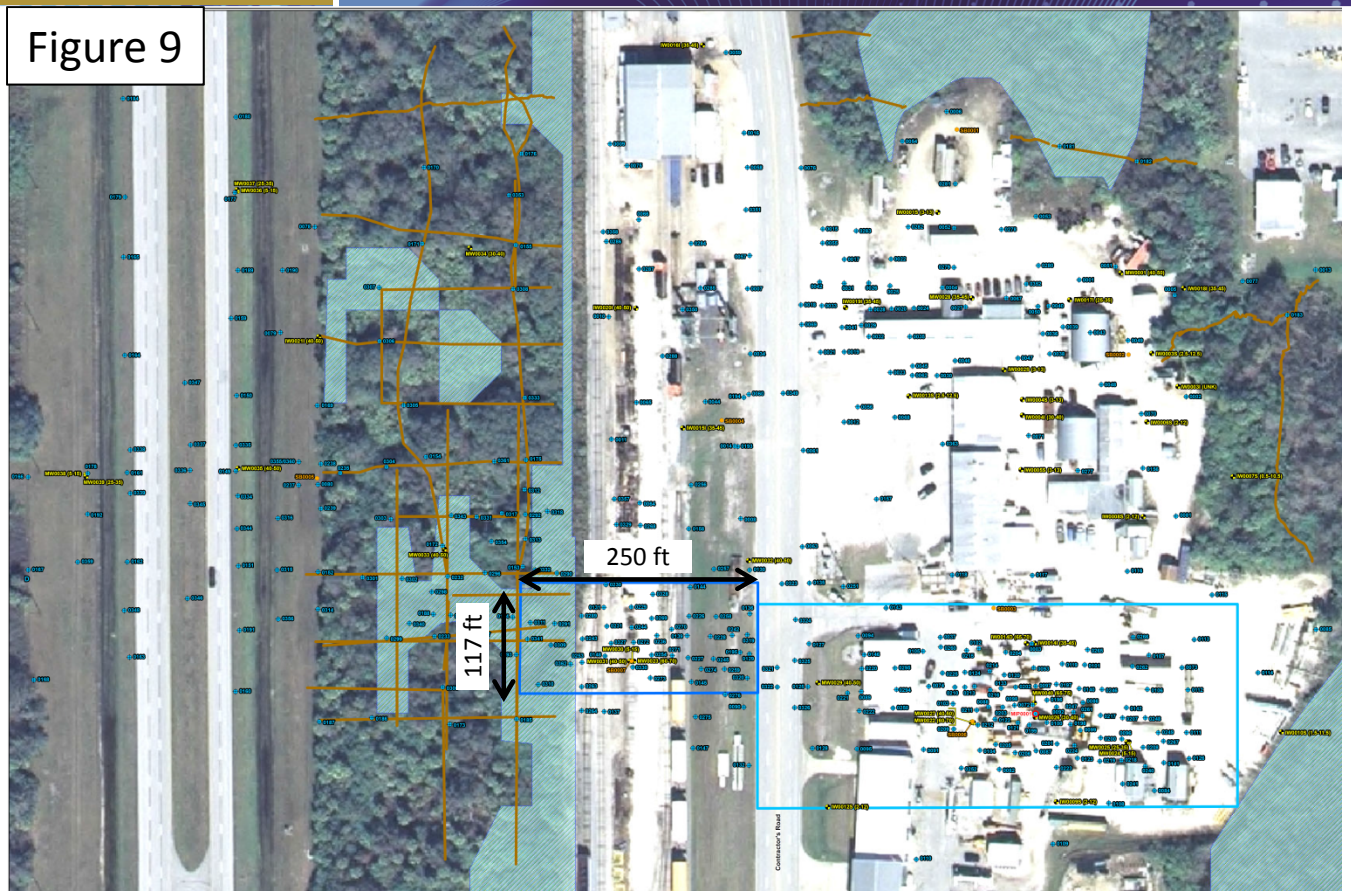
# Maximum COC Concentrations- Not Including HS1

| Depth Interval (ft BLS) | Maximum TCE Concentration in µg/L (DPT) | Maximum cDCE Concentration in µg/L (DPT) | Maximum VC Concentration in µg/L (DPT) |
|---|---|---|---|
| 8 to 12 | 3.5 (0231) | 26 (0226) | 1.2 (0226, 0289) |
| 12 to 16 | ND | ND | 1.5 (0177) |
| 16 to 20 | 1.5 (0230) | 3.0 (0135) | 65.0 (0020) |
| 21 to 28 | 2.3 (0227) | 1.4 (0256) | 53.6 (0159) |
| 26 to 30 | 6.1 (0228) | 48.2 (0039) | 1,500 (0336) |
| 31 to 35 | 22 (0174) | 1,600 (0174) | 2,400 (0336) |
| 34 to 40 | 83 I (0233) | 5,700 (0269) | 2,500 (0135, 0329, 0331) |
| 41 to 46 | 1,200 (0269) | 9,900 (0231) | 4,500 (0271) |
| 46 to 50 | 3,400 (0139) | 8,100 (0228) | 2,500 (0271) |
| 51 to 55 | 1,200 (0139) | 1,600 (0139) | 380 (0330) |
| 56 to 60 | 11 (0244) | 300 (0362) | 270 (0362) |
| 61 to 65 | 1.9 (0131) | 140 (0020) | 120 (0020) |
| 66 to 70 | 1.0 (0242) | 7.4 (0244) | 0.58 I (0244) |
| 67 to 71 | ND | ND | ND |
| 71 to 75 | ND | ND | ND |

- Highest detected concentrations are highlighted orange
- Maximum TCE concentration in HS2 is two orders of magnitude less than HS1 maximum TCE concentration
- Potentially represents historical dissolved flux from HS1

# DPT Sampling Locations

Figure 9




Notes:

1. Tag maps included as Figures 10, 11, 12, and 13 (not included in presentation).
2. Blue shaded areas are generally submerged.
3. Table 1 (attached) provides additional explanation where sample spacing varied from suggested guidance.

**Legend**

- Membrane Interface Probe (MIP) Location
- Soil Boring Location
- DPT Sampling Location
- Monitoring Well Location (showing screen interval, ft BLS)
- Cleared Trails

Jacobs comment #1: Figure 10 – For locations that have 2 sample dates (i.e. DPT0105), which dataset is included in the tag box?

*Response: Each sample date is included in the tag box. Multiple sampling dates at the same locations were employed to collect samples from intervals that had not been sampled.*

Data collected on 1/11/12

Data collected on 10/3/12

| DPT0174 (Jan-12 & Oct-12) | | | | | | |
|---|---|---|---|---|---|---|
| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
| 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 2.4 | NA | 1.4 |
| 31 to 35 | **10 U** | **22** | **1,600** | 48 | NA | **720** |
| 36 to 40 | **50 U** | **13 U,I** | **2,800** | 80 | NA | **740** |
| 41 to 45 | **50 U** | **31 I** | **2,600** | 85 | NA | **400** |
| 46 to 50 | **20 U** | 5 U,I | **1,100** | 37 | NA | **280** |
| 51 to 55 | 1.0 U | 1.0 U | **170** | 3.5 | NA | **76** |
| 56 to 60 | 1.0 U | 1.0 U | 3.8 | 1.0 U | NA | 1.0 U |

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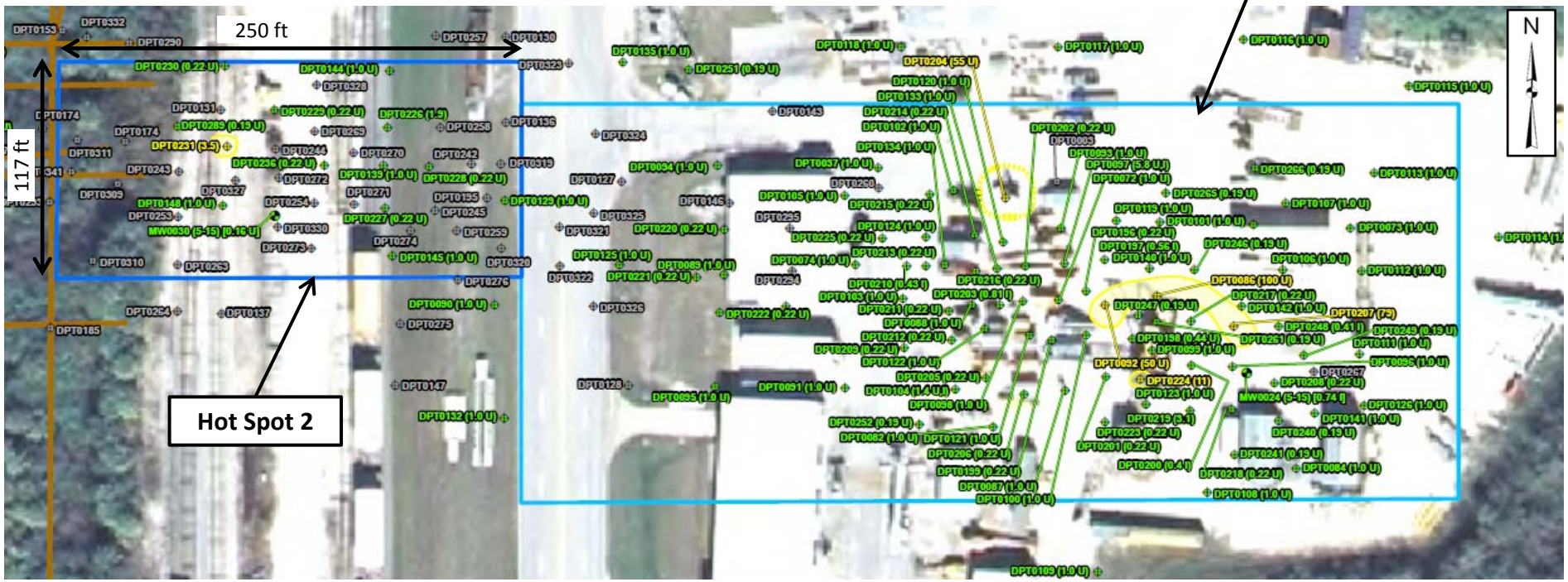
# TCE 8 to 16 ft BLS

Figure 14




DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest TCE Concentration)**

TCE concentration less than or equal to 3 µg/L

TCE concentration greater than 3 µg/L (GCTL)

TCE concentration greater than 300 µg/L (NADC)

3 µg/L TCE Isopleth based on elevated U values

3 µg/L TCE Isopleth

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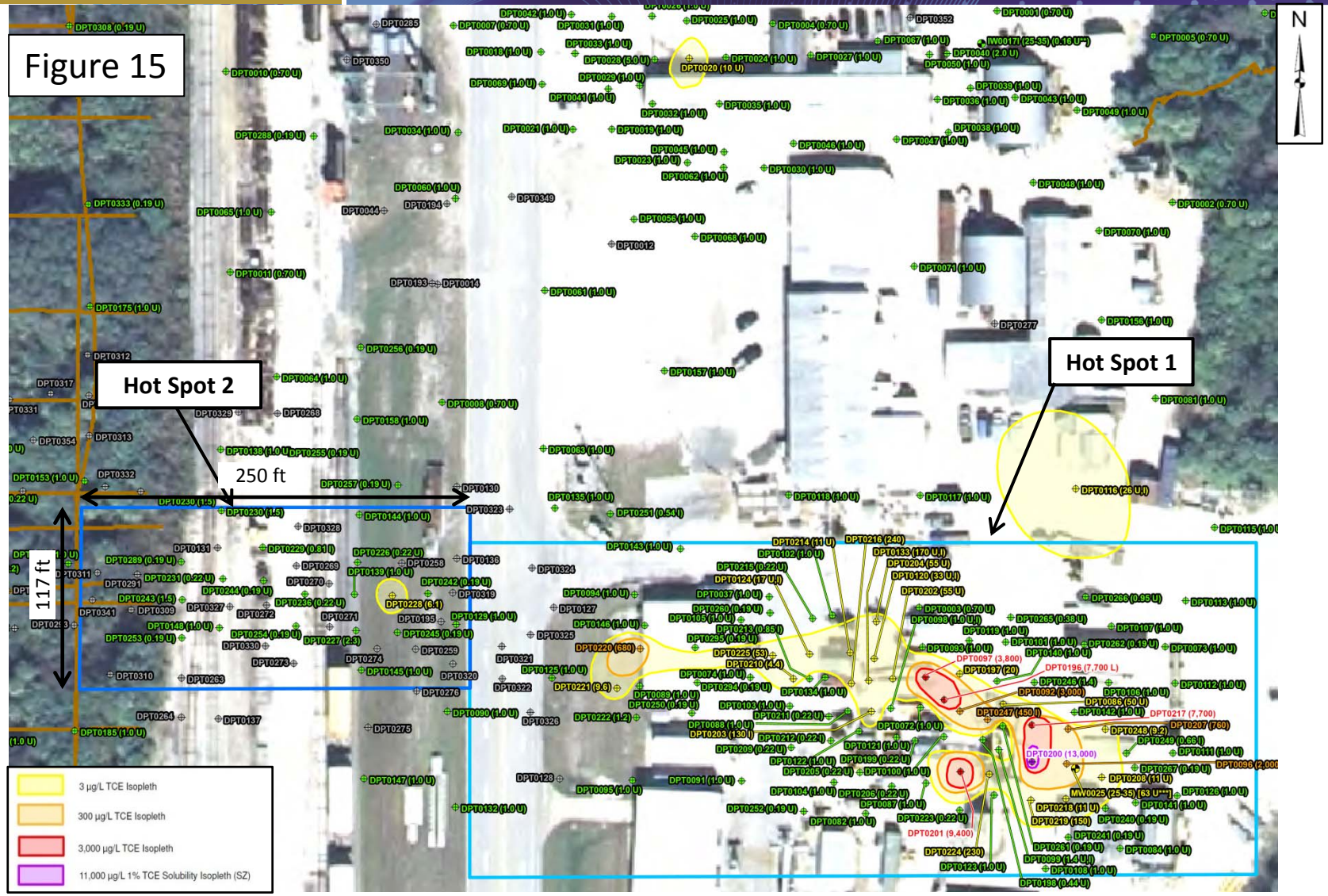
# TCE 16 to 30 ft BLS

Figure 15



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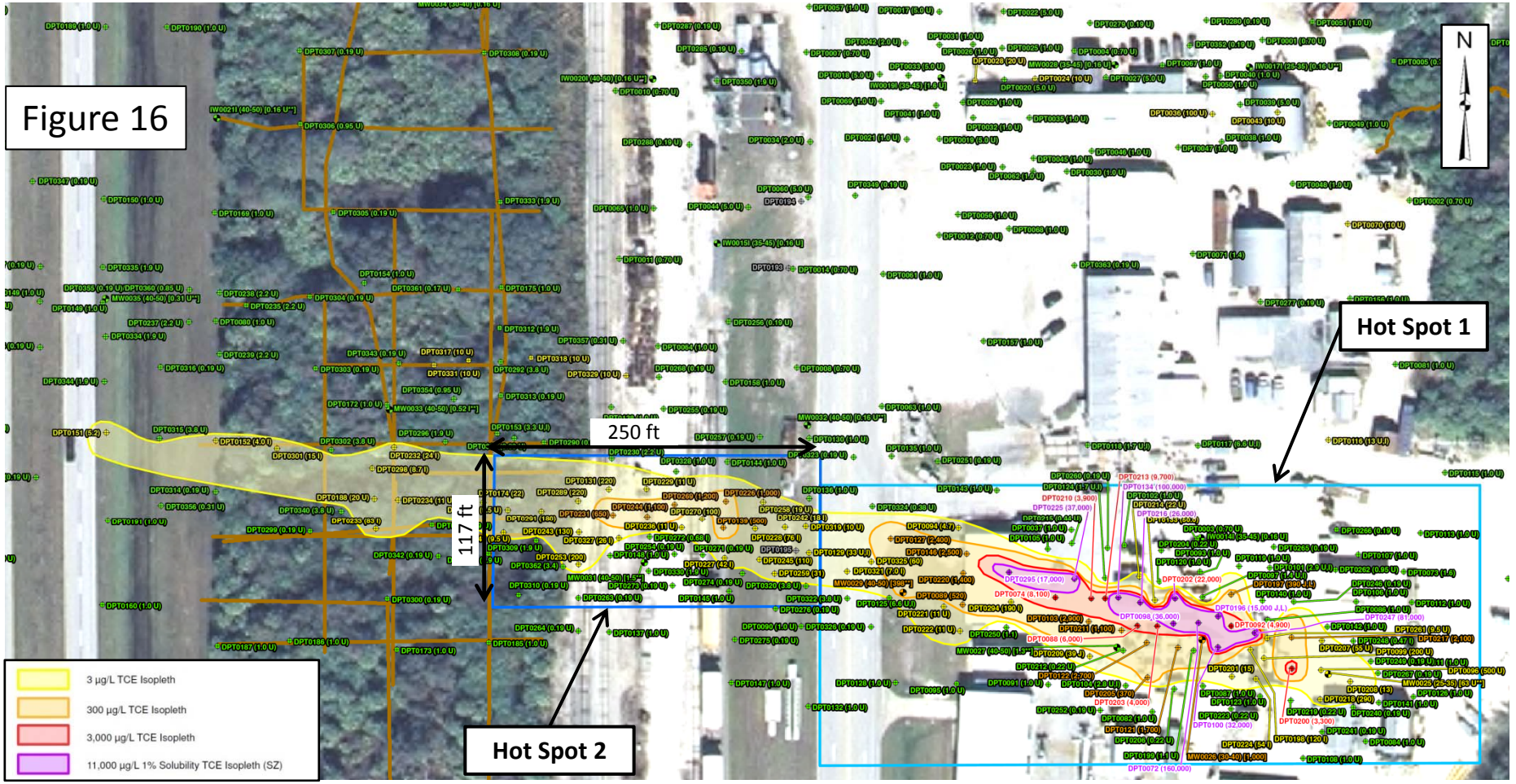
# TCE 31 to 46 ft BLS




Note: Based on the conceptual site model, contouring half the detection limit in this interval does not appear appropriate at DPT locations with elevated reporting limits.

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# TCE 46 to 56 ft BLS

Figure 17

# Response to Comment

Jacobs comment #2: Slide 31/Figure 18 (new Slide 35) **[a]** According to Figure 13, the TCE result of 3.6 µg/L at DPT0227 is from the 46-50 ft bls interval, not "greater than 56 ft bls." No data is shown for DPT0227 past the 46-50 ft bls interval on Figure 13, so it appears that it should be "gray" on Figure 18. **[b]** It is understood that "note #8" on this figure explains that the data shown is from the bottom depth interval for each location. However, consider showing the highest result from the intervals sampled below 56 ft bls. In this case, for a location like DPT0244, which had two depths sampled below 56 ft bls (56-60 ft bls and 66-70 ft bls), the TCE data from the 56-60 ft bls interval would be shown (11 µg/L) and would be part of the 3 µg/L isopleth. Currently, the figure shows the TCE data (0.74 µg/L) for the lowest interval (66-70 ft bls) and is, therefore, not part of the 3 µg/L isopleth.

*Response:*

*[a] Comment noted; Figure 13 has been updated.*

*[b] Comment noted; the objective of this figure is to show vertical delineation. If the highest detection in this mapping interval is shown, it may give the impression that delineation has not been achieved.*

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# TCE Greater than 56 ft BLS

Figure 18

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# cDCE 8 to 16 ft BLS

Figure 19

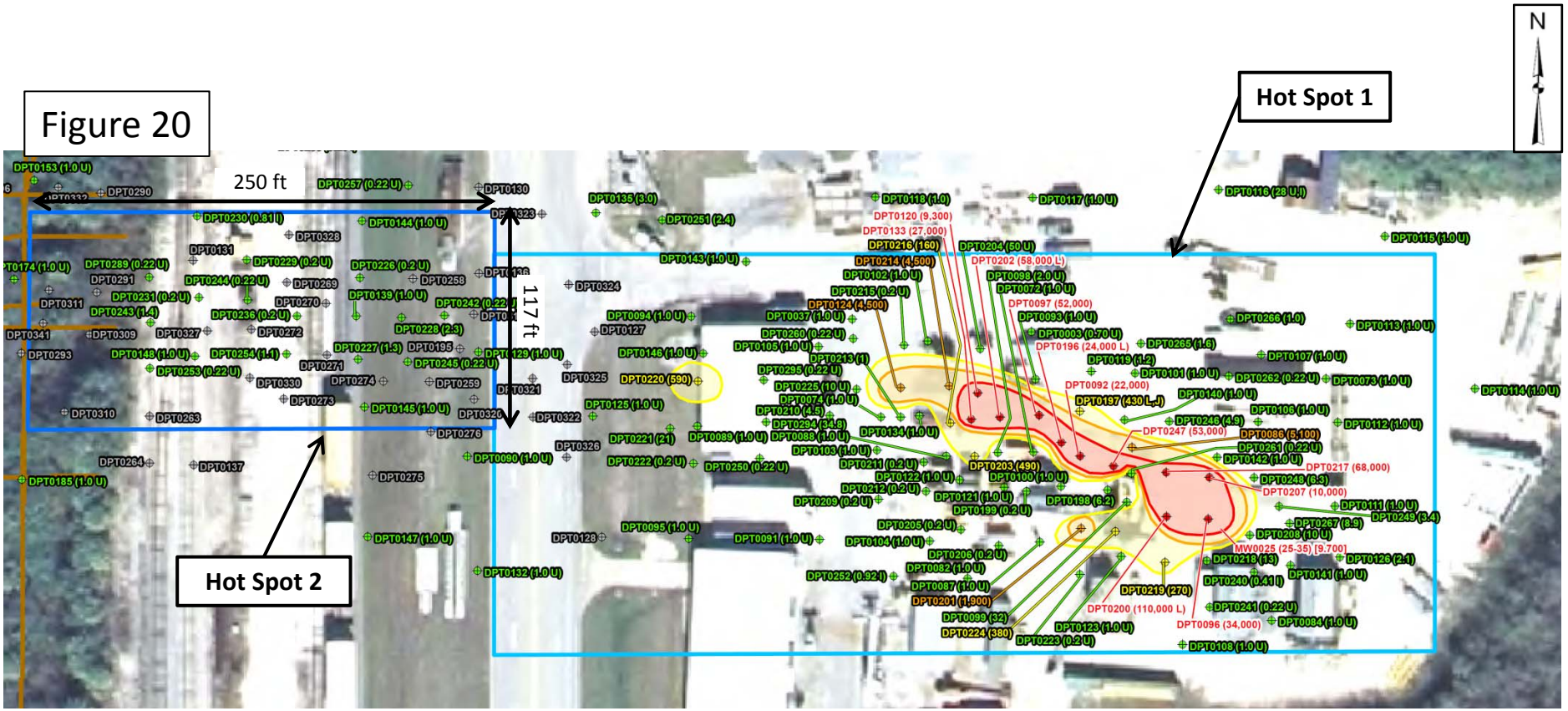
70 µg/L cDCE Isopleth

700 µg/L cDCE Isopleth

Geosyntec consultants

# cDCE 16 to 30 ft BLS

Figure 20



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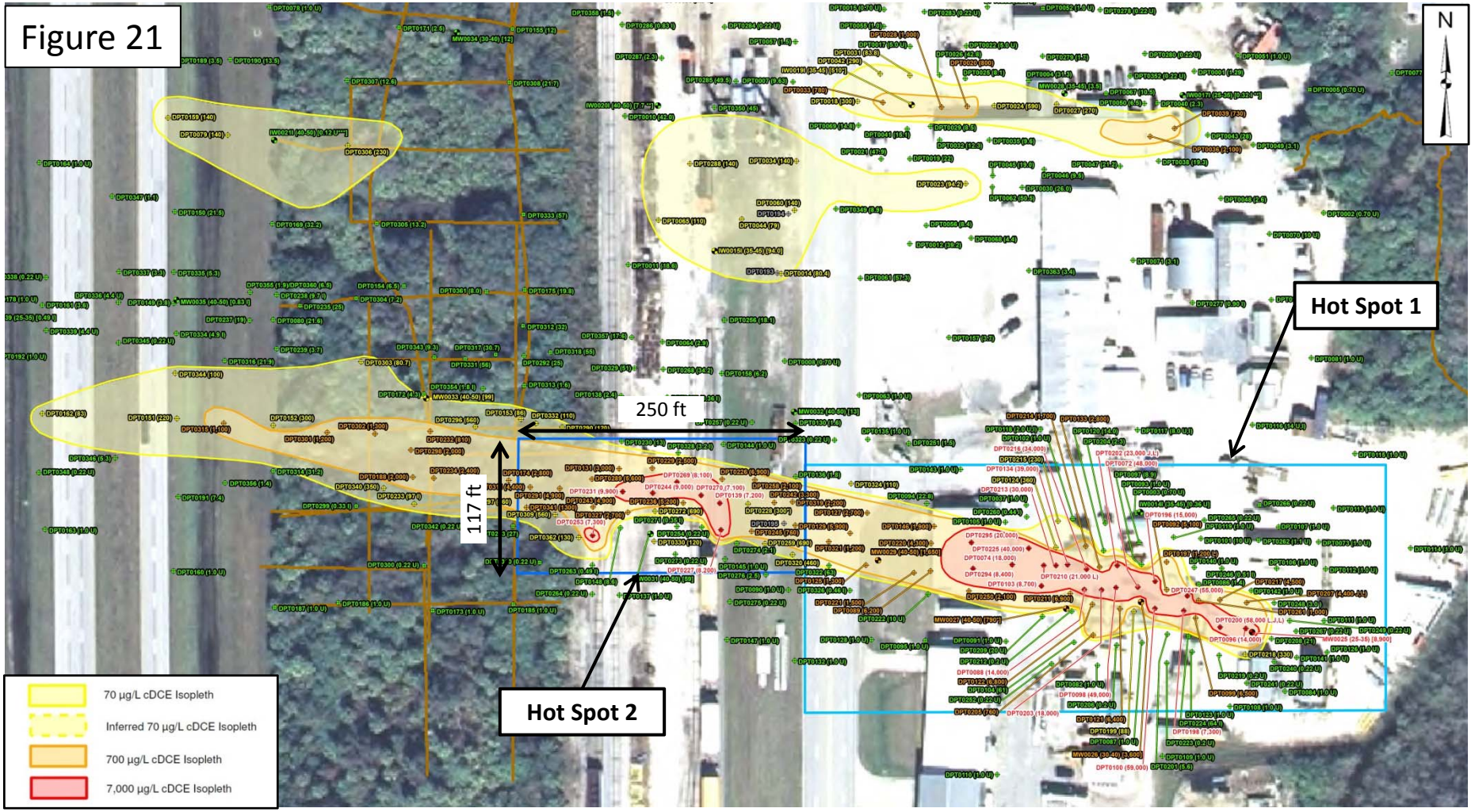
# cDCE 31 to 46 ft BLS

Figure 21



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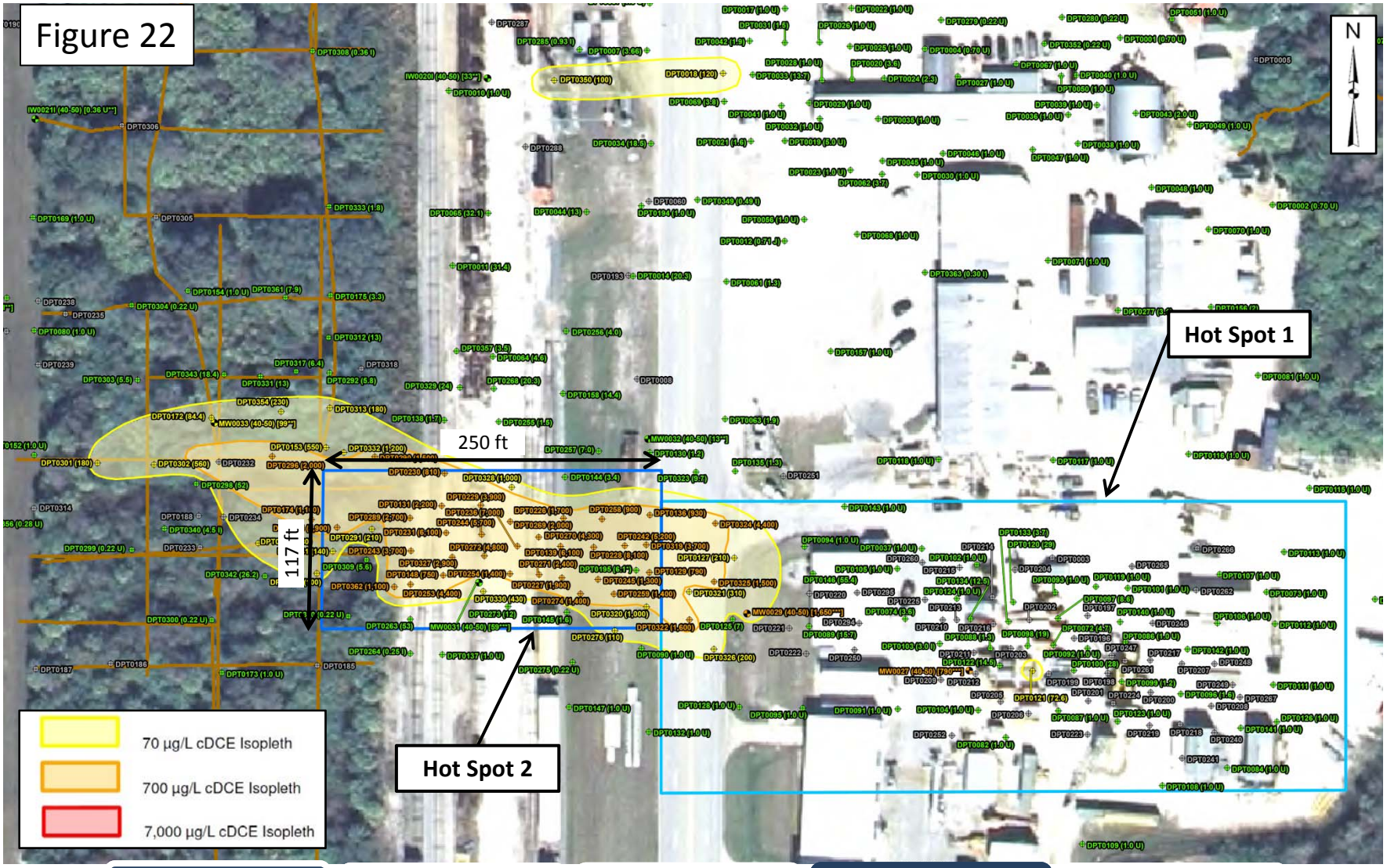
# cDCE 46 to 56 ft BLS

Figure 22



Jacobs comment #3: Slide 36/Figure 23 (new Slide 41) - It is understood that "note #8" on this figure explains that the data shown is from the bottom depth interval for each location. However, consider showing the highest result from the intervals sampled below 56 ft bls. In this case, for a location like DPT0244, which had two depths sampled below 56 ft bls (56-60 ft bls and 66-70 ft bls), the cDCE data from the 56-60 ft bls interval would be shown (110 µg/L) and would be part of the 70 µg/L isopleth. Currently, the figure shows the cDCE data (7.4 µg/L) for the lowest interval (66-70 ft bls) and is, therefore, not part of the 70 µg/L isopleth.

*Response: See response 2[b].*

# cDCE Greater than 56 ft BLS

Figure 23

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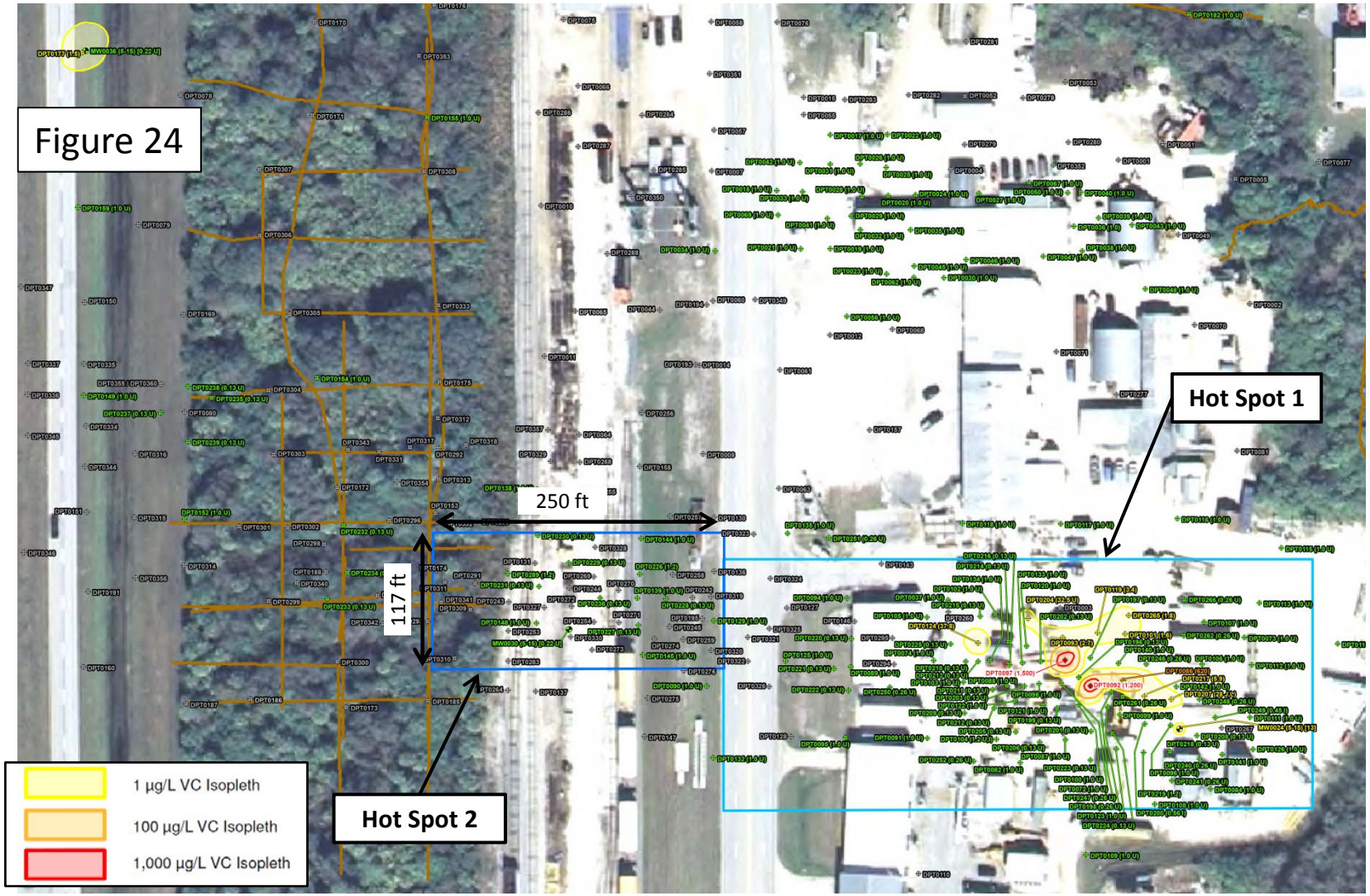
# VC 8 to 16 ft BLS



# Response to Comment

TetraTech comment #3: Slide 38 (new slide 44) - **[a]** Should the LCP plume be shown as inferred south of DPT0044, **[b]** west of DPT0146/0220, **[c]** east of DPT0135? Samples were not collected from this [mapping] interval at those locations. **[d]** Additionally, the DPT spacing around DPT0336 does not appear to meet KSC spacing conventions. **[e]** For consistency, the LCP should be extended to include DPT0179 (e.g., DPT0162 was included).

*Response: [a] Geosyntec does not agree that the LCP should be shown as inferred S of DPT0044. The distance between DPT0060 and DPT0065, which both had VC concentrations below 2.0 µg/L in this mapping interval, is approximately 120 ft. Based on the VC concentrations at DPT0060 and DPT0065 and at the following locations, the LCP is delineated in this area: 31-35 ft BLS interval from DPT0044 (2.3 µg/L), 31-35 ft BLS interval from DPT0014 (0.80 U µg/L), and 26-30 ft BLS interval from DPT0011 (0.80 U µg/L).*

*The VC 16-30 ft BLS plume map has been revised to show VC concentrations from the 31-35 ft BLS intervals of DPT0044 and DPT0014 for lateral delineation interpretation.*

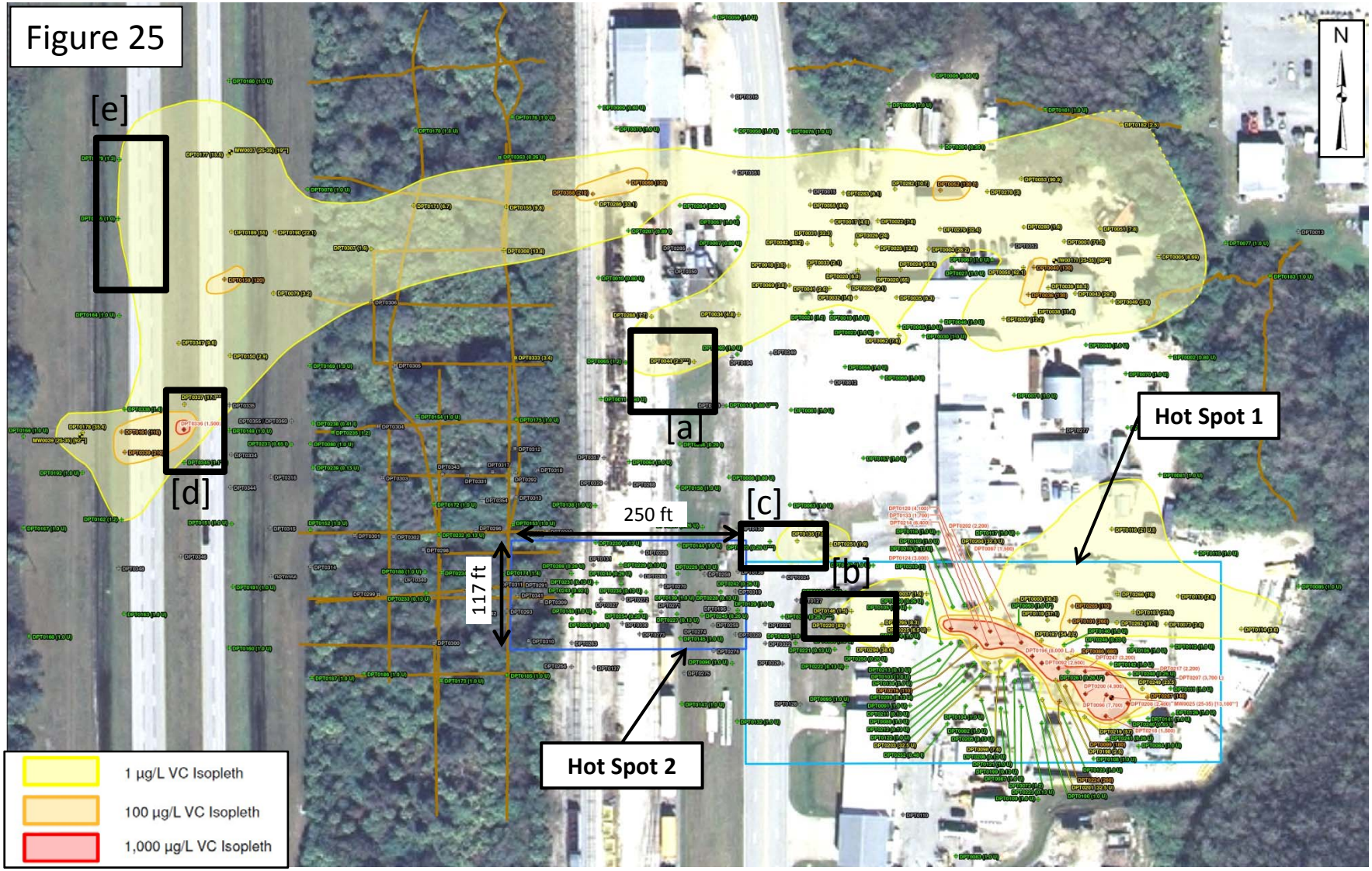
*[b] Geosyntec does not agree that the LCP should be shown as inferred W of DPT0146/220 based on the VC concentration in the 36-40 ft BLS interval from DPT0325 (0.26 U µg/L). The VC 16-30 ft BLS plume map has been revised to show VC concentrations from the 36-40 ft BLS interval of DPT0325 for lateral delineation interpretation.*

*[c] Geosyntec does not agree that the LCP should be shown as inferred W of DPT0135 based on the VC concentration in the 36-40 ft BLS interval from DPT0323 (0.26 U µg/L). The VC 16-30 ft BLS plume map has been revised to show VC concentrations from the 36-40 ft BLS interval of DPT0323 for lateral delineation interpretation.*

*[d] Comment noted; although DPT spacing around DPT0336 shown on the 16-30 ft BLS interval map does not meet the specific spacing suggestion in the Step process, VC detections at DPT0337 (17.7 µg/L) and DPT0345 (1.1 µg/L) from the 31-35 ft BLS interval (i.e. the interval immediately below the 1,500 µg/L VC detection in DPT0336) indicate that the current contour interpretation is valid. The VC 16-30 ft BLS plume map has been revised to show VC concentrations from the 31-35 ft BLS intervals of DPT0337 and DPT0345 for lateral delineation interpretation. If an interim measure is necessary in this area, additional sampling may be completed at that time.*

*[e] Comment noted; the VC 16-30 ft BLS plume map was adjusted slightly to include DPT0179 and DPT0165 in the 1.0 µg/L contour; however, this does not represent a material impact to the LCP.*

# VC 16 to 30 ft BLS



# Response to Comment

TetraTech comment #4: Slide 39 (new Slide 46) - [a] Suggest showing LCP as inferred in the northeast most portion of the LCP northeast of DPT005, as there are not points bounding the plume in this direction between DPT0182 and DPT0077. [b] Please also identify the area south of MW0034 as a data gap, as the HCP is not delineated to the south of this location.

*Response: [a] Geosyntec's contour interpretation of the peripheral DPT locations in this area is based on observed VC concentrations less than 1.0 µg/L in DPT0181, DPT0182, DPT0077, and DPT0013.*

*[b] Comment noted. Geosyntec agrees that there is not a DPT location that meets the specific spacing suggestion in the Step process south of MW0034. However, given the VC concentrations detected in DPT0307 (31.6 µg/L) and DPT0308 (70.9 µg/L), we are comfortable with the delineation as presented. Sampling in this area has not occurred to date due to wetland conditions. If accessible, additional sampling may be conducted at a later date, if needed.*

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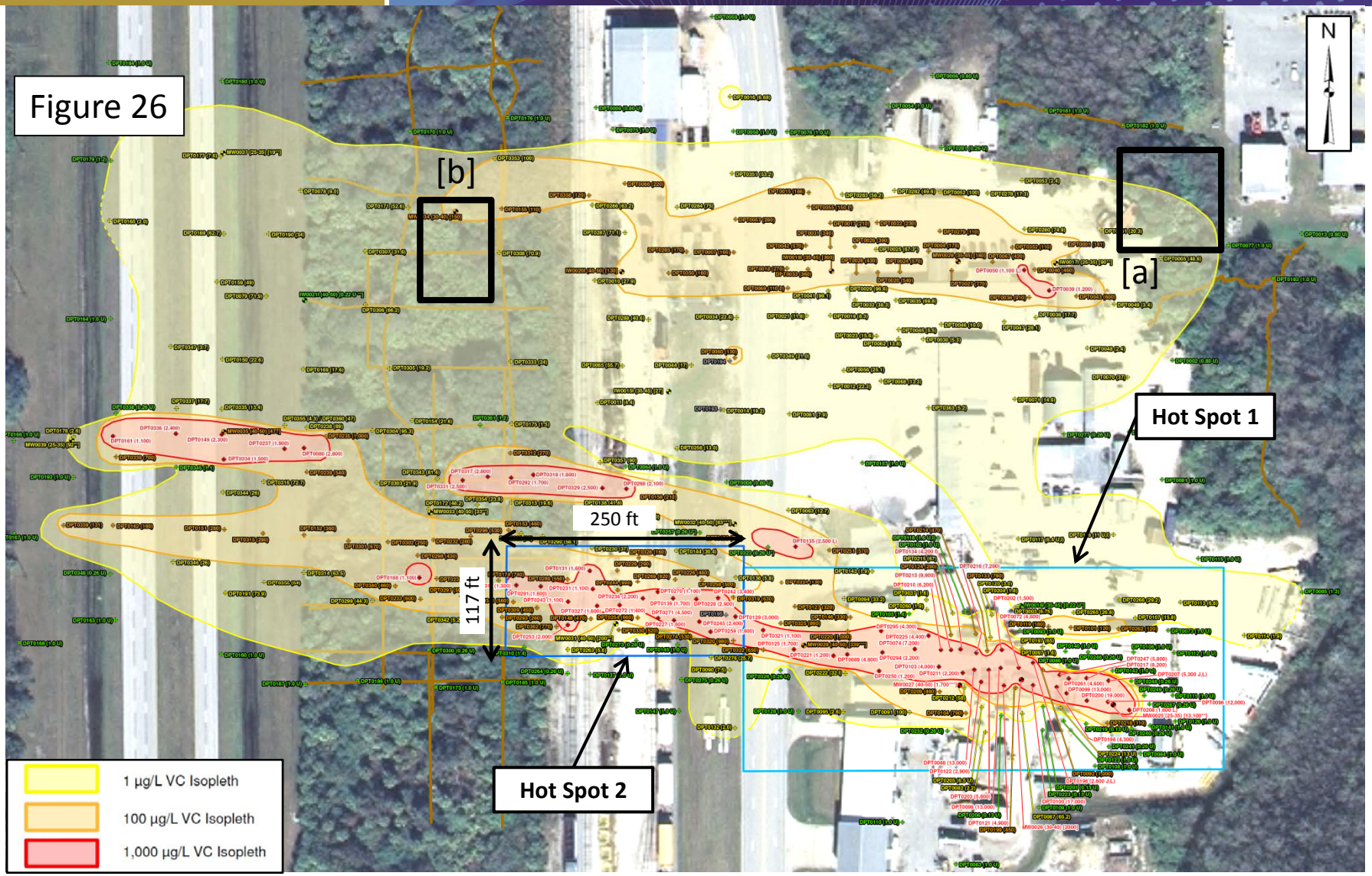
# VC 31 to 46 ft BLS



# Response to Comment

TetraTech comment #5: Slide 40 (new Slide 49) - [a] The HCP is not bound in the northern direction of DPT0301 and DPT0302 to the north and northwest. Suggest more conservative contouring in this area as well as identification of data gap. [b] We also suggest south of DPT0350 and IW0020I be identified as an HCP data gap, as data is not available in this direction near the referenced locations.

*Response: [a] Geosyntec agrees that there is a data gap at this location when comparing to the specific spacing suggestions in the Step process; however, this data gap can be filled at a later date, if needed. The VC 46-56 ft BLS plume map has been updated with more conservative contouring.*

*[b] Geosyntec agrees that there is not a DPT location that meets the specific spacing suggestion in the Step process in this area of the 46-56 ft BLS mapping interval; however, based on the VC detections in the 41-45 ft BLS interval at DPT0288 (40.6 µg/L) and 46-50 ft BLS interval at DPT0010 (48.4 µg/L), we are comfortable with the delineation as presented.*

# Response to Comment

TetraTech comment #6: Slide 40 (new Slide 49) - Agree with inferred plume boundary along southwestern tail near DPT0163. Suggest plume boundaries be shown as inferred boundaries near DPT0264 and around DPT0016 (northern isolated detection)?

*Response: Comment noted; plume boundary near DPT0264 and around DPT0016 shown as inferred.*

TetraTech comment #7: Slide 40 (new Slide 49) - The LCP south of the Hot Spot 1 area appears to not be delineated, as the plume south of DPT0091 and DPT0095 is not bound to the south by single-digit detections.

*Response: DPT0110 meets the spacing requirements of S of DPT0091 and our request to collect a sample S of DPT0095 was denied due to utilities. Based on the results at DPT0110 and our understanding of the conceptual site model, we are comfortable with the delineation presented.*

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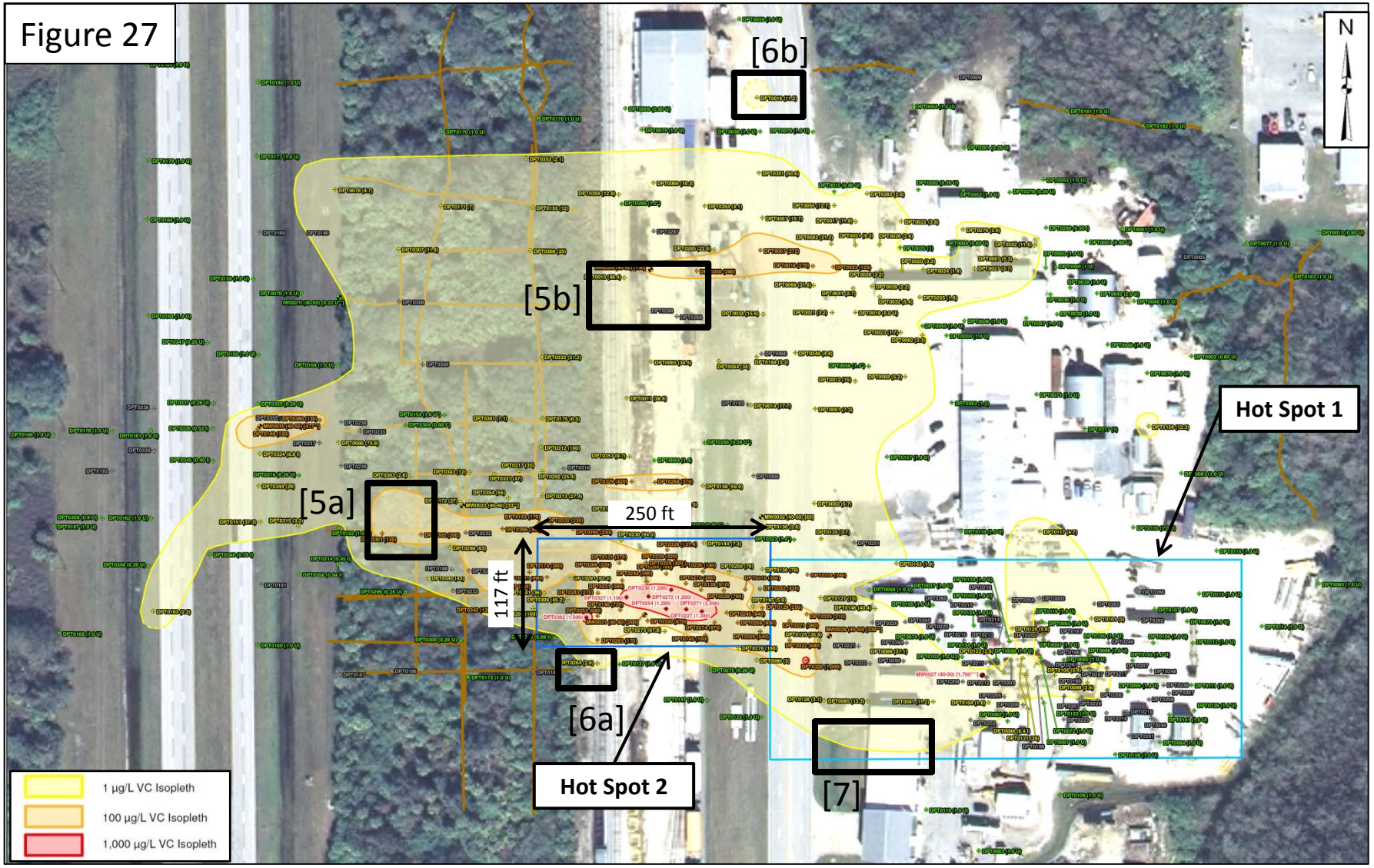
# VC 46 to 56 ft BLS

Figure 27



Jacobs comment #4: Slide 41/Figure 28 (new Slide 51) - It is understood that "note #10" on this figure explains that the data shown is from the bottom depth interval for each location. However, consider showing the highest result from the intervals sampled below 56 ft bls. In this case, for a location like DPT0244, which had two depths sampled below 56 ft bls (56-60 ft bls and 66-70 ft bls), the VC data from the 56-60 ft bls interval would be shown (10 µg/L) and would be part of the 1 µg/L isopleth. Currently, the figure shows the VC data 0.58 µg/L) for the lowest interval (66-70 ft bls) and is, therefore, not part of the 1 µg/L isopleth.

*Response: See response 2[b].*

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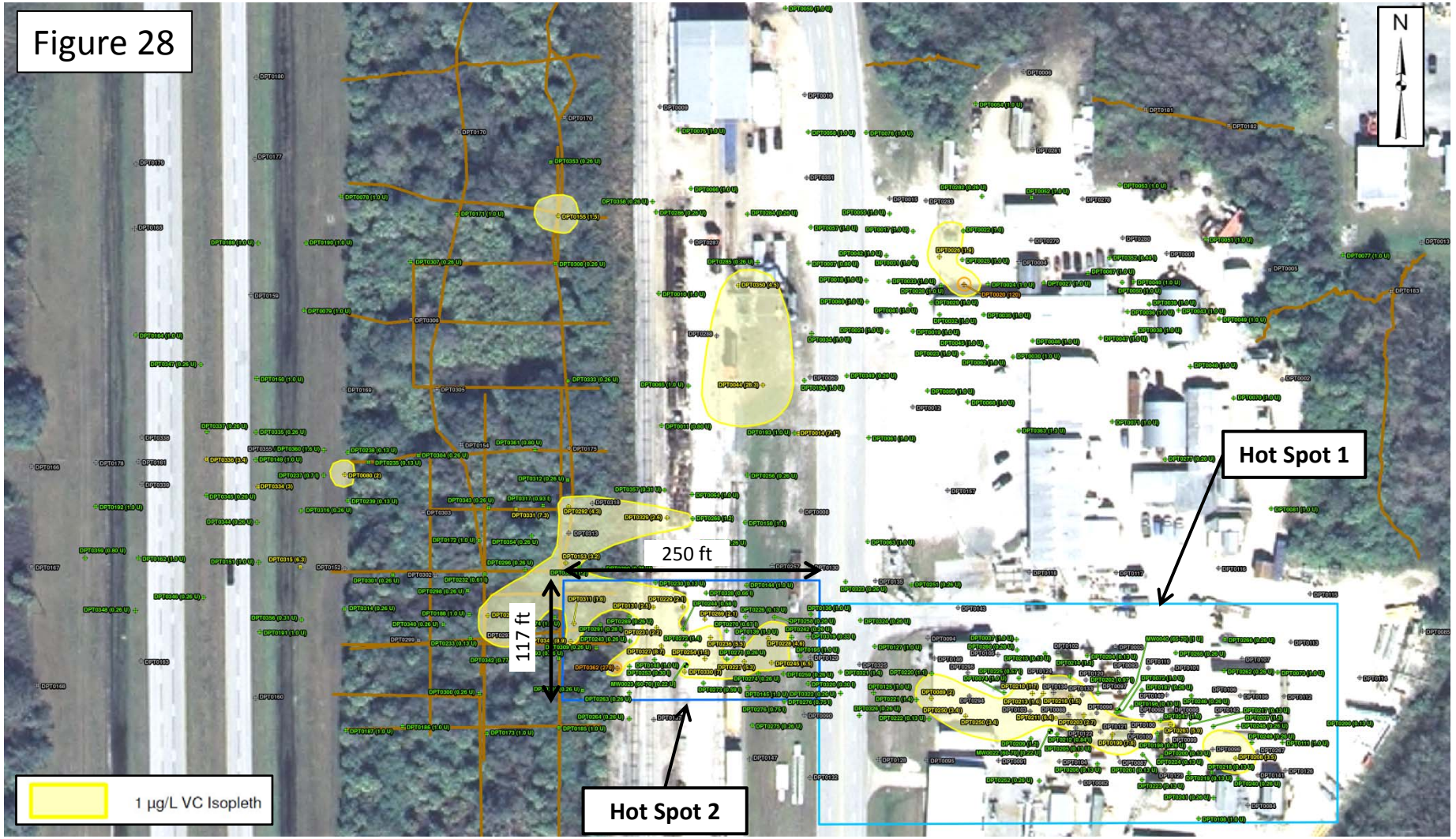
# VC Greater than 56 ft BLS

Figure 28



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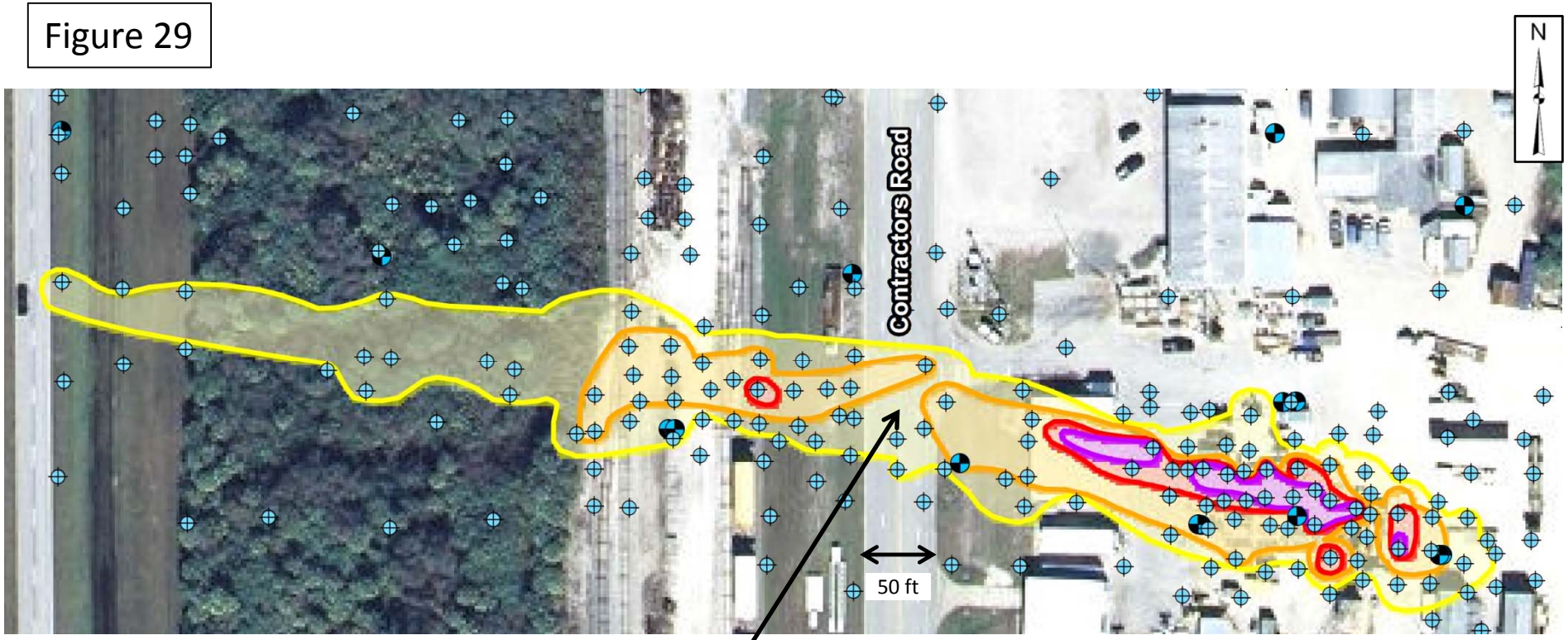
# Composite TCE Plume

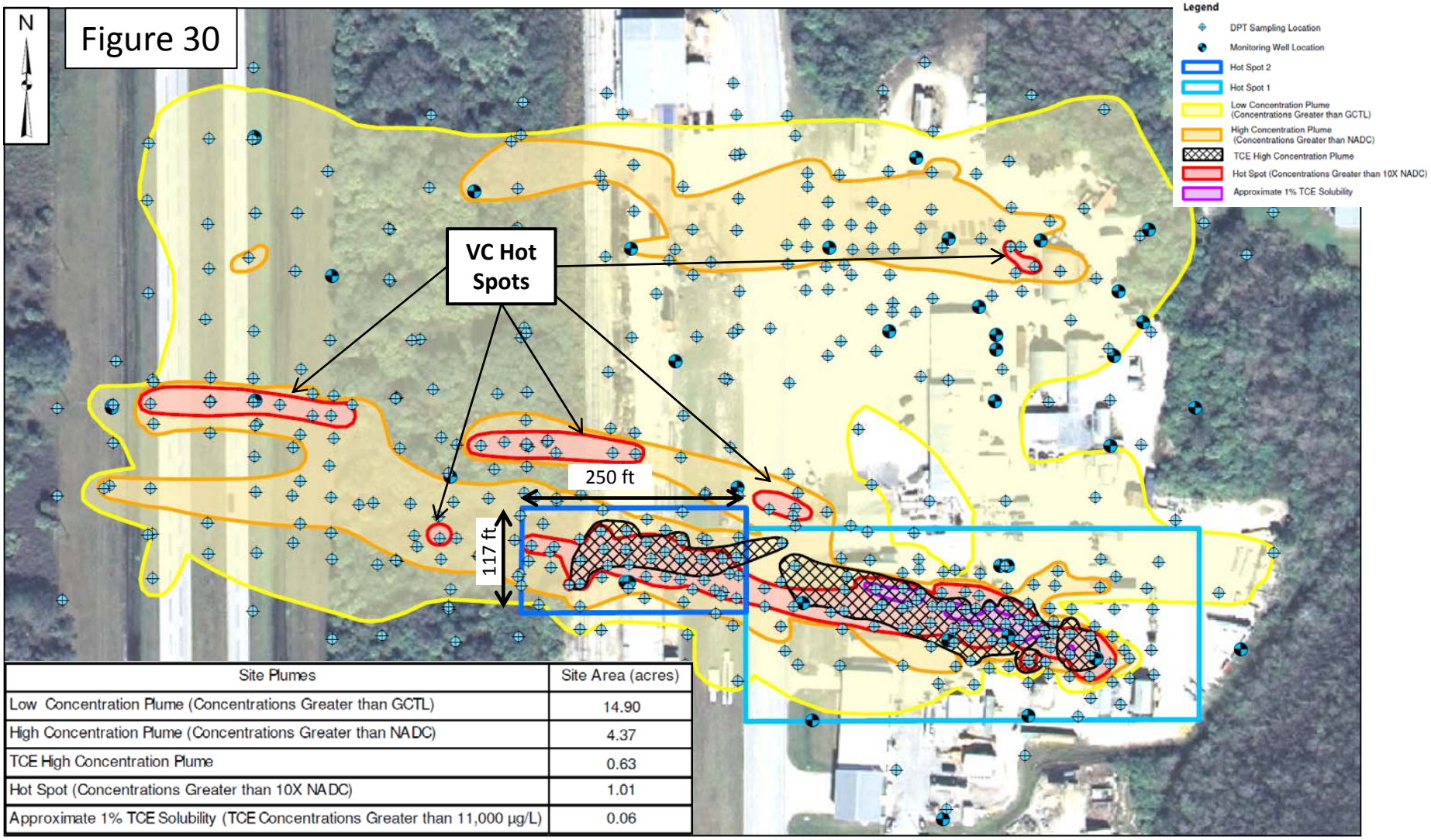
Figure 29




Note: Separation of HCP contours is due to a difference in the depth interval of associated impacts.

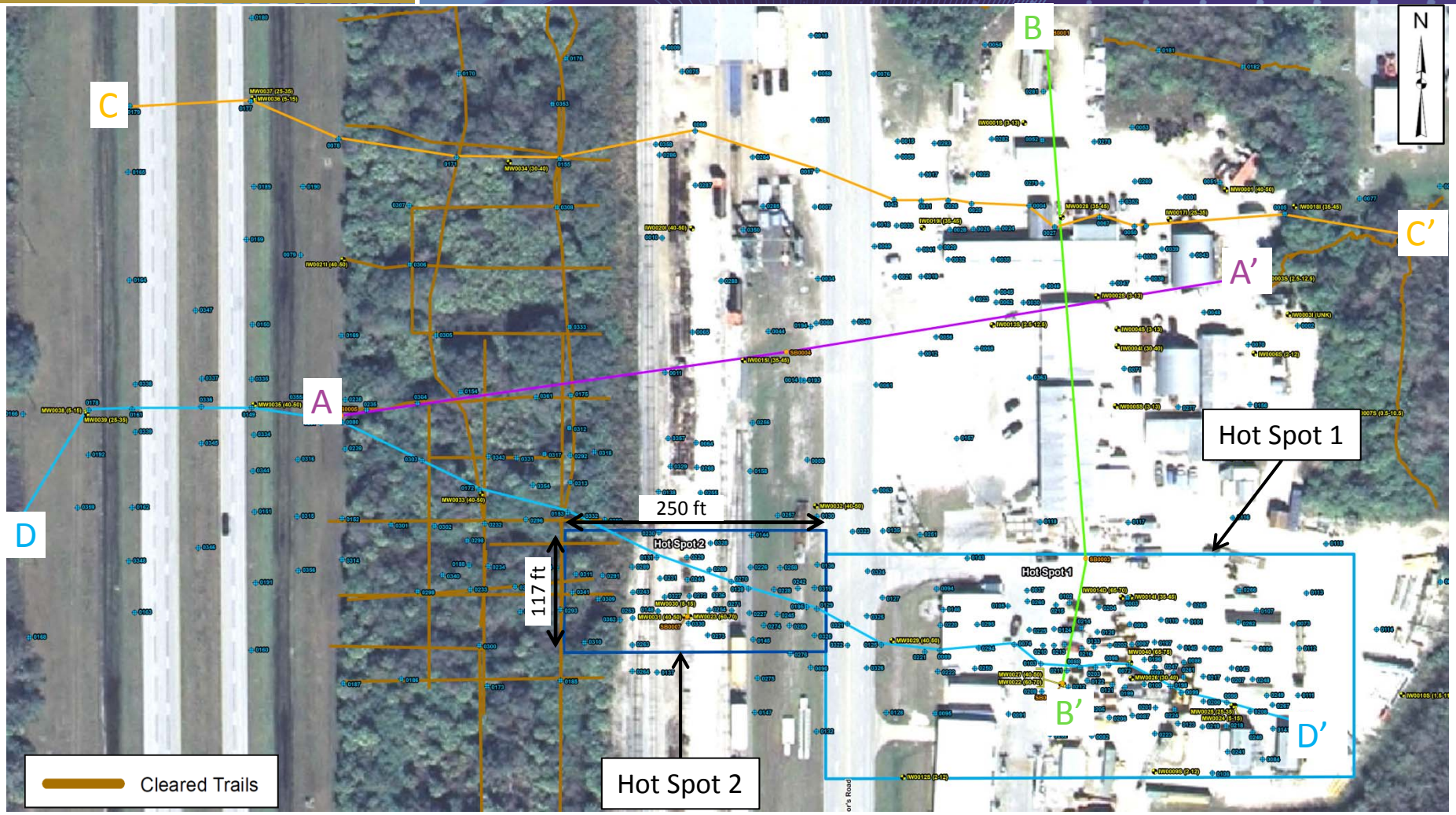
# Overall Combined Depth CVOC Plume Map

Figure 30




| Site Plumes | Site Area (acres) |
|---|---|
| Low Concentration Plume (Concentrations Greater than GCTL) | 14.90 |
| High Concentration Plume (Concentrations Greater than NADC) | 4.37 |
| TCE High Concentration Plume | 0.63 |
| Hot Spot (Concentrations Greater than 10X NADC) | 1.01 |
| Approximate 1% TCE Solubility (TCE Concentrations Greater than 11,000 µg/L) | 0.06 |

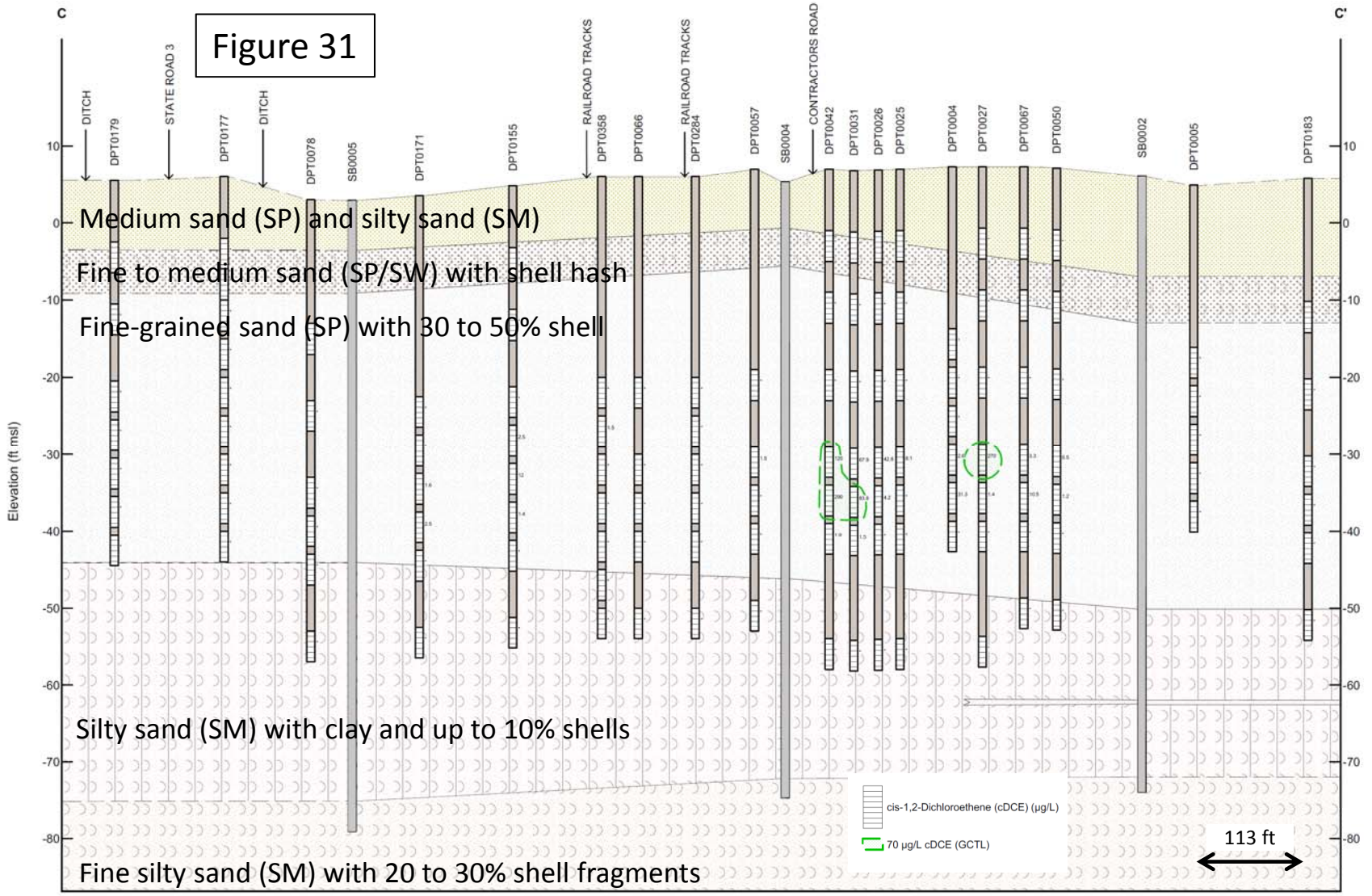
# Cross Section Locations




Note: Cross sections A to A' and B to B' display lithology only; cross sections C to C' and D to D' display subsurface plume profiles.

# C to C' – cDCE

Figure 31



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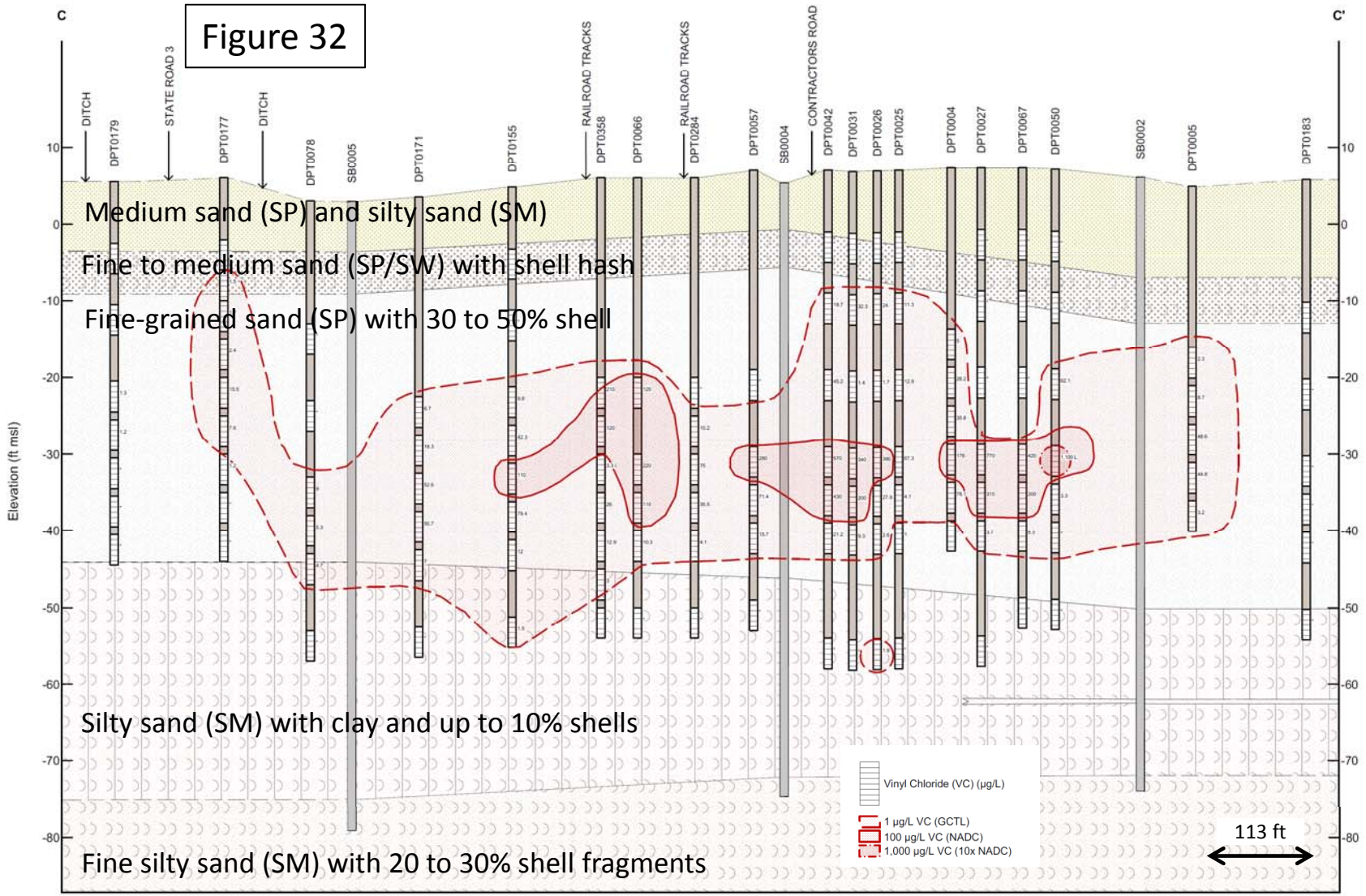
# C to C' – VC

Figure 32



# D to D' – TCE

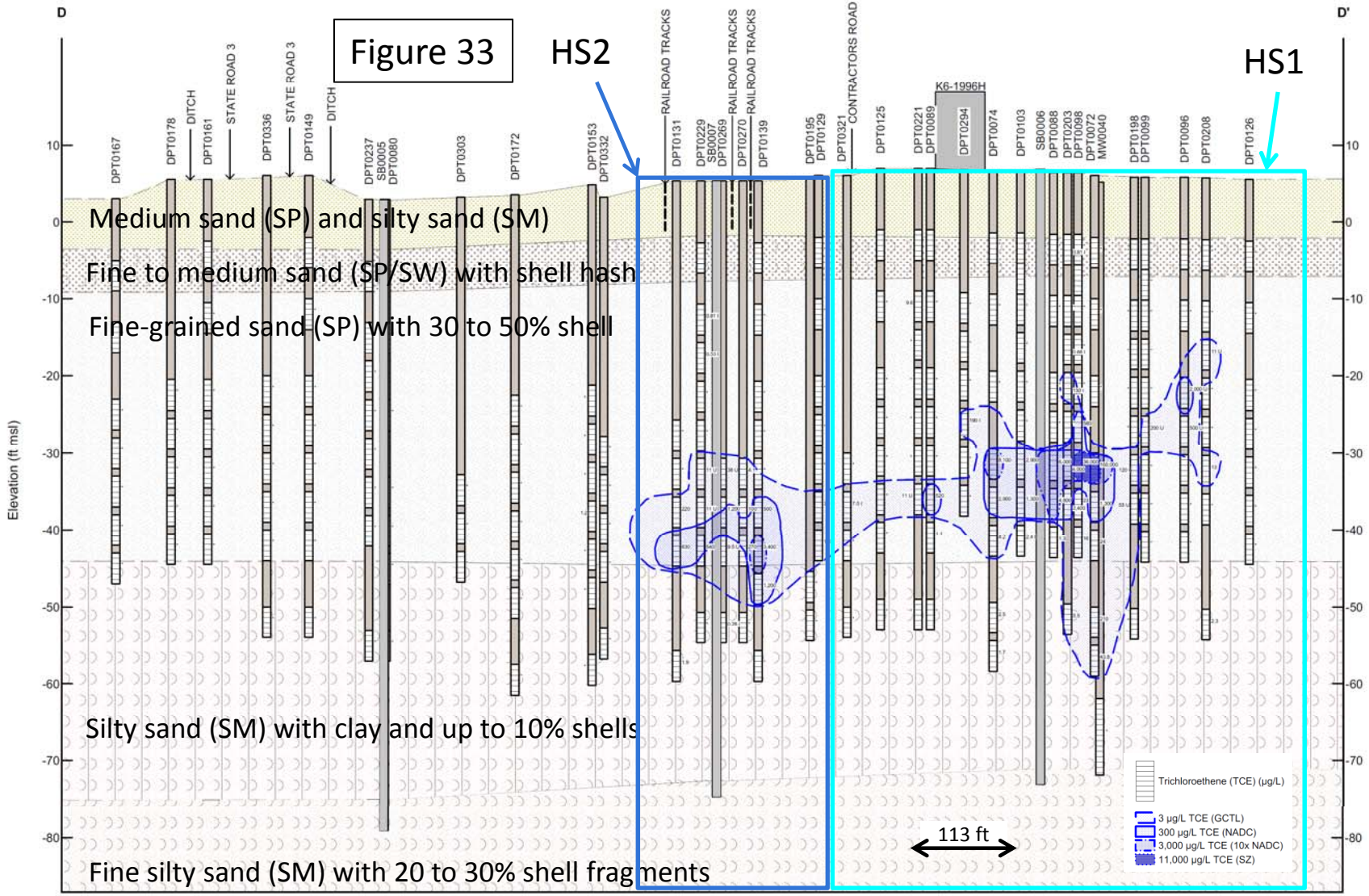


Figure 33
HS2
HS1
D
D'
Medium sand (SP) and silty sand (SM)
Fine to medium sand (SP/SW) with shell hash
Fine-grained sand (SP) with 30 to 50% shell
Silty sand (SM) with clay and up to 10% shells
Fine silty sand (SM) with 20 to 30% shell fragments
Elevation (ft msl)
RAILROAD TRACKS
CONTRACTORS ROAD
STATE ROAD 3
DITCH
K6-1996H
113 ft
Trichloroethene (TCE) (µg/L)
3 µg/L TCE (GCTL)
300 µg/L TCE (NADC)
3,000 µg/L TCE (10x NADC)
11,000 µg/L TCE (SZ)

# D to D' – cDCE

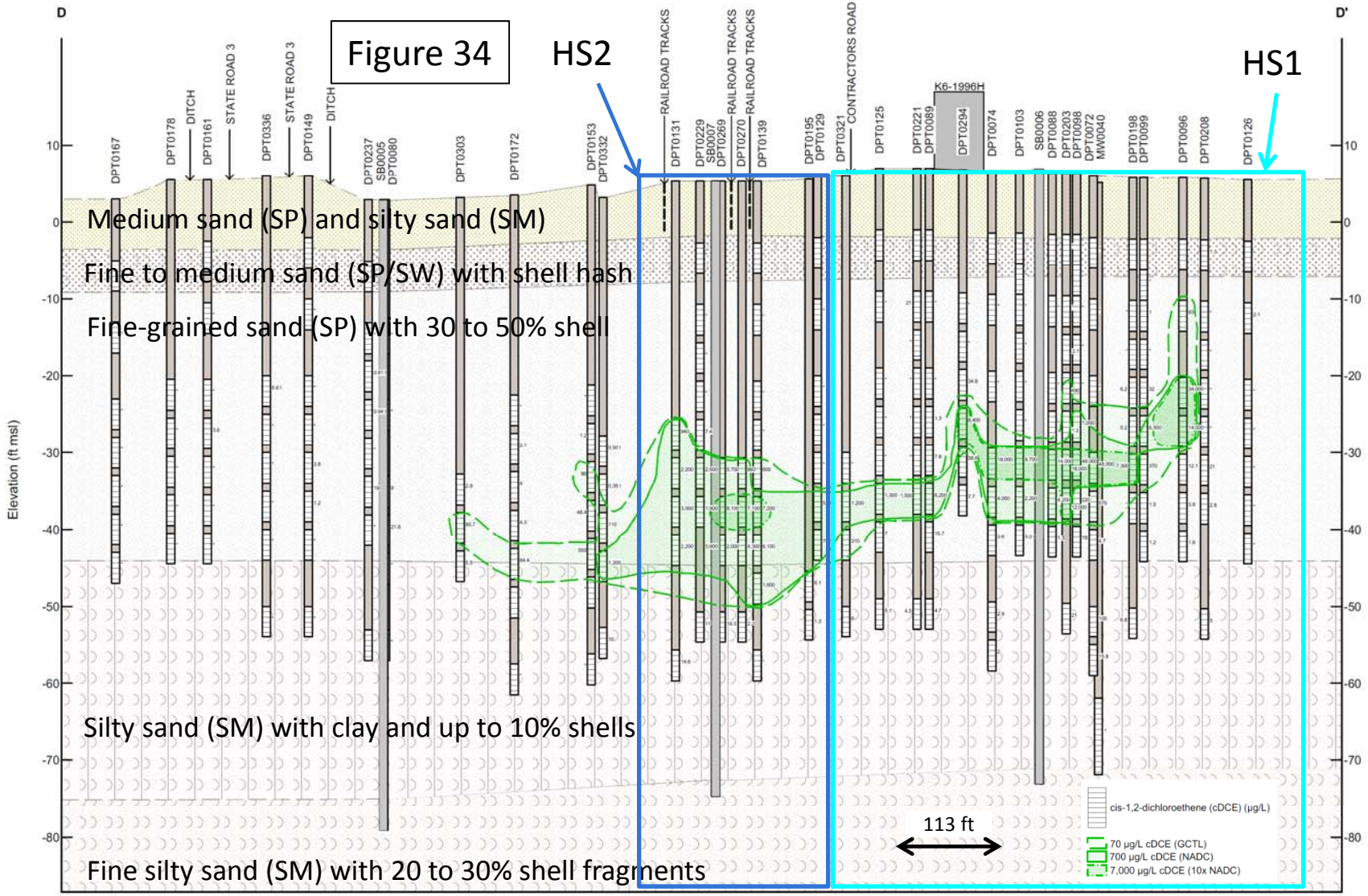


Figure 34
HS2
HS1
D
D'
Elevation (ft msl)
Medium sand (SP) and silty sand (SM)
Fine to medium sand (SP/SW) with shell hash
Fine-grained sand (SP) with 30 to 50% shell
Silty sand (SM) with clay and up to 10% shells
Fine silty sand (SM) with 20 to 30% shell fragments
113 ft
cis-1,2-dichloroethene (cDCE) (µg/L)
70 µg/L cDCE (GCTL)
700 µg/L cDCE (NADC)
7,000 µg/L cDCE (10x NADC)
RAILROAD TRACKS
CONTRACTORS ROAD
DITCH
STATE ROAD 3
K6-1996H

# D to D' – VC

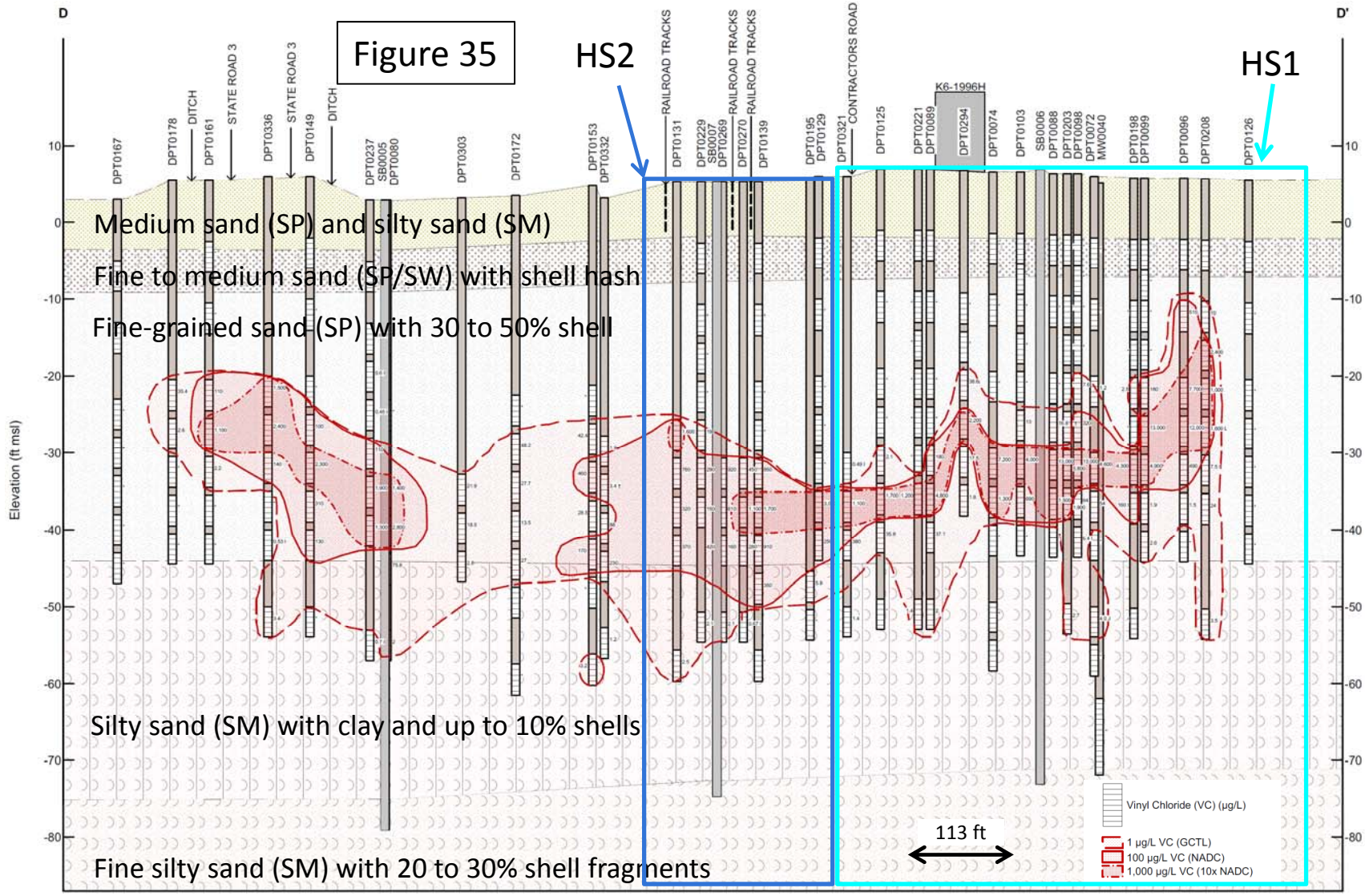
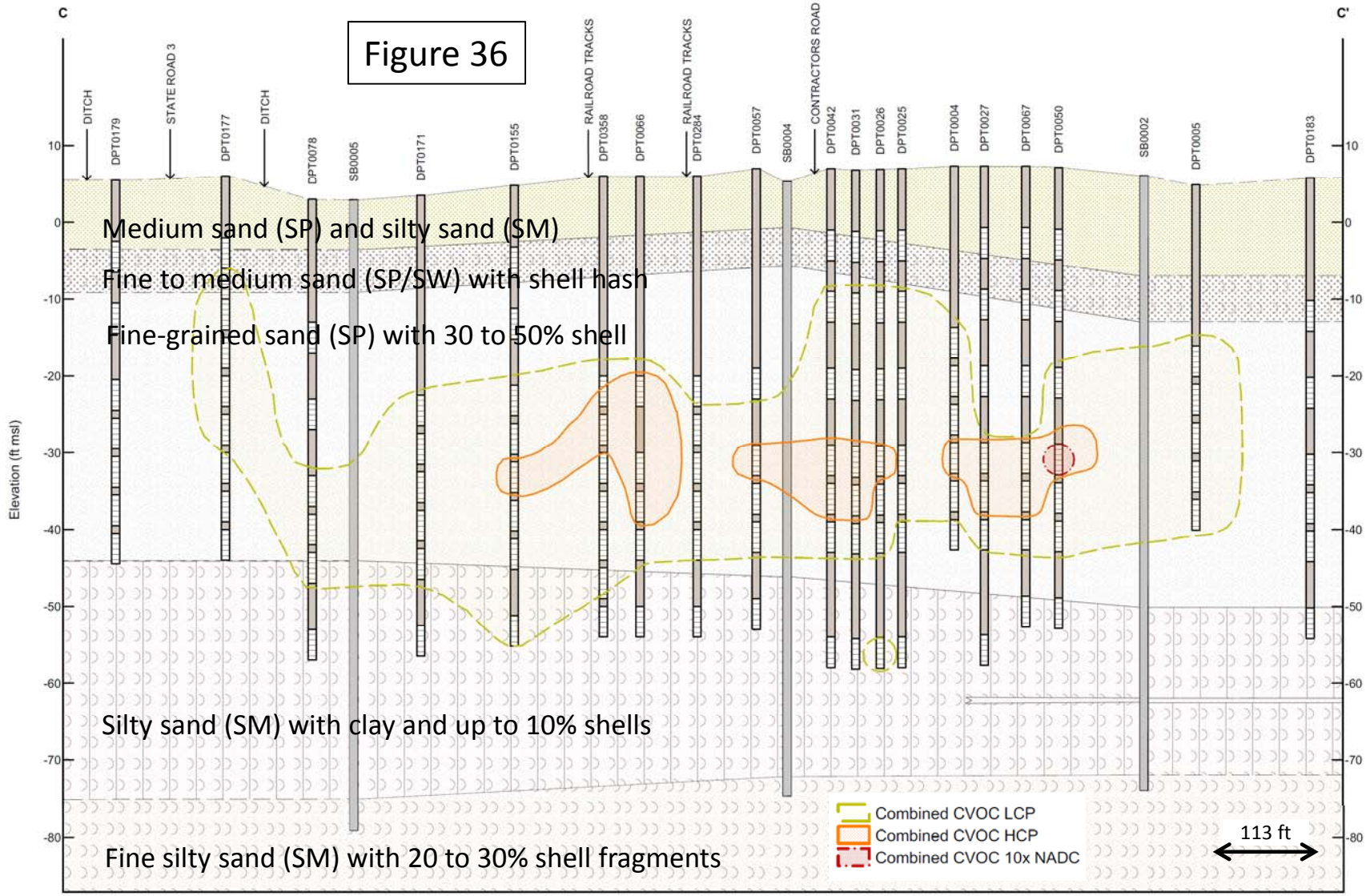


Figure 35
HS2
HS1
D
D'
Elevation (ft msl)
Medium sand (SP) and silty sand (SM)
Fine to medium sand (SP/SW) with shell hash
Fine-grained sand (SP) with 30 to 50% shell
Silty sand (SM) with clay and up to 10% shells
Fine silty sand (SM) with 20 to 30% shell fragments
113 ft
Vinyl Chloride (VC) (µg/L)
1 µg/L VC (GCTL)
100 µg/L VC (NADC)
1,000 µg/L VC (10x NADC)
DPT0167
DPT0178
DITCH
DPT0161
STATE ROAD 3
DPT0336
STATE ROAD 3
DPT0149
DITCH
DPT0237
SB0005
DPT0080
DPT0303
DPT0172
DPT0153
DPT0332
RAILROAD TRACKS
DPT0131
DPT0229
SB0007
DPT0269
RAILROAD TRACKS
DPT0270
RAILROAD TRACKS
DPT0139
DPT0195
DPT0129
DPT0321
CONTRACTORS ROAD
DPT0125
DPT0221
DPT0089
K6-1996H
DPT0294
DPT0074
DPT0103
SB0006
DPT0088
DPT0203
DPT0098
DPT0072
MW0040
DPT0198
DPT0099
DPT0096
DPT0208
DPT0126

# C-C' Composite CVOC Cross Section

Figure 36



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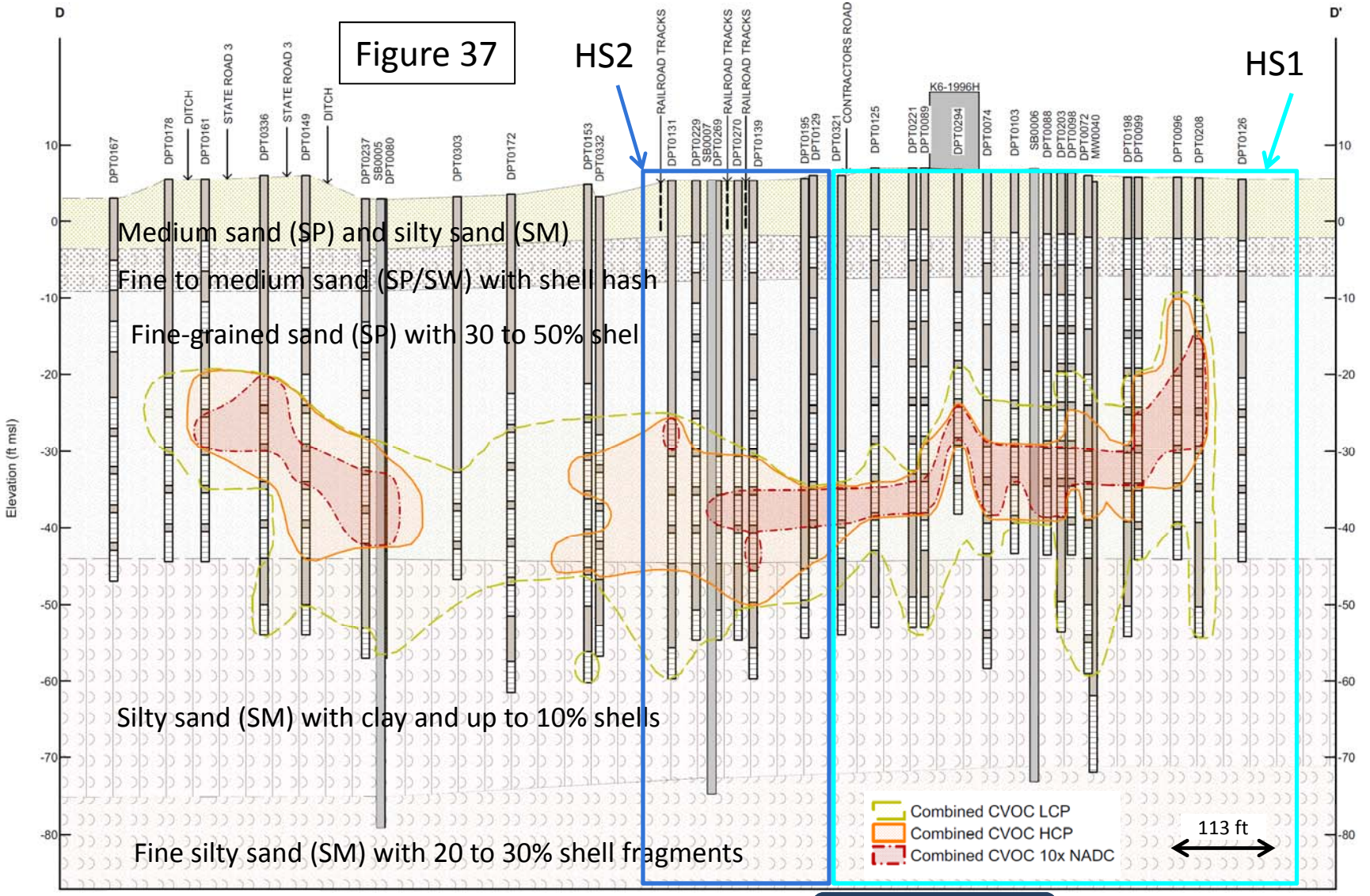
# D-D' Composite CVOC Cross Section



# View 4dim EVS Files

Note: In the EVS model, ½ detection limit was used for ND values.

TetraTech comment #8: Slide 53 (new Slide 60) - Please list mass information by COC for each plume interval (e.g., X lbs of VC in LCP, Y lbs of VC in HCP, and Z lbs of VC in HS, etc.).

*Response: The mass evaluation was prepared consistent with the Step 1 requirements; however, COC mass by plume designation is provided for review.*

| Plume Designation | TCE (lbs) | cDCE (lbs) | VC (lbs) | Total CVOCs (lbs) |
|---|---|---|---|---|
| **LCP** | 6.9 | 8.1 | 6.2 | 21.2 |
| **HCP** | 17.3 | 63.0 | 15.2 | 95.5 |
| **HS** | 6.9 | 56.6 | 25.8 | 89.3 |
| **SZ** | 28.4 | NA | NA | 28.4 |
| **Total** | 60 | 128 | 47 | 234 |

# Contaminant Mass Evaluation
# Site-Wide HCP and LCP

| | | TCE Mass (lbs) | | | | cDCE Mass (lbs) | | | | VC Mass (lbs) | | | | Total CVOC Mass (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth Interval (ft BLS) | foc | Dissolved | Sorbed | Total | Percentage of Total | Dissolved | Sorbed | Total | Percentage of Total | Dissolved | Sorbed | Total | Percentage of Total | |
| 8 to 16 | 0.00333 | 0.01 | 0.03 | 0.04 | 0.1% | 0.22 | 0.22 | 0.44 | 0.3% | 0.10 | 0.06 | 0.16 | 0.3% | 0.6 |
| 16 to 30 | 0.0011 | 1 | 1.4 | 3 | 4.5% | 16 | 5.1 | 21 | 16.5% | 4 | 0.7 | 4 | 9.1% | 40 |
| 31 to 46 | 0.0011 | 17 | 20 | 36 | 61.3% | 45 | 14 | 60 | 46.6% | 27 | 5 | 32 | 68.3% | 213 |
| 46 to 56 | 0.01 | 1 | 15 | 16 | 27.5% | 12 | 35 | 47 | 36.5% | 4 | 6 | 10 | 21.7% | 58 |
| 56 to 75 | 0.01 | 0 | 3.6 | 4 | 6.7% | 0 | 0.0 | 0 | 0.1% | 0 | 0.1 | 0.2 | 0.5% | 3 |
| **Total Mass** | | **59 lbs of TCE** | | | | **128 lbs of cDCE** | | | | **47 lbs of VC** | | | | * |

*Total CVOC mass (excluding potential DNAPL) within LCP and HCP areas = **234 lbs**

**Notes:**

1. Dissolved mass calculation method: Calculate the area of each COC contour interval, i.e. GCTL to NADC, NADC to 10xNADC, >10xNADC, (For TCE: 3 to 300 µg/L, 300 to 30,000 µg/L, > 30,000 µg/L). Calculate the plume pore volume (area multiplied by depth interval and porosity). Calculate the average CVOC concentration using DPT data located within each COC contour interval in the depth interval of interest. Pore volume multiplied by average concentration yields mass.
2. Sorbed mass calculation method: Use the area of each contour interval as described in note 1. Calculate the soil volume (area multiplied by depth interval) and convert to soil mass (multiply by assumed density of 100 lb/ft$^3$). Calculate the equilibrium soil concentrations using average dissolved CVOC concentrations calculated above, the fraction organic carbon (foc) provided in table above and the Koc's presented below. The soil concentration multiplied by the soil mass yields the sorbed mass.
3. Porosity was assumed to be 0.25.
4. foc is depth interval-specific and based on data from HMF North.
5. Koc data is from Sawyer, McCarty and Parkin (2003) and are TCE: 165.7 L/kg; cDCE: 45.6 L/kg; and VC: 26.3 L/kg.
6. Calculations do not consider potential DNAPL mass.

# Contaminant Mass Evaluation
# Hot Spot 2

| | | TCE Mass (lbs) | | | | cDCE Mass (lbs) | | | | VC Mass (lbs) | | | | Total CVOC Mass (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth Interval (ft BLS) | foc | Dissolved | Sorbed | Total | Percentage of Total | Dissolved | Sorbed | Total | Percentage of Total | Dissolved | Sorbed | Total | Percentage of Total | |
| 31 to 45 | 0.0011 | 0.20 | 0.24 | 0.44 | 12% | 5.39 | 1.7331 | 7.1 | 56% | 2.4 | 0.441 | 2.8 | 65% | 10 |
| 46 to 55 | 0.01 | 0.28 | 2.9 | 3.2 | 88% | 1.5 | 4.2 | 5.7 | 44% | 0.56 | 0.94 | 1.5 | 35% | 10 |
| **Total Mass (lbs)** | | **4 lbs of TCE** | | | | **13 lbs of cDCE** | | | | **4 lbs of VC** | | | | * |

*Total CVOC mass within HS2 = **21 lbs**

**Notes:**

1. Dissolved mass calculation method: Calculate the area of each contour interval (COCs combined), i.e. GCTL to NADC, NADC to 10xNADC, >10xNADC. Calculate the plume pore volume (area multiplied by depth interval and porosity). Calculate the average CVOC concentration using DPT data located within each COC contour interval in the depth interval of interest. Pore volume multiplied by average concentration yields the dissolved mass.
2. Sorbed mass calculation method: Use the area of each contour interval as described in note 1. Calculate the soil volume (area multiplied by depth interval) and convert to soil mass (multiply by assumed density of 100 lb/ft$^3$). Calculate the equilibrium soil concentrations using average dissolved CVOC concentrations calculated above, the fraction organic carbon (foc) provided in table above and the Koc's presented below. The soil concentration multiplied by the soil mass yields the sorbed mass.
3. Porosity was assumed to be 0.25.
4. foc is depth interval-specific and based on data from HMF North.
5. Koc data is from Sawyer, McCarty and Parkin (2003) and are TCE: 165.7 L/kg; cDCE: 45.6 L/kg; and VC: 26.3 L/kg.
6. Calculations do not consider potential DNAPL mass.

# Test Consensus

- HS2
  - TCE delineation
  - cDCE delineation
  - VC delineation
- HCP
  - TCE delineation
  - cDCE delineation
  - VC delineation
- LCP
  - TCE delineation
  - cDCE delineation
  - VC delineation

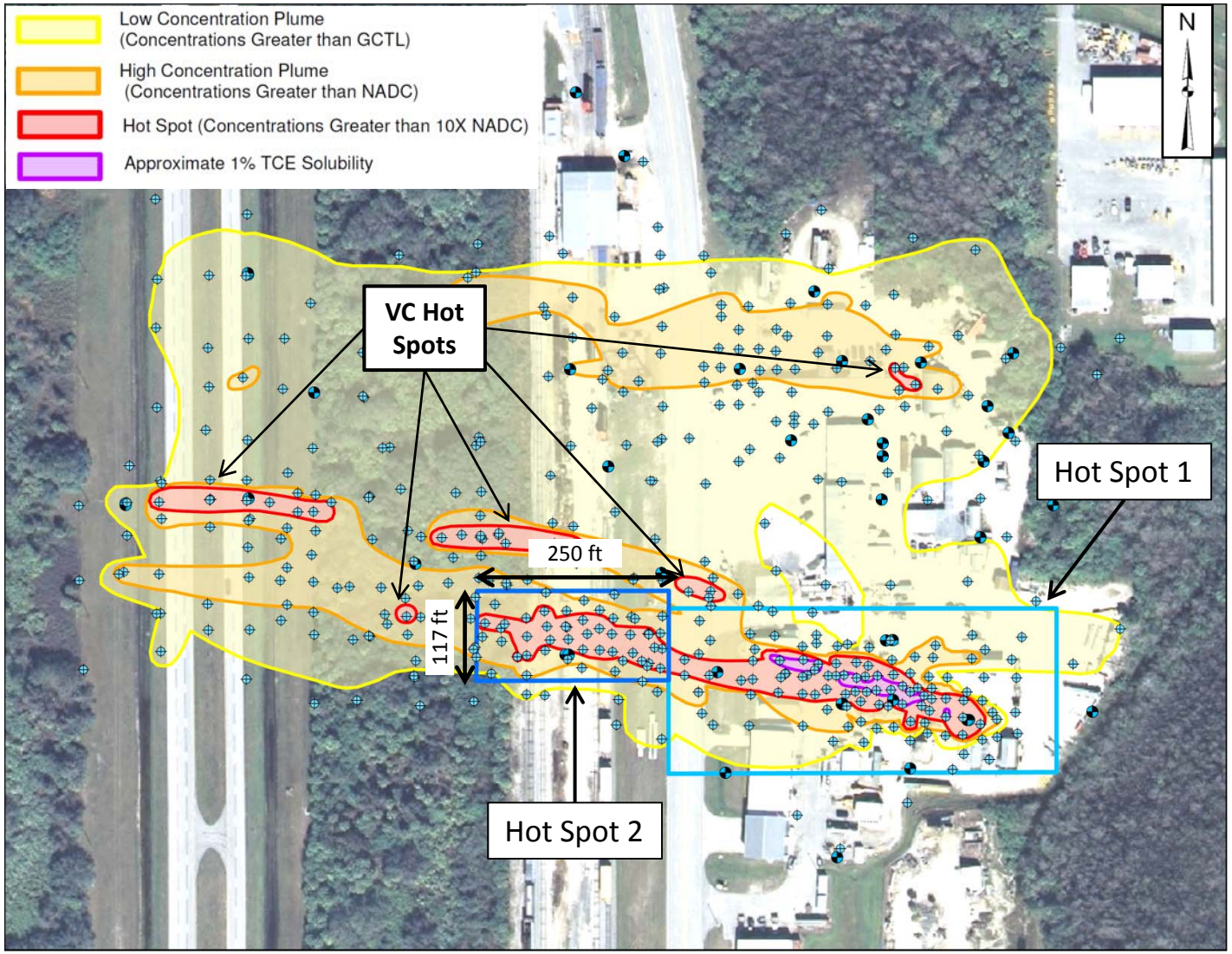
# Step 1 – Section B

# Presentation Outline

- Step 1 Section B
  - Review of Site Conditions
  - List of Technologies
  - Engineering Data Gaps
  - Technologies Retained
  - Test Consensus

# Overall Combined Depth CVOC Plume Map

- HS2: Area west of Hot Spot 1 with CVOC impacts greater than 10XNADC
- HCP: refers to site-wide CVOC impacts greater than NADC
- LCP: refers to site-wide CVOC impacts greater than GCTL



# Site Plumes

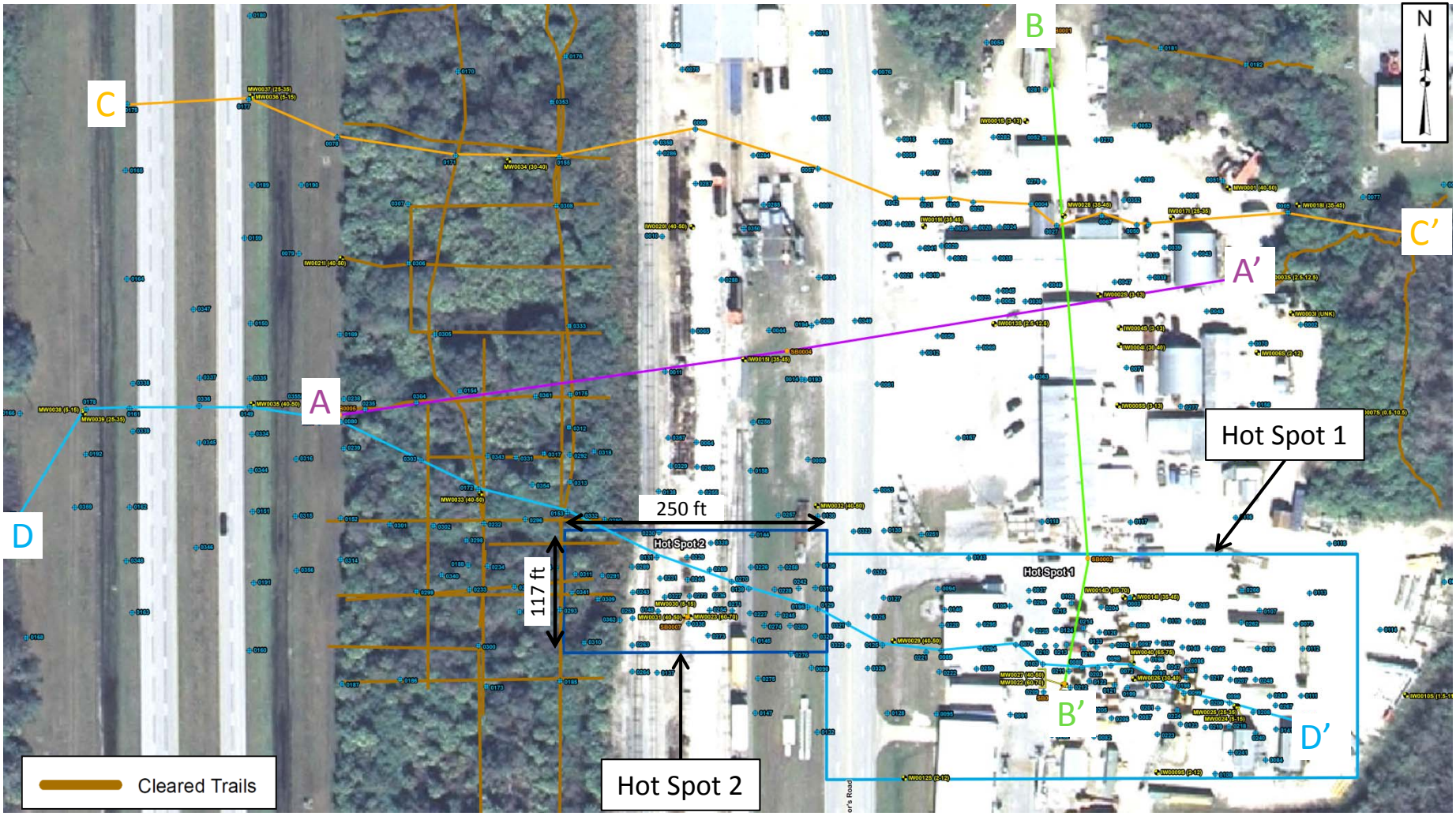
| Designation | Concentrations | Acreage |
|---|---|---|
| LCP (site-wide) | >GCTL | 14.90 |
| HCP (site-wide) | >NADC | 4.37 |
| HCP (HS2) | >NADC | 0.25 |
| Hot Spot (site-wide) | >10XNADC | 1.01 |
| 1% TCE Solubility | >11,000 µg/L | 0.06 |

- Step 1B focused on HS2 and HCP plumes

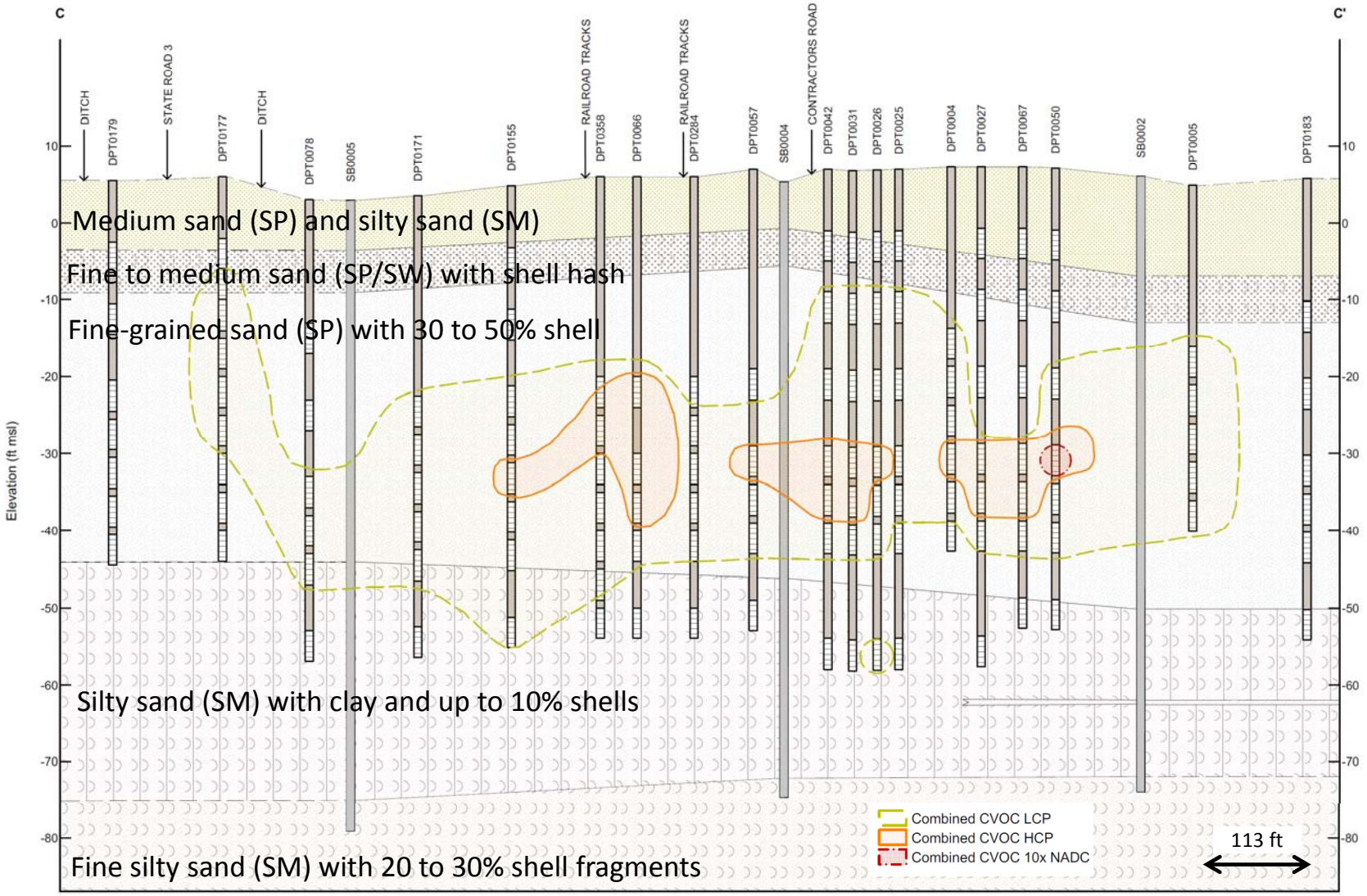
# Review of Site Conditions

- Heavy vegetation and wetlands near western boundary of HS2 and most of HCP
- HS2 and HCP include wetlands, multiple railroads, drainage ditch, and Kennedy Parkway
- Impacts generally present from 8 to 50 ft BLS
  - Majority of CVOC contaminant mass is located from 31 to 45 ft BLS (91%)
- Lithology is primarily sand until approximately 45 ft BLS (based on visual observations, MIP, and DPT data)
  - Below approximately 45 ft BLS lithology is silty sand, with varying amounts of clay (semi-confining layer)

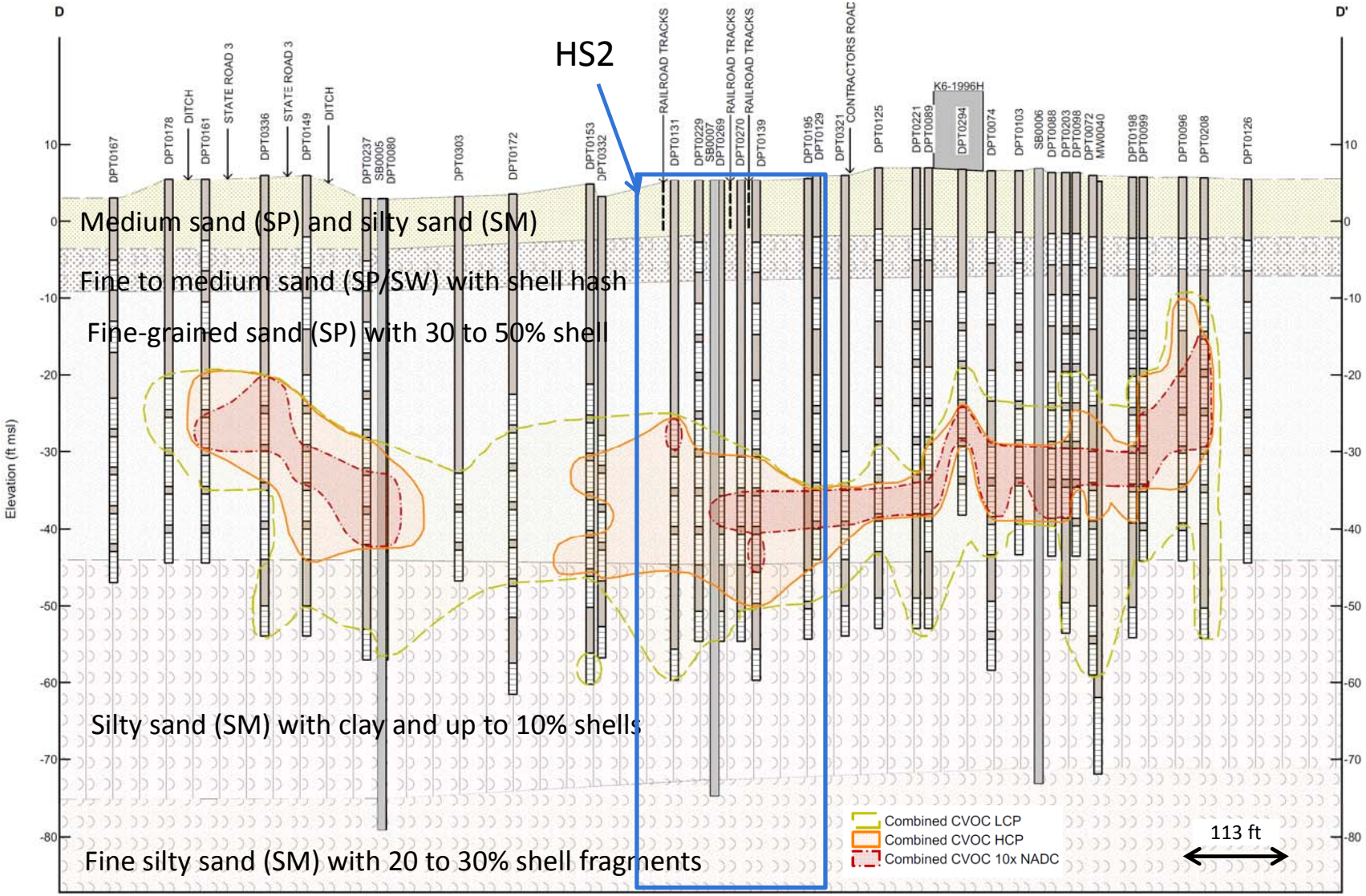
# Cross Section Locations



# C-C' Composite CVOC Cross Section



# D-D' Composite CVOC Cross Section



# Low Concentration Plume (site-wide)

| Technology | Screening Result and Rationale |
|---|---|
| *No Action*<br>No Further Action | **Eliminated** – Not protective of human health and environment or allowed from a regulatory perspective. |
| *Limited Action (Passive)*<br>Institutional Controls | **Retained** – Facility Land Use Controls warranted to prevent exposure to groundwater and/or installation of potable wells. |
| Monitoring (LTM, MNA) | **Retained** – Implement LTM/MNA groundwater program to monitor site conditions. |
| *Action (Aggressive)* | **Eliminated** – Aggressive actions for LCP not warranted at this time; therefore, no detailed screening necessary. There are no receptors for impacts associated with LCP or nearby OFWs that could potentially be impacted. |

# High Concentration Plume (site-wide)

| Technology | Screening Result and Rationale |
|---|---|
| *No Action* | |
| No Further Action | **Eliminated** – Not protective of human health and environment or allowed from a regulatory perspective. |
| *Limited Action (Passive)* | |
| Institutional Controls | **Retained** – Facility Land Use Controls warranted to prevent exposure to groundwater and/or installation of potable wells. |
| Monitoring (LTM, MNA) | **Retained** –Implement LTM/MNA groundwater program to monitor site conditions in conjunction with implementation of another technology. |
| *Action (Aggressive)* | |
| GW Extraction (Hydraulic Containment, pump and treat) | **Conditionally Retained** – Only suitable for plume containment and/or as a component of another aggressive treatment technology. |
| Impermeable Barrier | **Eliminated** – Not feasible due to site features (buildings, roads and railroad tracks); multiple discrete areas. |
| Bioremediation (Bioaugmentation, Biostimulation) | **Retained** – Reductive dechlorination occurring at site based on MEE, sulfate, sulfide, Dhc, vcrA, cDCE and VC sampling results from HS1. |
| Large Diameter Auger (LDA) (solidification, steam, EZVI approaches) | **Eliminated** – Not feasible due to site features – buildings, roads and railroad tracks. |
| Air Sparge | **Retained** – Effective treatment above semi-confining layer (~45 ft BLS) for volatilization of CVOCs. |

# High Concentration Plume (site-wide)

| Technology | Screening Result and Rationale |
|---|---|
| *Action (Aggressive)* | |
| Multiphase Extraction (MPE) | **Eliminated** – No significant vadose zone/shallow impacts, high energy use if deployed for groundwater dewatering/extraction. |
| Heating Technologies | **Eliminated** – Technology better suited for significant DNAPL source zone and mass stored in low permeability zones. |
| Oxidation Technologies | **Eliminated** – Rebound and tailing effects would be anticipated and difficulties achieving effective oxidant distribution. |
| EZVI | **Eliminated** – Technology better suited for focused DNAPL source zones not dissolved CVOCs. |
| Co-Solvent Flushing | **Eliminated** – Technology better suited for focused DNAPL source zones. |
| Electrokinetic (EK) Enhanced Bio or ChemOx | **Eliminated** – Technology better suited for focused uniform distribution of e-donor, microbial culture, or oxidant in limited footprint areas with high level of heterogeneity and diffused mass/DNAPL in low permeability zones. |
| Excavation | **Eliminated** – Depth of impacts makes implementation infeasible. |

# Hot Spot 2 (>10xNADCs)

| Technology | Screening Result and Rationale |
|---|---|
| *No Action* | |
| No Further Action | **Eliminated** – Not protective of human health and environment or allowed from a regulatory perspective. |
| *Limited Action (Passive)* | |
| Institutional Controls | **Retained** – Facility Land Use Controls warranted to prevent exposure to groundwater and/or installation of potable wells. |
| Monitoring (LTM, MNA) | **Retained** –Implement LTM/MNA groundwater program to monitor site conditions in conjunction with implementation of another technology. |
| *Action (Aggressive)* | |
| GW Extraction (Hydraulic Containment, pump and treat) | **Conditionally Retained** – Only suitable for plume containment and/or as a component of another aggressive treatment technology. |
| Impermeable Barrier | **Eliminated** – Not feasible due to site features (buildings, roads and railroad tracks); multiple discrete areas. |
| Bioremediation (Bioaugmentation, Biostimulation) | **Retained** – Reductive dechlorination occurring at site based on MEE, sulfate, sulfide, Dhc, vcrA, cDCE and VC sampling results from HS1. |
| Large Diameter Auger (LDA) (solidification, steam, EZVI approaches) | **Eliminated** – Not feasible due to site features – buildings, roads and railroad tracks. |
| Air Sparge | **Retained** – Effective treatment above semi-confining layer (~45 ft BLS) for volatilization of CVOCs. |

# Hot Spot 2 (>10xNADCs)

| Technology | Screening Result and Rationale |
|---|---|
| *Action (Aggressive)* | |
| Multiphase Extraction (MPE) | **Eliminated** – No significant vadose zone/shallow impacts, high energy use if deployed for groundwater dewatering/extraction. |
| Heating Technologies | **Eliminated** – Technology better suited for significant DNAPL source zone and mass stored in low permeability zones; very limited area of hot spot would result in very high unit cost for technology application. |
| Oxidation Technologies | **Eliminated** – Rebound and tailing effects would be anticipated and difficulties achieving effective oxidant distribution. |
| EZVI | **Eliminated** – Technology better suited for focused DNAPL source zones not dissolved CVOCs. |
| Co-Solvent Flushing | **Eliminated** – Technology better suited for focused DNAPL source zones. |
| Electrokinetic (EK) Enhanced Bio or ChemOx | **Eliminated** – Technology better suited for focused uniform distribution of e-donor, microbial culture, or oxidant in limited footprint areas with high level of heterogeneity and diffused mass/DNAPL in low permeability zones. |
| Excavation | **Eliminated** – Depth of impacts makes implementation infeasible. |

# Engineering Data Gaps

- Evaluate permeability in silty sand with clay layer (45 to 60 ft BLS)

# Retained Technologies

| HS2 (> 10xNADC) | HCP (> NADC) | LCP (> GCTL) |
|---|---|---|
| Monitoring | Monitoring | Monitoring |
| Bioremediation (Recirculation delivery option retained) | Bioremediation (Recirculation delivery option retained) | |
| Air sparging | Air sparging | |

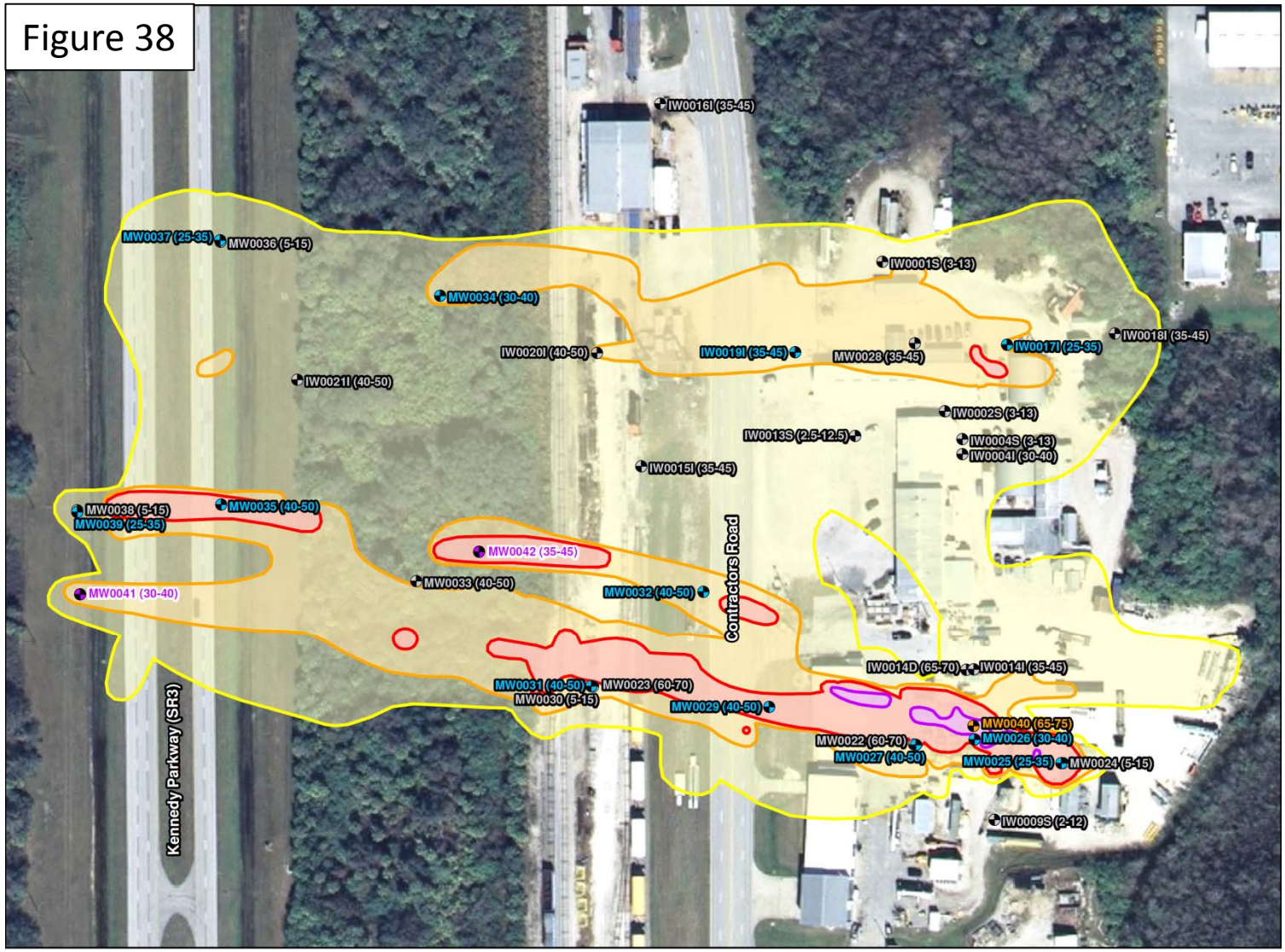
Air sparge, MNA and bioremediation are scalable to larger treatment areas

# Path Forward/Test Consensus

- Proceed to Step 2
  - Presumptive interim GW monitoring for LCP
  - Separate evaluations for retained technologies
    - CVOCs > NADC
  - Test consensus
    - Technologies retained for evaluation in Step 2
      - Bioremediation with recirculation
      - Air sparging
      - MNA

# Step 1 – Section C

Figure 38




Note:
1. Screen interval is presented in feet, below land surface (ft, BLS).

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# Rationale Table

| Well Location | Screened Interval (ft BLS) | Analytes | Rationale |
|---|---|---|---|
| IW0017I | 25 to 35 | VOCs | VC exceeds NADC. |
| IW0019I | 35 to 45 | VOCs | cDCE (GCTL) and VC (NADC) exceedances. |
| MW0025 | 25 to 35 | VOCs; 1,4-D | Monitor NADC plume. |
| MW0026 | 30 to 40 | VOCs; 1,4-D | Monitor NADC plume. |
| MW0027 | 40 to 50 | VOCs | Monitor NADC plume. |
| MW0029 | 40 to 50 | VOCs; 1,4-D | Monitor NADC plume. |
| MW0031 | 40 to 50 | VOCs | VC exceeds NADC. |
| MW0032 | 40 to 50 | VOCs | VC exceeds GCTL and downgradient of VC HS. |
| MW0034 | 30 to 40 | VOCs | VC exceeds NADC and screened within main plume. |
| MW0035 | 40 to 50 | VOCs; 1,4-D | VC exceeds NADC. |
| MW0037 | 25 to 35 | VOCs | cDCE (GCTL) and VC (NADC) exceedances. Provides downgradient monitoring of northern plume. |
| MW0039 | 25 to 35 | VOCs | VC exceedance (GCTL) and on far west boundary. Provides downgradient monitoring of southern plume. |
| MW0040 | 65 to 75 | VOCs | Deep well near source zone. |
| MW0041* | 30 to 40 | VOCs | VC exceeds NADC. |
| MW0042* | 35 to 45 | VOCs | VC exceeds 10XNADC. |

*Proposed monitoring wells.
1,4-D = 1,4-dioxane.
Annual sampling, conducted in November (timing may be adjusted based on SZ treatment).

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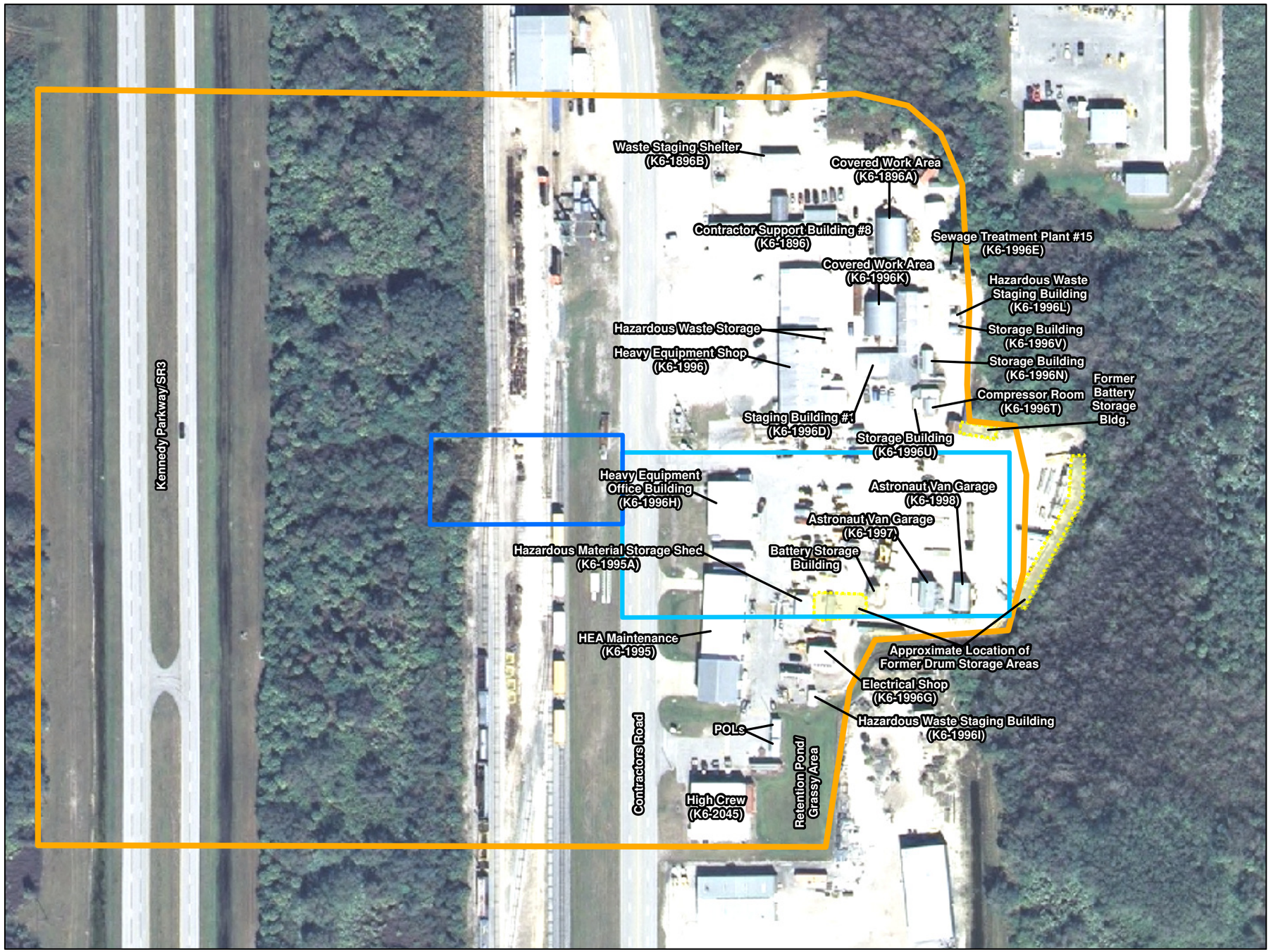
**Table 1. Summary of DPT Sample Spacing Compared to Recommended Spacing**
**Contractor's Road Heavy Equipment Area**

| Location | Applicable Maps | Plume Concentration | Recommended EE Guidance Spacing | Actual Sample Spacing | Rationale |
|---|---|---|---|---|---|
| DPT0135 | VC 31 to 46 | HS | 25 ft | 30 to 40 ft | Subsurface utilities present in this area. |
| DPT0159 | VC 16 to 30 | HCP | 50 ft | 50 to 100 ft | DPT0347 provides adequate delineation of this HCP. |
| DPT0161 | VC 16 to 30; VC 31 to 46 | HS | 25 ft | 25 to 45 ft | The area between DPT0161 and DPT0178 is inaccessible due to a drainage ditch. |
| DPT0237 | VC 31 to 46 | HS | 25 ft | 25 to 65 ft | The area between DPT0237 and DPT0149 is inaccessible due to a drainage ditch. |
| DPT0251 | VC 16 to 30; VC 31 to 46 | HCP | 50 ft | 35 to 90 ft | There is very thick road base in this area to support movement of heavy equipment and refusal was repeatedly encountered (attempted at over 20 locations). |
| DPT0268 | VC 31 to 46; VC 46 to 56 | HS | 25 ft | 25 to 50 ft | Railroad tracks are present in this area. |
| DPT0291 | cDCE 31 to 46; cDCE 46 to 56; VC 31 to 46; VC 46 to 56 | HS | 25 ft | 25 to 50 ft | The area between DPT0291 and DPT0290 was inaccessible during multiple sampling events due to standing water. |
| DPT0311 | cDCE 31 to 46; cDCE 46 to 56; cDCE >56; VC 31 to 46; VC 46 to 56; VC >56 | HS | 25 ft | 25 to 50 ft | The area between DPT0311 and DPT0332 was inaccessible during multiple sampling events due to standing water. |
| DPT0318 | VC 31 to 46 | HS | 25 ft | 25 to 70 ft | The area between DPT0318 and DPT0329 is inaccessible due to standing water, a drainage ditch, and railroad tracks. The areas to the north and south of DPT0318 were inaccessible during multiple sampling events due to standing water. |
| DPT0331 | VC 31 to 46 | HS | 25 ft | 25 to 50 ft | Limited access due to heavy vegetation. |
| DPT0333 | VC 16 to 30; VC 31 to 46; VC 46 to 56 | LCP | 100 ft | 65 to 130 ft | Limited access due to heavy vegetation. |

Note: This table is intended to provide additional explanation where sample spacing varied from suggested guidance.




N

140 70 0 140

Feet

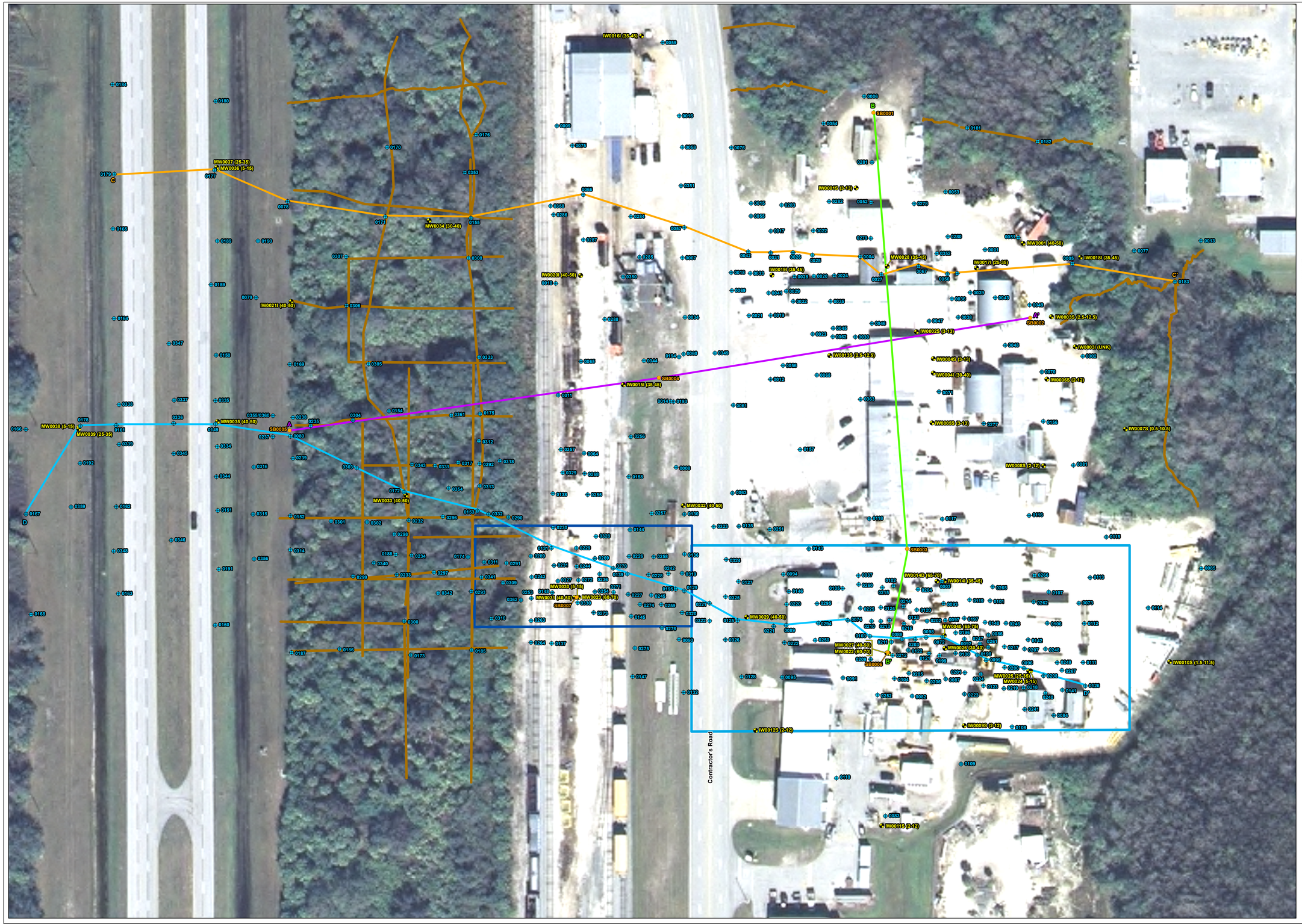
**Legend**

- Hot Spot 2
- Hot Spot 1
- Solid Waste Management Unit #55 Boundary
- Approximate Location of Former Drum Storage Area; Former Battery Storage Bldg.

Note: Historical Site Features were obtained from the 1999 RFI Report.

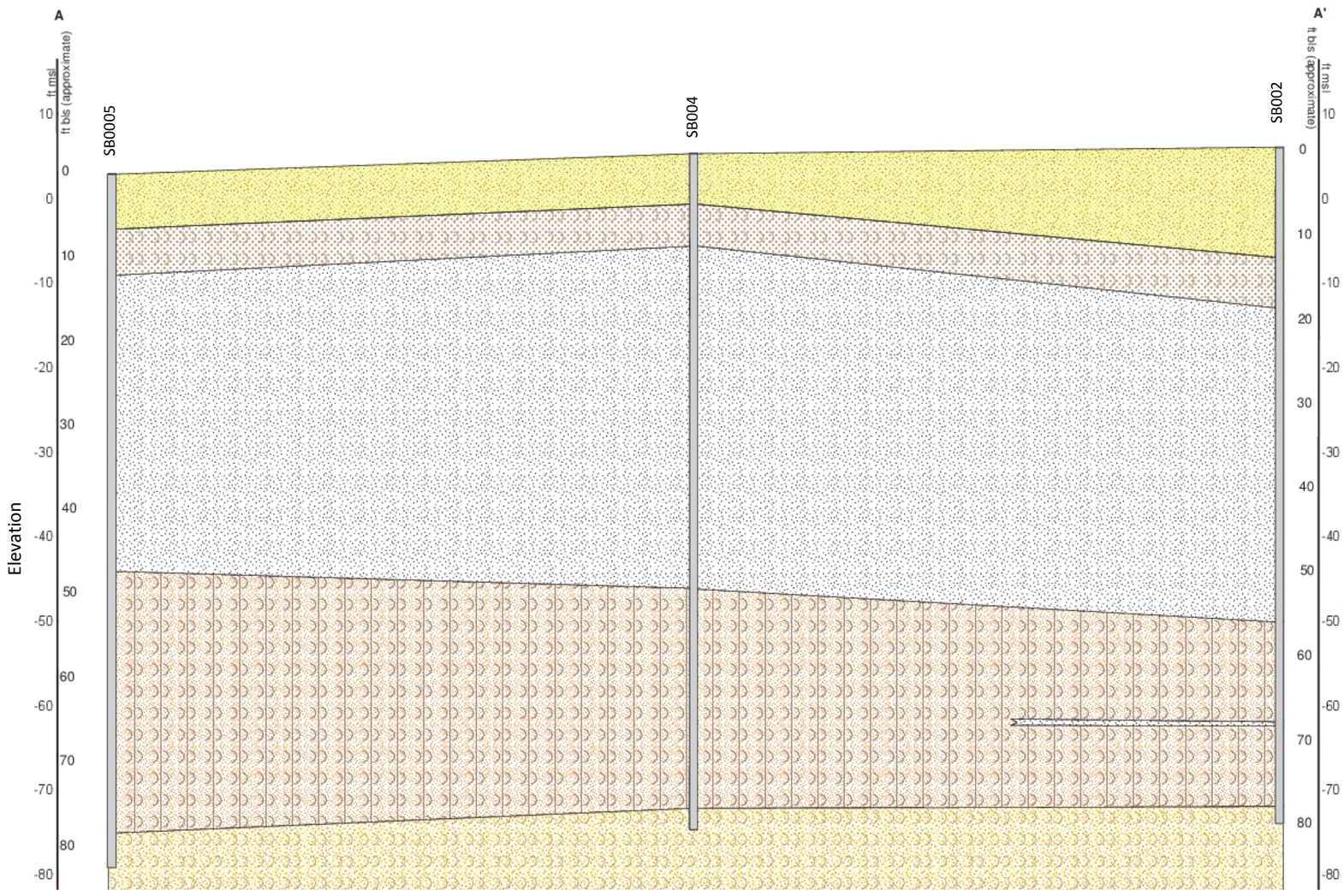
Path: (Titusville-01\DATA) T:\0GIS\FR1681_CRHE\MXDs\JAN2015\Overall_Site_Map_11_17.mxd 13 January 2015 JRB

Figure 1
Site Map




Path: I:\Nashville-01\Data\7.0\GIS\FY16\01_CRHE\MXD\eNOV2014\CrossSection_Transects_NOV2014.mxd 05 Mar 2015 JRB

Figure 2
CRHE Area Cross Section Transects




Notes:

1. ft indicate feet.
2. msl indicates mean sea level
3. bls indicates below land surface
4. This cross section is intended to show general lithological trends. At select locations there are interbedded materials of various grain size. If specific information regarding materials encountered at specific depths is needed, soil boring logs should be reviewed.

78 39 0 78 Feet

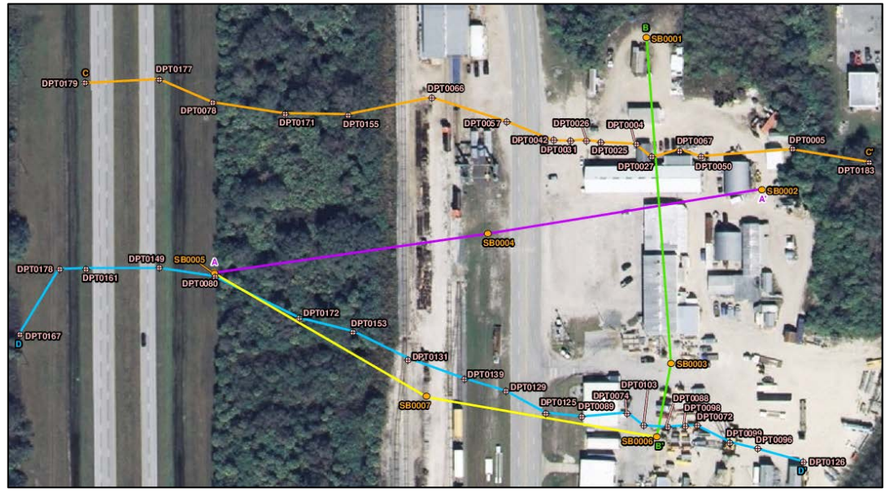
Horizontal 1" = 78'
Vertical exaggeration is 6

**Legend**

Lithology Boring

Lithology

- Medium SANDS (SP) and silty SANDS (SM) of varying color
- Fine to medium SAND (SP/SW)/tan shell hash
- SAND (SP) fine-grained with shell 30 - 50%
- Silty SAND (SM) with varying amounts of clay and up to 10% shells
- Fine silty SAND (SM) with 20-30% shell fragments




**Legend**

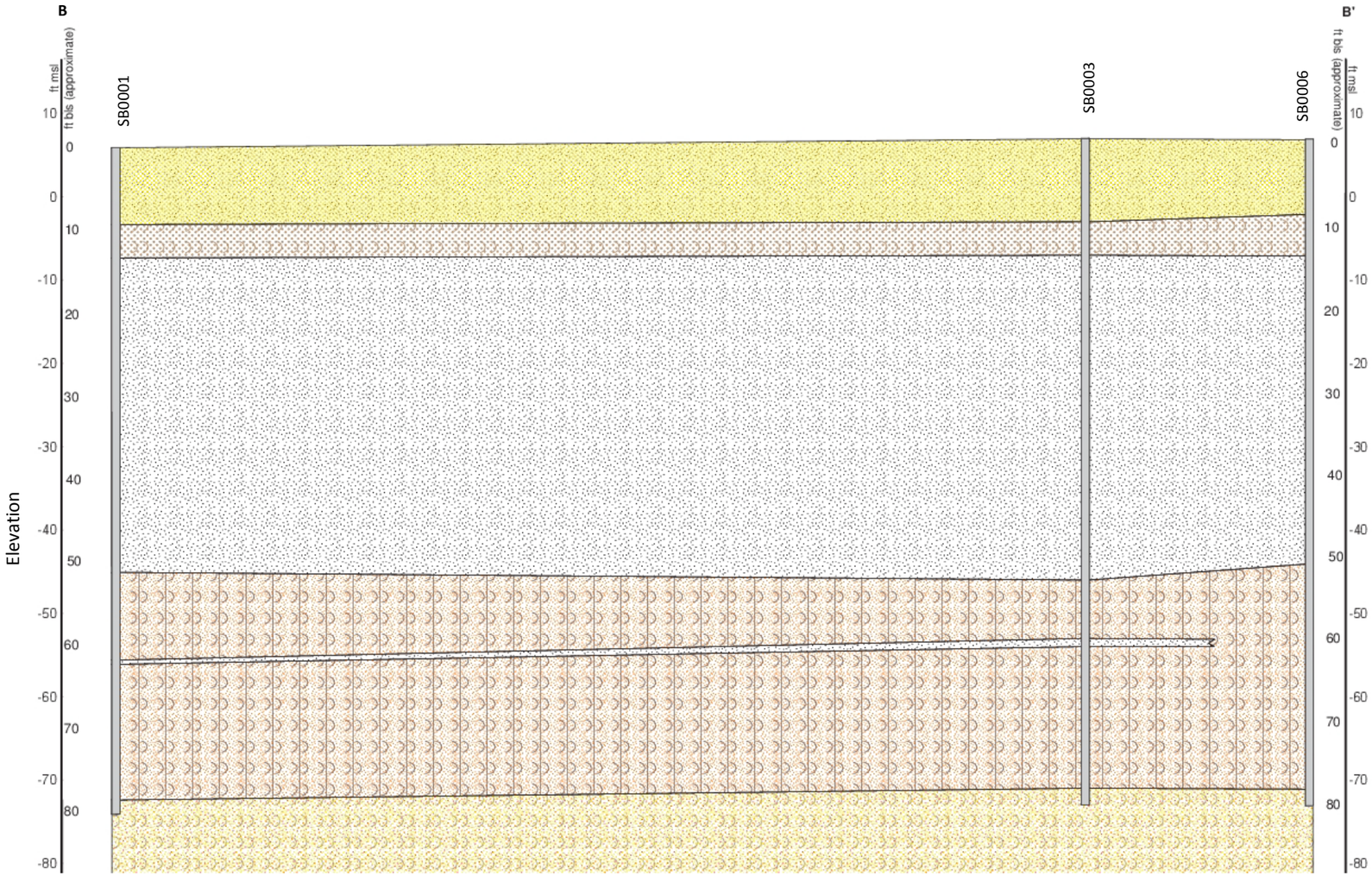
- Soil Boring Location
- DPT Sampling Location
- A-A' Transect
- A-B' Transect
- B-B' Transect
- C-C' Transect
- D-D' Transect

Notes: Prefix for all sampling location is "CRHE-"

12. This cross section is intended to show general lithologi trends. At select locations there are interbedded materials various grain size. If specific information regarding materia encountered at specific depths is needed, soil boiring logs should be reviewed.

120 60 0 120 Feet

Figure 3
Lithologic Cross Section A to A'




**Legend**

Lithology Boring

Lithology

- Medium SANDS (SP) and silty SANDS (SM) of varying color
- Fine to medium SAND (SP/SW)/tan shell hash
- SAND (SP) fine-grained with shell 30 - 50%
- Silty SAND (SM) with varying amounts of clay and up to 10% shells
- Fine silty SAND (SM) with 20-30% shell fragments

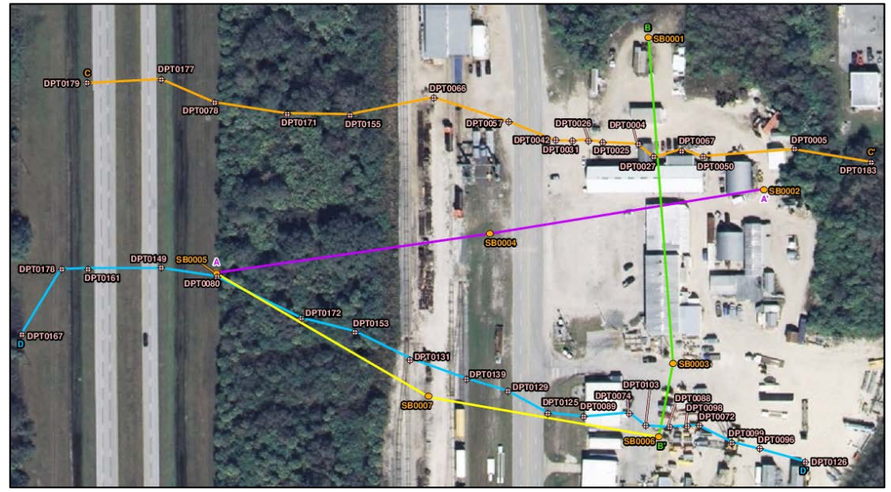
Notes:

1. ft indicate feet
2. msl indicates mean sea level
3. bls indicates below land surface
4. This cross section is intended to show general lithological trends. At select locations there are interbedded materials of various grain size. If specific information regarding materials encountered at specific depths is needed, soil boring logs should be reviewed.

57 28 0 57 Feet

Horizontal 1" = 57'

Vertical exaggeration is 4.5




**Legend**

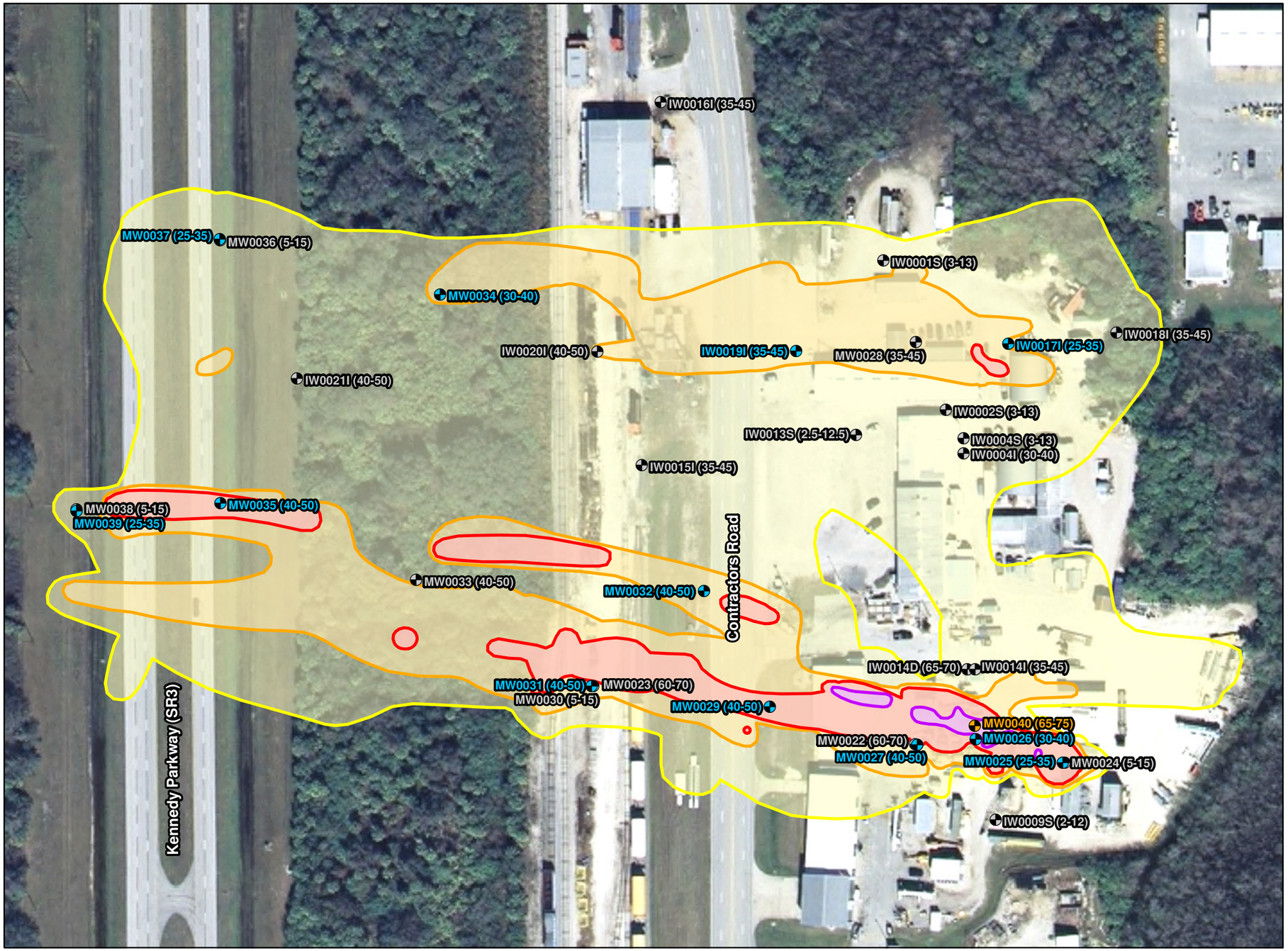
- Soil Boring Location
- DPT Sampling Location
- A-A' Transect
- A-B' Transect
- B-B' Transect
- C-C' Transect
- D-D' Transect

Notes: Prefix for all sampling location is "CRHE-"

N

120 60 0 120 Feet

Figure 4
Lithologic Cross Section B to B'




N

120 60 0 120

Feet

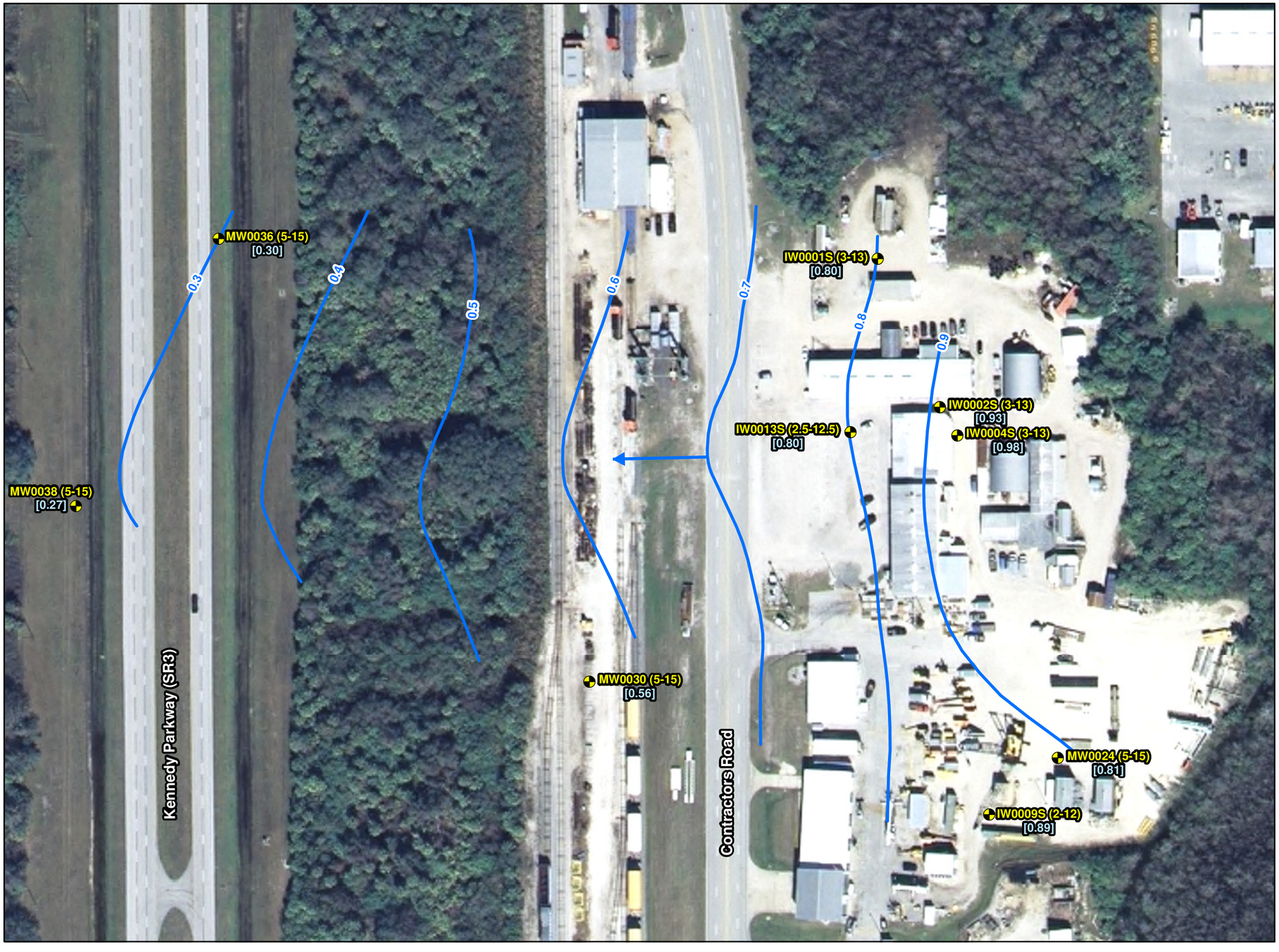
## Legend

- Intermediate Monitoring Well Location (Screen Interval)
- Deep Monitoring Well Location (Screen Interval)
- Monitoring Well - Not Part of Interim Groundwater Sampling Plan (Screen Interval)
- Low Concentration Plume
- High Concentration Plume
- Hot Spot
- 1% TCE Solubility Plume

Note:
1. Screen interval is presented in feet, below land surface (ft, BLS).

Path: {Titusville-01\Data\}P:\0GIS\FR1681_CRHE\MXDs\MAR2015\GW_network_MARCH2015.mxd 25 March 2015 MAH

Figure 5
Monitoring Well Sampling Locations




N

120 60 0 120

Feet

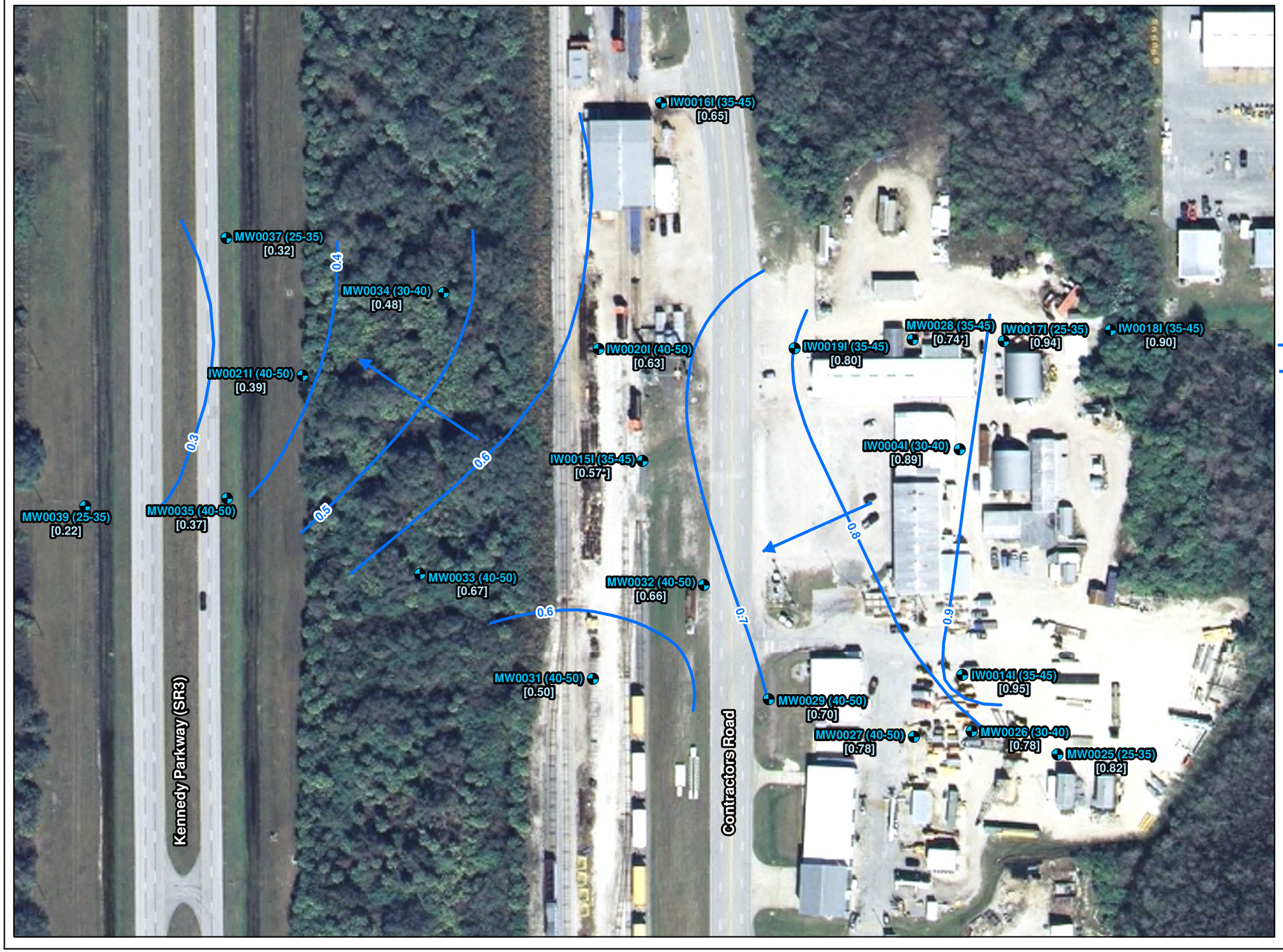
## Legend

- Shallow Monitoring Well Location showing (Screen Interval) and [Groundwater Elevation]
- Groundwater Elevation Contour
- Groundwater Flow Direction

Notes:
1. Screen interval is presented in feet, below land surface (ft, BLS).
2. Elevation is referenced to the North American Datum of 1988.

Titusville-01\data\0GIS\FR1681\MXDs\MRACH2012\GW_Elev_Shallow.mxd 21 MARCH 2012 JRB

Figure 6
Shallow Groundwater Elevation Contours - March 2012




N

120 60 0 120

Feet

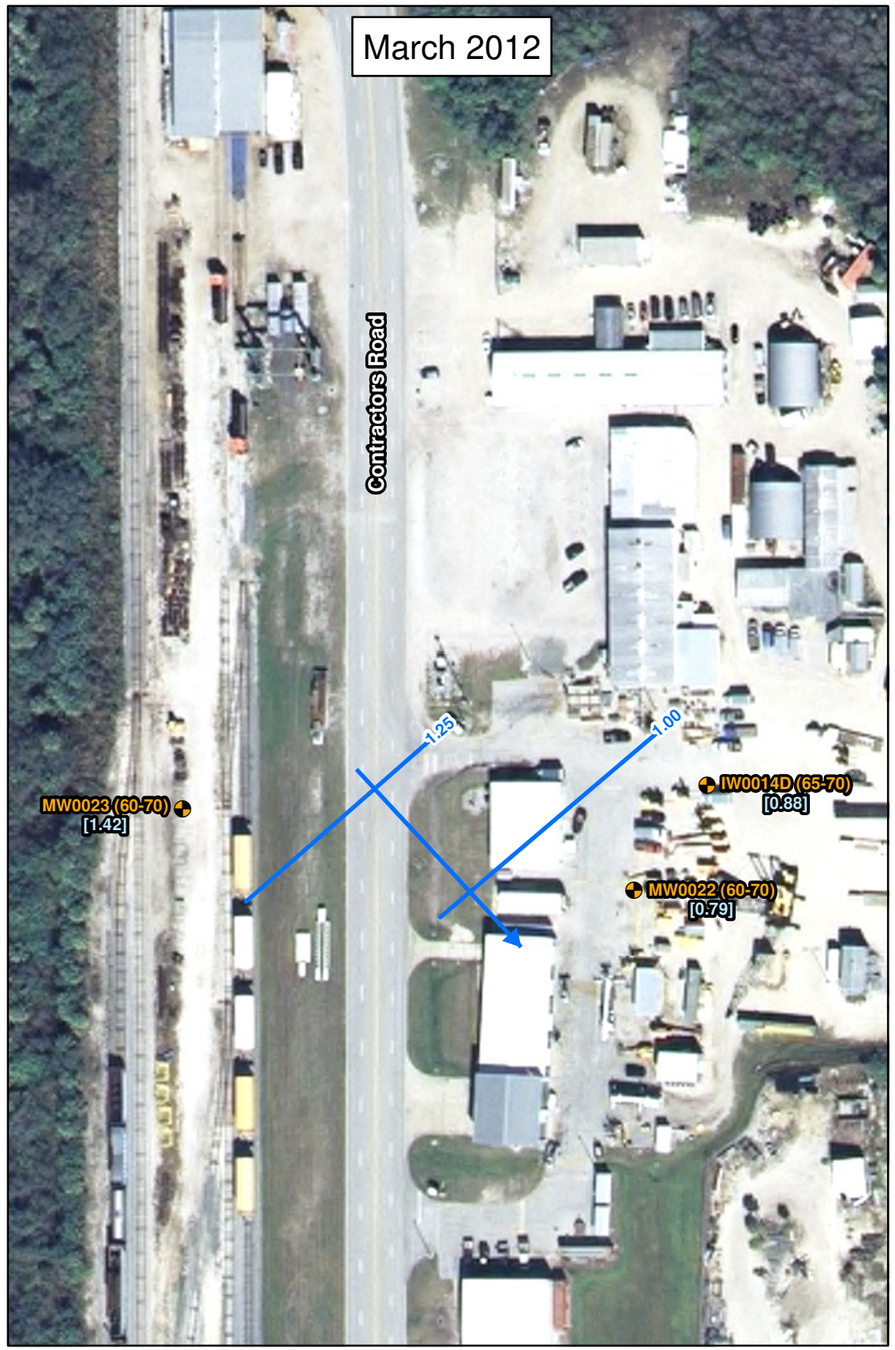
## Legend

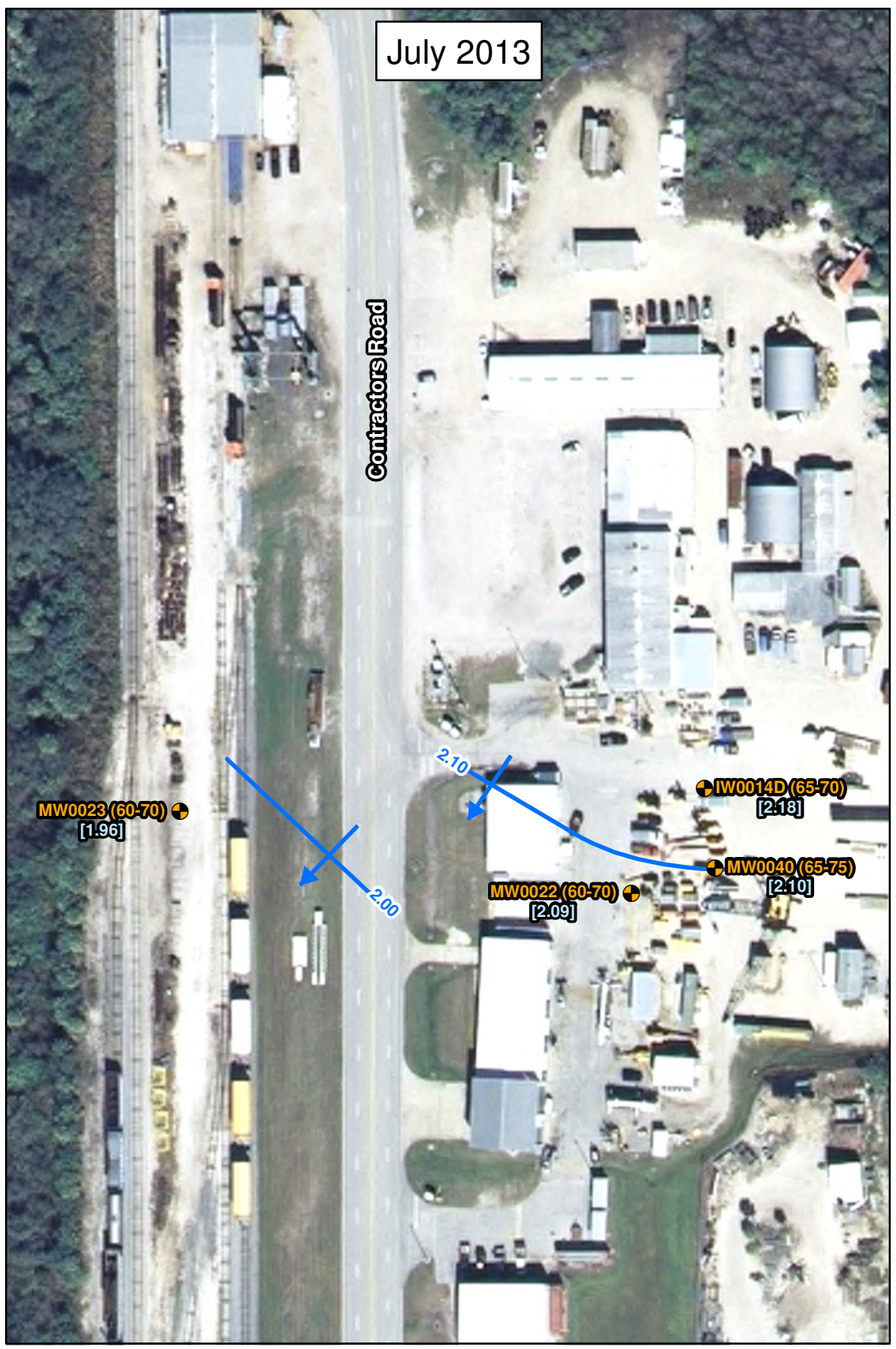
- Intermediate Monitoring Well Location showing (Screen Interval) and [Groundwater Elevation]
- Groundwater Elevation Contour
- Groundwater Flow Direction

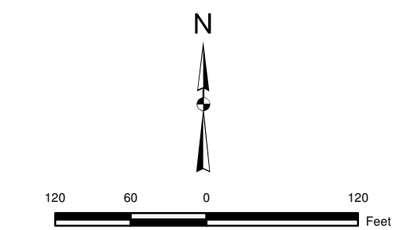
Notes:
1. Screen interval is presented in feet, below land surface (ft, BLS).
2. Elevation is referenced to the North American Datum of 1988.
3. * indicates value is not used to generate contour.

Path: (Titusville-01\Data\)T:\0GIS\FR1681_CRHE\MXDs\MARCH2012\GW_Elev_Intermediate.mxd 26 November 2013 JRB

Figure 7
Intermediate Groundwater Elevation Contours - March 2012



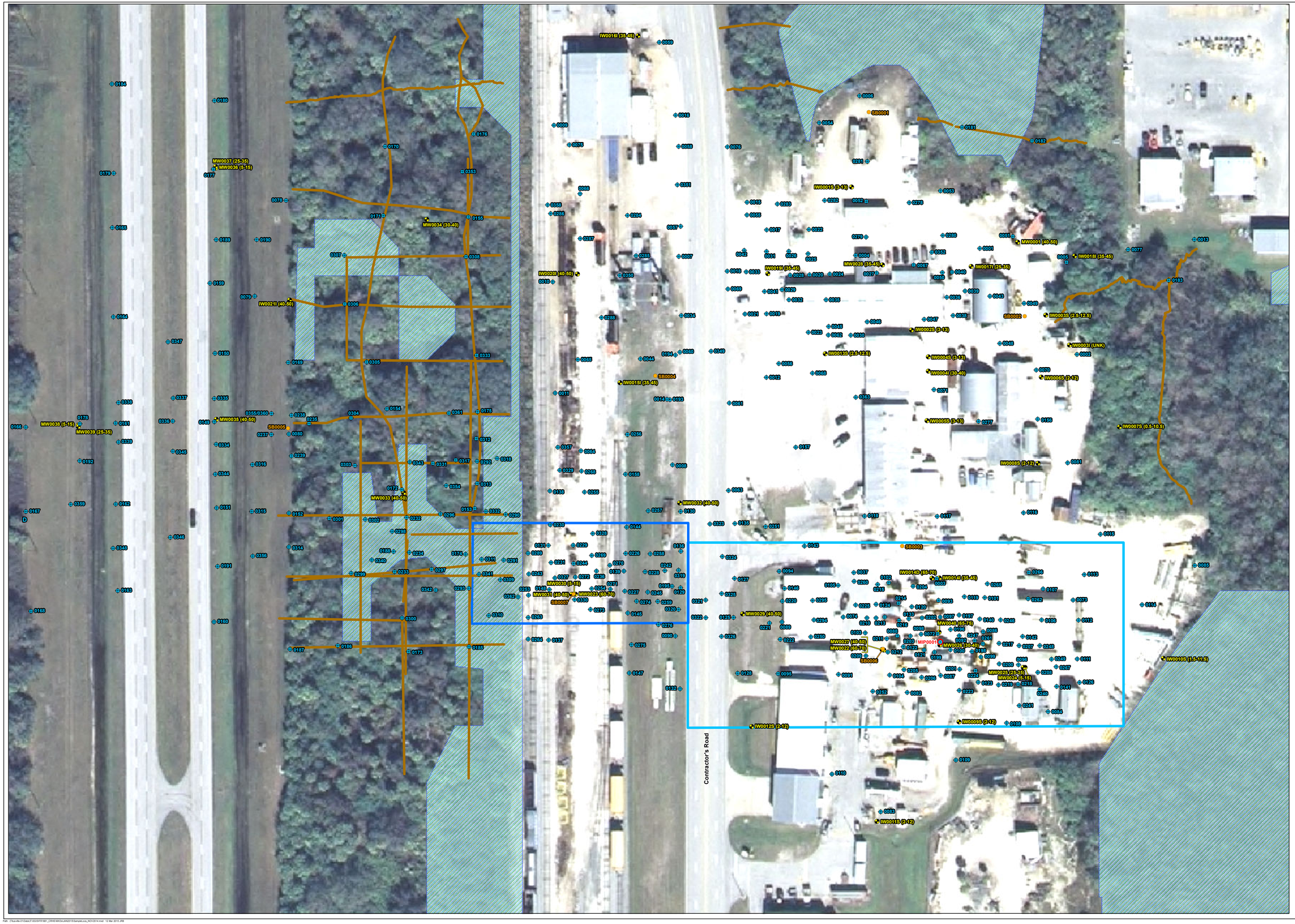

**Legend**

- Deep Monitoring Well Location showing (Screen Interval) and [Groundwater Elevation]
- Groundwater Elevation Contour
- Groundwater Flow Direction

Notes:
1. Screen interval is presented in feet, below land surface (ft, BLS).
2. Elevation is referenced to the North American Datum of 1988.

Path: (Titusville-01\Data\)T:\0GIS\FR1681_CRHE\MXDs\JAN2015\GW_Elev_Deep_MAR2012_JUL2013.mxd 13 Jan 2015 JRB

Figure 8
Deep Groundwater Elevation Contours - March 2012 and July 2013




N

50 25 0 50 Feet

**Legend**

- Membrane Interface Probe (MIP) Location
- Soil Boring Location
- DPT Sampling Location
- Monitoring Well Location (showing screen interval, ft BLS)
- Cleared Trails
- Hot Spot 2
- Hot Spot 1
- Wetlands

Notes:
1. ft BLS indicates feet below land surface.
2. UNK indicates an unknown screen interval.
3. All direct push technology (DPT) locations have a prefix of "CRHE-DPT".
4. All monitoring well locations have a prefex of "CHRE-".

Path: Z:\Aurelia-01\Data\27-102\SHP\191001_CRHE\MXD\ArcMAP2015\SampleLocs_NOV2014.mxd - 13 Mar 2015 JRB

Figure 9
CRHE Area Sampling Location Figure

**Legend**

- DPT Sampling Location
- Intermediate Monitoring Well Location showing screen interval (ft BLS)
- Cleared Paths

| Parameter | Abbreviation | GCTL | NADC |
|---|---|---|---|
| Tetrachloroethene | PCE | 3 | 300 |
| Trichloroethene | TCE | 3 | 300 |
| cis-1,2-Dichloroethene | cDCE | 70 | 700 |
| trans-1,2-Dichloroethene | tDCE | 100 | 1,000 |
| 1,1-Dichloroethane | 1,1-DCA | 70 | 700 |
| Vinyl Chloride | VC | 1 | 100 |

Notes:
1. Screen interval is presented in feet below land surface (ft BLS).
2. Results are presented in micrograms per liter (µg/L).
3. J indicates result is between the method detection limit and the practical quantitation limit.
4. J indicates estimated value.
5. U indicates value was not detected above the method detection limit.
6. L indicates value exceeds the calibration range.
7. Yellow shaded, bold text indicates exceedance of Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Level (GCTL).
8. Orange shaded, bold text indicates exceedance of FDEP Natural Attenuation Default Concentration (NADC).

Figure 10
CRHE Area Summary Groundwater Sampling Results - Northwestern Portion of Site

Path: T:\cadfile-01\Data\TIGIS\FIR381_CRHE\MXDs\NOV2014\DPT_NW_update_DEC2014.mxd 04 JANUARY 2013 JRB

DPT0069 (Feb-10)
DPT0018 (Jun-09)
DPT0033 (Jul-09)
DPT0042 (Aug-09)
DPT0076 (Feb-10)
DPT0059 (Jan-10)
DPT0015 (Jul-08)
DPT0031 (Jul-09)
DPT0017 (Jun-09)
DPT0026 (Jun-09)
DPT0083 (Jun-14)
DPT0051 (Jan-10)
DPT0098
DPT0021 (Jun-09)
DPT0056 (Jan-10)
DPT(-349 (Sep-14)
DPT0012 (Jul-06)
DPT0025 (Jun-09)
DPT0281 (Jun-14)
DPT0041 (Aug-09)
DPT0002 (Jun-09)
DPT0282 (Jun-14)
DPT0006 (May-06)
DPT0054 (Jun-09)
DPT0028 (Jun-09)
DPT0063 (Jun-09)
DPT0023 (Jun-09)
DPT0283 (Jun-14)
DPT0052 (Jan-10)
DPT0278 (May-14)
DPT0279 (May-14)
DPT0004 (May(Jul)-06)
DPT0024 (Jun-09)
DPT0027 (Jun-09)
DPT0181 (Feb-12)
DPT0067 (Feb-10)
DPT0053 (Jan-10)
DPT0280 (May-14)
DPT0050
DPT0063 (Nov-14)
DPT0071 (Feb-10)
DPT0045 (Jan-10)
DPT0062 (Jan-10)
DPT0019 (Jun-09)
DPT0048 (Jan-10)
DPT0020 (Jun-09)
DPT0070 (Feb-10)
DPT0002 (May-06)
DPT0001 (May-06)
DPT0040 (Aug-09)
DPT0029 (Jun-09)
DPT0077 (Feb-10)
DPT0013 (Jul-06)
IW0017I
IW0018I
DPT0063 (Aug-09)
DPT0005 (May-06)
DPT0049
DPT0039 (Aug-09)
DPT0036 (Jul-09)
DPT0183 (Feb-12)
DPT0066 (Jan-10)
DPT0047 (Jan-10)
DPT0038
DPT0046
DPT0052
DPT0182
DPT0025
DPT0270
DPT0279
DPT0004
DPT0024
DPT0027
DPT0181
DPT0182
DPT0067
DPT0053
DPT0001
DPT0040
DPT0029
DPT0077
DPT0013
DPT0183
DPT0005
DPT0049
DPT0039
DPT0036
DPT0038
DPT0046
DPT0047
DPT0052
DPT0182
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DPT0282
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DPT0028
DPT0063
DPT0023
DPT0283
DPT0051
DPT0098
DPT0021
DPT0056
DPT0088
DPT0012
DPT0035
DPT0022
DPT0080
DPT0062
DPT0045
DPT0019
DPT0048
DPT0020
DPT0070
DPT0002
DPT0001
DPT0040
DPT0029
DPT0077
DPT0013
IW0017I
IW0018I
DPT0063
DPT0005
DPT0049
DPT0039
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DPT0019
DPT0048
DPT0020
DPT0070
DPT0002
DPT0001
DPT0040
DPT0029
DPT0077
DPT0013
IW0017I
IW0018I
DPT0063

DPT0157 (Oct-11)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 26 to 30 | 1.0 U | 1.0 U | 1.3 | 1.0 U | NA | 1.0 U |
| 31 to 35 | 1.0 U | 1.0 U | 3.7 | 1.0 U | NA | 1.0 U |
| 36 to 40 | 1.0 U | 1.0 U | 3.3 | 1.0 U | NA | 1.0 U |
| 41 to 45 | 1.0 U | 1.0 U | 3.0 | 1.0 U | NA | 1.0 U |
| 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0083 (Jun-10)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.3 |
| 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **12.7** |
| 46 to 50 | 1.0 U | 1.0 U | 1.9 | 1.0 U | NA | **5.7** |
| 56 to 60 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0328 (Aug-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 2.3 | 0.30 U | 0.26 U |
| 41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.461 | 0.30 U | 0.26 U |
| 46 to 50 | 0.23 U | 0.19 U | 97 | 0.29 U | 0.30 U | 1.4 |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |

DPT0135 (Aug-10)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 16 to 20 | 1.0 U | 1.0 U | 9.0 | 1.0 U | NA | **7.8** |
| 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 72.6 | NA | **2,500 L** |
| 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 3.5 | NA | **72.4** |
| 46 to 50 | 1.0 U | 1.0 U | 1.3 | 1.0 U | NA | **3.7** |

DPT0118 (Aug-10)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 16 to 20 | 1.0 U | 1.0 U | 1.0 | 1.0 U | NA | 1.0 U |
| 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 36 to 40 | 2.6 U J | 1.7 U J | 1.7 U J | 2.0 U J | NA | 1.6 U J |
| 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0251 (May-13)

| Interval | PCE | TCE | cDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|
| 8 to 12 | 0.23 U | 0.19 U | 1 | 0.29 U | NA | 0.26 U |
| 16 to 20 | 0.23 U | 0.541 | 2.4 | 0.29 U | NA | **1.9** |
| 21 to 25 | 0.23 U | 0.19 U | 0.541 | 0.29 U | NA | 1.2 |
| 26 to 30 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 7.7 | NA | **97.5** |
| 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 33.9 | NA | **370** |
| 41 to 45 | 0.23 U | 0.19 U | 1.5 | 0.59 J | NA | **7.2** |
| 46 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | NA | 0.26 U |

DPT0277 (May-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 36 to 40 | 0.23 U | 0.19 U | 0.90 J | 0.29 U | 0.30 U | 0.26 U |
| 41 to 45 | 0.23 U | 0.19 U | 0.85 J | 0.29 U | 0.30 U | 0.26 U |
| 46 to 50 | 0.23 U | 0.19 U | 3.1 | 0.29 U | 1 | 1 |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |

DPT0117 (Aug-10)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 36 to 40 | **11 U J** | **6.6 U J** | 8.0 U J | 20 U | NA | **6.4 U J** |
| 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **4.7** |

DPT0156 (Oct-11)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.2 | NA | 1.0 U |
| 46 to 50 | 1.0 U | 1.0 U | 2 | 1.0 U | NA | **12.3** |

DPT0081 (Feb-10)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 56 to 60 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0116 (Aug-10)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 16 to 20 | **18 U J** | **26 U J** | 28 U J | 100 U | NA | **21 U J** |
| 20 to 30 | **18 U J** | **26 U J** | 28 U J | 100 U | NA | **21 U J** |
| 31 to 35 | **9.0 U J** | **13 U J** | 14 U J | 50 U | NA | **11 U J** |
| 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0115 (Jun-10)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0085 (Feb-10)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.3 |
| 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.3 |
| 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0114 (Jun-10)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **3.6** |
| 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | **1.9** |
| 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0110 (Jun-10)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0109 (Jun-10)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

DPT0083 (Feb-10)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 16 to 20 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 26 to 30 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 31 to 35 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 36 to 40 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 41 to 45 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |
| 46 to 50 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | NA | 1.0 U |

N

30 15 0 30 Feet

**Legend**

- DPT Sampling Location
- Intermediate Monitoring Well Location showing screen interval (ft BLS)
- Cleared Paths
- Hot Spot 1

| Parameter | Abbreviation | GCTL | NADC |
|---|---|---|---|
| Tetrachloroethene | PCE | 3 | 300 |
| Trichloroethene | TCE | 3 | 300 |
| cis-1,2-Dichloroethene | cDCE | 70 | 700 |
| trans-1,2-Dichloroethene | tDCE | 100 | 1,000 |
| 1,1-Dichloroethane | 1,1-DCA | 70 | 700 |
| Vinyl Chloride | VC | 1 | 100 |

Notes:
1. Screen interval is presented in feet below land surface (ft BLS).
2. Results are presented in micrograms per liter (µg/L).
3. I indicates result is between the method detection limit and the practical quantitation limit.
4. J indicates estimated value.
5. U indicates value was not detected above the method detection limit.
6. L indicates value exceeds the calibration range.
7. Yellow shaded, bold text indicates exceedance of Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Level (GCTL).
8. Orange shaded, bold text indicates exceedance of FDEP Natural Attenuation Default Concentration (NADC).



Figure 12
CRHE Area Summary Groundwater Sampling Results - Southeastern Portion of Site

DPT0166

DPT0178 (Jan-12)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 26 to 30 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 31 to 35 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 36 to 40 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 41 to 45 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 46 to 50 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |

DPT0178

DPT0192

DPT0192 (Oct-12)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 16 to 20 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 21 to 25 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 26 to 30 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 31 to 35 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 36 to 40 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 41 to 45 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 46 to 50 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |

DPT0359

DPT0359 (Nov-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 20 | 3.1 | 0.30 U | **131** |
| 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.45 J |
| 41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 46 to 50 | 0.23 U | 0.17 U | 0.46 J | 0.36 U | 0.15 U | 0.91 J |
| 51 to 55 | 0.23 U | 0.17 U | 0.16 U | 0.16 U | 0.15 U | 0.36 U |
| 56 to 60 | 1.2 U | 0.20 U | 0.40 U | 0.40 U | 0.40 U | 0.80 U |

DPT0167

DPT0167 (Jan-12)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 36 to 40 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 41 to 45 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 46 to 50 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |

DPT0348

DPT0348 (Sep-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 51 to 55 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |

DPT0168

DPT0168 (Jan-12)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 26 to 30 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 31 to 35 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 36 to 40 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 41 to 45 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 46 to 50 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |

DPT0178

DPT0161

DPT0161 (Oct-11 & Feb-12)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 16 to 20 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 26 to 30 | 1.0U | 1.0U | 1.0U | 1.0U | NA | **110** |
| 31 to 35 | 1.0U | 1.0U | 3.6 | 4.4 | NA | **1100** |
| 36 to 40 | 1.0U | 1.0U | 1.0U | 1.0U | NA | **2.2** |
| 41 to 45 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 46 to 50 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |

DPT0345

DPT0345 (Sep-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 1.1 |
| 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **1,200** |
| 41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **1,500** |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 51 to 55 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **530** |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **8.8 J** |

DPT0151

DPT0151 (Oct-10)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 26 to 30 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 31 to 35 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.3 |
| 36 to 40 | 2.6 U J | **5.2** | **220** | 11.0 | NA | **280** |
| 41 to 45 | 1.0U | 1.0U | 6.7 | 11.0 | NA | **30.4** |
| 46 to 50 | 1.0U | 1.0U | 1.0U | 1.6 | NA | **37.3** |
| 51 to 55 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 56 to 60 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |

DPT0359

DPT0162

DPT0162 (Oct-11)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 26 to 30 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 31 to 35 | 1.0U | 1.0U | **83** | 4.2 J | NA | **160** |
| 36 to 40 | 1.0U | 1.0U | 4.4 | 1.0U | NA | **14** |
| 41 to 45 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 46 to 50 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 51 to 55 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 56 to 60 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |

DPT0151

DPT0314

DPT0314 (Aug-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 36 to 40 | 0.23 U | 0.19 U | 31.2 | 3.3 | 0.30 U | **63.5** |
| 41 to 45 | 0.23 U | 0.19 U | 28 | 2.2 | 0.30 U | **63.0** |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |

DPT0346

DPT0191

DPT0191 (Jun-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 4.6 U | 3.8 U | **1,200** | 45 | 6.0 U | **1,600** |
| 36 to 40 | 2.3 U | **37 J** | **4,900** | **140** | **30 U** | **3,100** |
| 41 to 45 | **12 U** | **180** | **2,100** | 92 | **15 U** | **560** |
| 46 to 50 | 0.23 U | 0.77 J | **210** | 7.2 | 0.30 U | **63.3** |
| 56 to 60 | 0.23 U | 0.19 U | 1 | 0.29 U | 0.30 U | 0.36 U |

DPT0163

DPT0163 (Oct-11)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 26 to 30 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 31 to 35 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 36 to 40 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 41 to 45 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 46 to 50 | 1.0U | 1.0U | 1.0U | 1.0U | NA | **2.2** |

DPT0299

DPT0299 (Jan-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.82 J | 0.30 U | 0.36 U |
| 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 1.3 | 0.30 U | **44.3** |
| 41 to 45 | 0.23 U | 0.19 U | 0.33 J | 1.7 | 0.30 U | **36.2** |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |

DPT0336

DPT0336 (Aug-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 3.8 U | 0.91 J | 0.30 U | **1,200** |
| 36 to 40 | 4.6 U | 3.8 U | 4.4 U | 131 | 6.0 U | **2,400** |
| 41 to 45 | 2.3 U | 1.9 U | 2.2 U | 2.9 U | 3.0 U | **140** |
| 46 to 50 | 2.3 U | 1.9 U | 2.2 U | 2.9 U | 3.0 U | 2.4 J |
| 51 to 55 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.51 J |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **3.4** |

DPT0334

DPT0334 (Aug-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 3.8 U | 0.91 J | 0.30 U | **1,200** |
| 36 to 40 | 0.23 U | 0.19 U | 3.7 | 9.2 | 0.30 U | **1,500** |
| 41 to 45 | 2.3 U | 1.9 U | 4.9 J | 3.5 J | 3.0 U | **530** |
| 46 to 50 | 2.3 U | 1.9 U | 2.2 U | 2.9 U | 3.0 U | **8.8 J** |
| 51 to 55 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **3** |

DPT0344

DPT0344 (Sep-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 36 to 40 | 0.23 U | 0.19 U | 1.9 U | **100** | 2.9 U | **26.0** |
| 41 to 45 | 0.23 U | 0.19 U | 0.91 J | 3.3 | 0.89 J | **5.3** |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **29.0** |
| 51 to 55 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 56 to 60 | 0.23 U | 0.19 U | 0.78 J | 0.29 U | 0.30 U | 0.36 U |

DPT0315

DPT0315 (Aug-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 36 to 40 | 2.3 U | 1.9 U | **650** | 14 | 3.0 U | **290** |
| 41 to 45 | 2.3 U | 1.9 U | **1,100** | 18 J | 3.0 U | **640** |
| 46 to 50 | 0.23 U | 0.19 U | 20.3 | 0.29 U | 0.30 U | **3.2** |
| 56 to 60 | 0.23 U | 0.19 U | 34.1 | 0.37 J | 0.30 U | **6.3** |

DPT0152

DPT0152 (Oct-10)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 16 to 20 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 31 to 35 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 36 to 40 | 1.0U | 1.0U | 1.0U | 1.0U | NA | **2.5** |
| 41 to 45 | 2.6 U J | **4.0 J** | **300** | 17.0 | NA | **360** |
| 46 to 50 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |

DPT0356

DPT0356 (Sep-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 51 to 55 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |

DPT0150

DPT0150 (Oct-11)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 26 to 30 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 31 to 35 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 36 to 40 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 41 to 45 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 46 to 50 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |

DPT0299

DPT0299 (Jan-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.82 J | 0.30 U | 0.36 U |
| 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 1.3 | 0.30 U | **44.3** |
| 41 to 45 | 0.23 U | 0.19 U | 0.33 J | 1.7 | 0.30 U | **36.2** |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |

DPT0348

DPT0348 (Sep-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 36 to 40 | 0.23 U | 0.19 U | 5.3 | 1.5 | 0.30 U | **26.0** |
| 41 to 45 | 0.23 U | 0.19 U | 1.8 | 0.29 U | 0.30 U | **7.8** |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 51 to 55 | 0.23 U | 0.19 U | 0.24 J | 0.29 U | 0.30 U | 0.78 J |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |

DPT0349

DPT0349 (Jan-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 50 | 6.71 | 3.0 U | **450** |
| 36 to 40 | 2.3 U | 1.9 U | **560** | 20 | 3.0 U | **280** |
| 41 to 45 | 2.3 U | 1.9 U | 5.6 | 1.2 | 0.30 U | **45.2** |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |

DPT0340

DPT0340 (Sep-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.54 J | 0.30 U | 0.36 U |
| 36 to 40 | 4.6 U | 3.8 U | **350** | 14 J | 6.0 U | **460** |
| 41 to 45 | 4.6 U | 3.8 U | **320** | 13 J | 6.0 U | **450** |
| 46 to 50 | 1.2 U | 0.95 U | 4.5 J | 1.5 U | 1.5 U | **43.0** |
| 56 to 60 | 0.23 U | 0.19 U | 0.38 J | 0.29 U | 0.30 U | 0.36 U |

DPT0234

DPT0234 (Apr-13)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 0.16 U | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA |
| 16 to 20 | 0.16 U | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA |
| 21 to 25 | 0.16 U | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA |
| 26 to 30 | 0.16 U | 0.16 U | 2.2 | 0.2 U | 0.28 U | NA |
| 31 to 35 | 0.16 U | 0.22 U | 4.5 | NA | NA | **46** |
| 36 to 40 | 1.6 U | 2.2 U | **360** | 20 | NA | **500** |
| 41 to 45 | **8 U** | **11 U** | **2,400** | 50 | NA | **800** |
| 56 to 60 | 0.16 U | 0.22 U | 4.8 | 0.28 U | NA | **1.6** |

DPT0233

DPT0233 (Apr-13)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 0.16 U | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA |
| 16 to 20 | 0.16 U | 1.4 | 1.1 | 0.28 U | NA | 0.13 U |
| 21 to 25 | 0.16 U | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA |
| 26 to 30 | 0.16 U | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA |
| 31 to 35 | 0.16 U | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA |
| 36 to 40 | 1.6 U | 2.2 U | **360** | 20 | NA | **500** |
| 41 to 45 | **8 U** | **11 U** | **2,400** | 50 | NA | **800** |
| 46 to 50 | 1.2 U | 0.95 U | 4.8 J | 1.5 U | 1.5 U | **46** |
| 56 to 60 | 0.16 U | 0.22 U | 4.8 | 0.28 U | NA | **1.6** |

DPT0341

DPT0341 (Sep-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 36 to 40 | 0.23 U | 0.19 U | 2.8 | 4.7 | 0.30 U | **100** |
| 41 to 45 | **12 U** | **9.5 U** | **1,300** | 281 | **15 U** | **560** |
| 46 to 50 | 2.3 U | 1.9 U | **140** | 2.9 U | 3.0 U | **36.0** |
| 51 to 55 | 0.23 U | 0.19 U | 4.7 | 0.33 J | 0.30 U | 7.6 |
| 56 to 60 | 0.23 U | 0.19 U | 22.3 | 0.41 J | 0.30 U | **8.9** |

DPT0342

DPT0342 (Sep-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.49 J | 0.30 U | 0.29 J |
| 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 1.3 | 0.30 U | 0.36 U |
| 41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.74 J | 0.30 U | **5.2** |
| 46 to 50 | 0.23 U | 0.19 U | 26.2 | 2.8 | 0.30 U | **120** |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.77 J |

DPT0300

DPT0300 (Jun-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |

DPT0149

DPT0149 (Oct-10 & Oct-12)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 16 to 20 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 26 to 30 | 1.0U | 1.0U | 1.0U | 1.0U | NA | **100** |
| 31 to 35 | 1.0U | 1.0U | 1.0U | 1.0U | NA | **2,300** |
| 36 to 40 | 2.3 U | 1.9 U | 2.2 U | 2.9 U | 3.0 U | **140** |
| 41 to 45 | 2.3 U | 1.9 U | 2.2 U | 2.9 U | 3.0 U | **24.1** |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.51 J |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **3.4** |

DPT0316

DPT0316 (Aug-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 16 to 20 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 21 to 25 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 26 to 30 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 31 to 35 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 36 to 40 | 1.0U | 1.0U | 9.0 | 5.4 | NA | **1,400** |
| 41 to 45 | 1.0U | 1.0U | 21.6 | 15.2 | NA | **2,000** |
| 46 to 50 | 1.0U | 1.0U | 1.0U | 1.0U | NA | **75.8** |
| 56 to 60 | 1.0U | 1.0U | 1.0U | 1.0U | NA | **2.0** |

DPT0315

DPT0315 (Aug-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 36 to 40 | 2.3 U | 1.9 U | **650** | 14 | 3.0 U | **290** |
| 41 to 45 | 2.3 U | 1.9 U | **1,100** | 18 J | 3.0 U | **640** |
| 46 to 50 | 0.23 U | 0.19 U | 20.3 | 0.29 U | 0.30 U | **3.2** |
| 56 to 60 | 0.23 U | 0.19 U | 34.1 | 0.37 J | 0.30 U | **6.3** |

DPT0080

DPT0080 (Feb-10)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 16 to 20 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 21 to 25 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 26 to 30 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 31 to 35 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 36 to 40 | 1.0U | 1.0U | 9.0 | 5.4 | NA | **1,400** |
| 41 to 45 | 1.0U | 1.0U | 21.6 | 15.2 | NA | **2,000** |
| 46 to 50 | 1.0U | 1.0U | 1.0U | 1.0U | NA | **75.8** |
| 56 to 60 | 1.0U | 1.0U | 1.0U | 1.0U | NA | **2.0** |

DPT0356

DPT0356 (Sep-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 51 to 55 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |

DPT0150

DPT0150 (Oct-11)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 26 to 30 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 31 to 35 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 36 to 40 | 1.0U | 1.0U | 1.0U | 1.0U | NA | **3.2** |
| 41 to 45 | 1.0U | 1.0U | 1.0U | 7.4 | 1.8 | NA |
| 46 to 50 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |

DPT0299

DPT0299 (Jan-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.82 J | 0.30 U | 0.36 U |
| 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 1.3 | 0.30 U | **44.3** |
| 41 to 45 | 0.23 U | 0.19 U | 0.33 J | 1.7 | 0.30 U | **36.2** |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |

DPT0348

DPT0348 (Sep-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 36 to 40 | 0.23 U | 0.19 U | 5.3 | 1.5 | 0.30 U | **26.0** |
| 41 to 45 | 0.23 U | 0.19 U | 1.8 | 0.29 U | 0.30 U | **7.8** |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 51 to 55 | 0.23 U | 0.19 U | 0.24 J | 0.29 U | 0.30 U | 0.78 J |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |

DPT0349

DPT0349 (Jan-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 50 | 6.71 | 3.0 U | **450** |
| 36 to 40 | 2.3 U | 1.9 U | **560** | 20 | 3.0 U | **280** |
| 41 to 45 | 2.3 U | 1.9 U | 5.6 | 1.2 | 0.30 U | **45.2** |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |

DPT0340

DPT0340 (Sep-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.54 J | 0.30 U | 0.36 U |
| 36 to 40 | 4.6 U | 3.8 U | **350** | 14 J | 6.0 U | **460** |
| 41 to 45 | 4.6 U | 3.8 U | **320** | 13 J | 6.0 U | **450** |
| 46 to 50 | 1.2 U | 0.95 U | 4.5 J | 1.5 U | 1.5 U | **43.0** |
| 56 to 60 | 0.23 U | 0.19 U | 0.38 J | 0.29 U | 0.30 U | 0.36 U |

DPT0234

DPT0234 (Apr-13)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 0.16 U | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA |
| 16 to 20 | 0.16 U | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA |
| 21 to 25 | 0.16 U | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA |
| 26 to 30 | 0.16 U | 0.16 U | 2.2 | 0.2 U | 0.28 U | NA |
| 31 to 35 | 0.16 U | 0.22 U | 4.5 | NA | NA | **46** |
| 36 to 40 | 1.6 U | 2.2 U | **360** | 20 | NA | **500** |
| 41 to 45 | **8 U** | **11 U** | **2,400** | 50 | NA | **800** |
| 56 to 60 | 0.16 U | 0.22 U | 4.8 | 0.28 U | NA | **1.6** |

DPT0233

DPT0233 (Apr-13)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 0.16 U | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA |
| 16 to 20 | 0.16 U | 0.16 U | 1.4 | 1.1 | 0.28 U | NA |
| 21 to 25 | 0.16 U | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA |
| 26 to 30 | 0.16 U | 0.16 U | 0.22 U | 0.2 U | 0.28 U | NA |
| 31 to 35 | 0.16 U | 0.22 U | 4.5 | NA | NA | **46** |
| 36 to 40 | 1.6 U | 2.2 U | **360** | 20 | NA | **500** |
| 41 to 45 | **8 U** | **11 U** | **2,400** | 50 | NA | **800** |
| 46 to 50 | 1.2 U | 0.95 U | 4.8 J | 1.5 U | 1.5 U | **46** |
| 56 to 60 | 0.16 U | 0.22 U | 4.8 | 0.28 U | NA | **1.6** |

DPT0341

DPT0341 (Sep-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 36 to 40 | 0.23 U | 0.19 U | 2.8 | 4.7 | 0.30 U | **100** |
| 41 to 45 | **12 U** | **9.5 U** | **1,300** | 281 | **15 U** | **560** |
| 46 to 50 | 2.3 U | 1.9 U | **140** | 2.9 U | 3.0 U | **36.0** |
| 51 to 55 | 0.23 U | 0.19 U | 4.7 | 0.33 J | 0.30 U | 7.6 |
| 56 to 60 | 0.23 U | 0.19 U | 22.3 | 0.41 J | 0.30 U | **8.9** |

DPT0342

DPT0342 (Sep-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 31 to 35 | 0.23 U | 0.19 U | 0.22 U | 0.49 J | 0.30 U | 0.29 J |
| 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 1.3 | 0.30 U | 0.36 U |
| 41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.74 J | 0.30 U | **5.2** |
| 46 to 50 | 0.23 U | 0.19 U | 26.2 | 2.8 | 0.30 U | **120** |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.77 J |

DPT0300

DPT0300 (Jun-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 36 to 40 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 41 to 45 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.36 U |

DPT0149

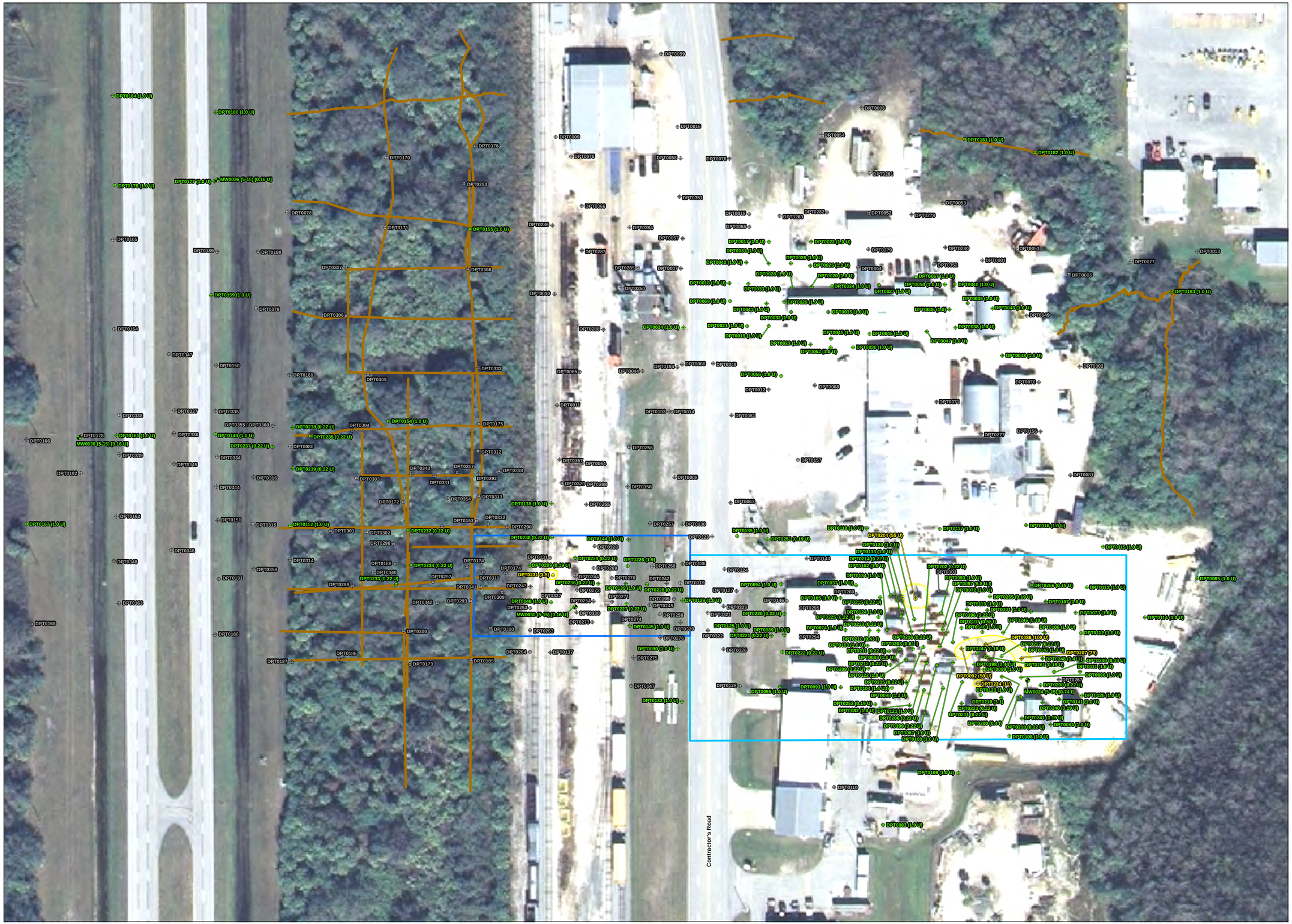
DPT0149 (Oct-10 & Oct-12)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 8 to 12 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 16 to 20 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 26 to 30 | 1.0U | 1.0U | 1.0U | 1.0U | NA | **100** |
| 31 to 35 | 1.0U | 1.0U | 1.0U | 1.0U | NA | **2,300** |
| 36 to 40 | 2.3 U | 1.9 U | 2.2 U | 2.9 U | 3.0 U | **140** |
| 41 to 45 | 2.3 U | 1.9 U | 2.2 U | 2.9 U | 3.0 U | **24.1** |
| 46 to 50 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.51 J |
| 56 to 60 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **3.4** |

DPT0316

DPT0316 (Aug-14)

| Interval | PCE | TCE | cDCE | tDCE | 1,1-DCA | VC |
|---|---|---|---|---|---|---|
| 16 to 20 | 1.0U | 1.0U | 1.0U | 1.0U | NA | 1.0U |
| 21 to 




**Legend**

- DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest TCE Concentration)**

- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)

**Monitoring Well Location showing (screen interval (ft BLS) and [TCE Concentration])**

- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)
- 3 µg/L TCE Isopleth
- Hot Spot 1
- Hot Spot 2
- Cleared Trails

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. TCE indicates trichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. GCTL indidcates Groundwater Cleanup Target Level.
7. NADC indicates Natural Attenuation Default Concentration.
8. Prefix for all sampling locations is "CRHE-".
9. Contours that are based solely on non-detects with elevated detection limits are shown with dashed lines and no shading.
10. Only monitoring wells that were sampled in March 2012 & December 2013 are shown on this map.



Figure 14
CRHE Area Summary of TCE Results in Groundwater 8 to 16 ft BLS

N

50 25 0 50 Feet

## Legend

- DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest TCE Concentration)**

- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)
- TCE concentration greater than 3,000 µg/L (10X NADC)
- TCE concentration greater than 10,000 µg/L (Source Zone)

**Monitoring Well Location showing (screen interval (ft BLS) and [TCE Concentration])**

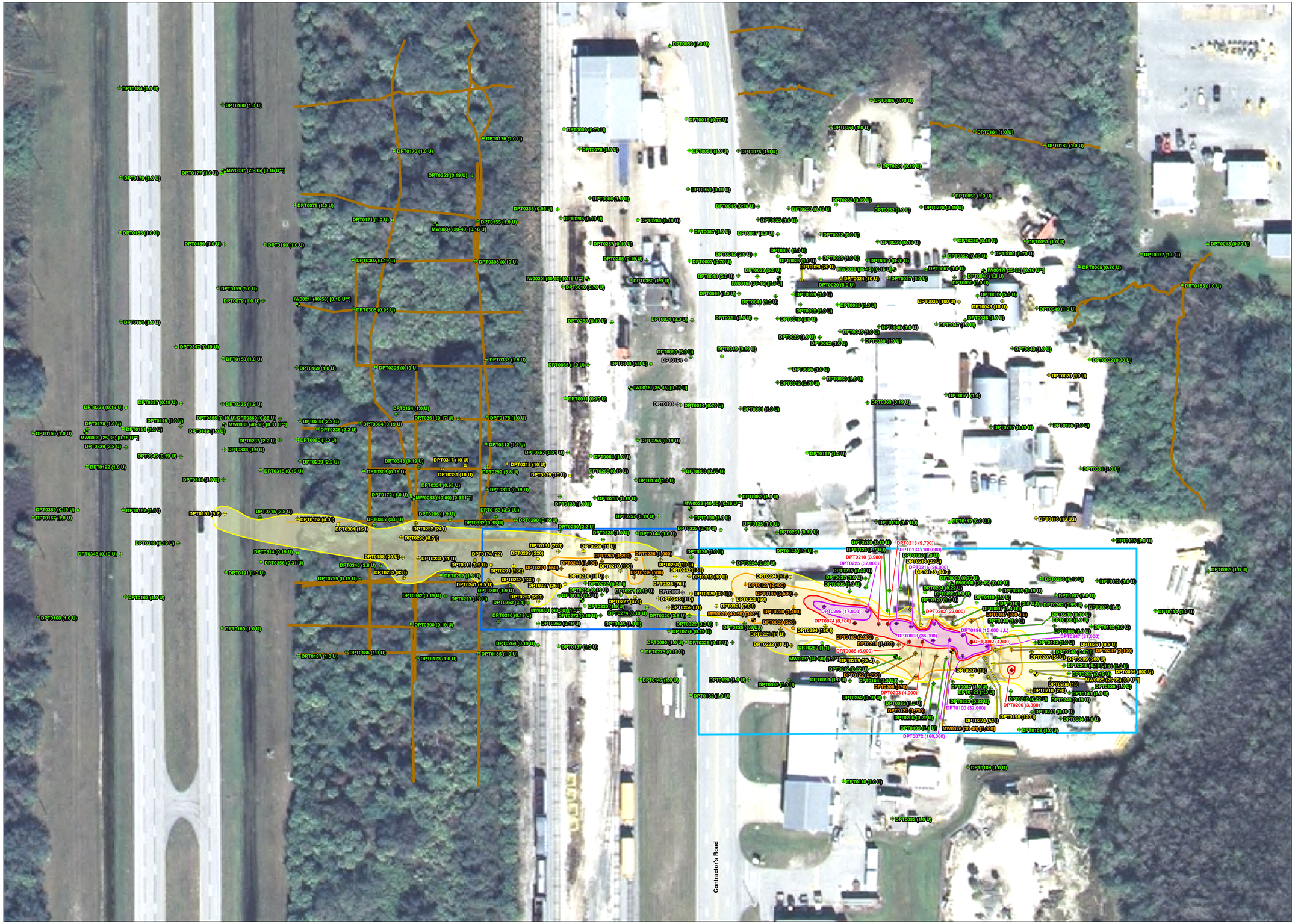
- TCE concentration less than or equal to 3 µg/L
- TCE concentration greater than 3 µg/L (GCTL)
- TCE concentration greater than 300 µg/L (NADC)
- 3 µg/L TCE Isopleth
- 300 µg/L TCE Isopleth
- 3,000 µg/L TCE Isopleth
- Source Zone (1% TCE Solubility Plume)
- Hot Spot 1
- Hot Spot 2
- Cleared Trails

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. TCE indicates trichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. GCTL indicates Groundwater Cleanup Target Level.
7. NADC indicates Natural Attenuation Default Concentration.
8. Prefix for all sampling locations is "CRHE-".
9. ** indicates well screens fall within more than one mapping interval.
10. *** indicates result was not used for contouring as the well screen falls within more than one mapping interval.
11. Only monitoring wells that were sampled in March 2012 & December 2013 are shown on this map.

Contractor's Road



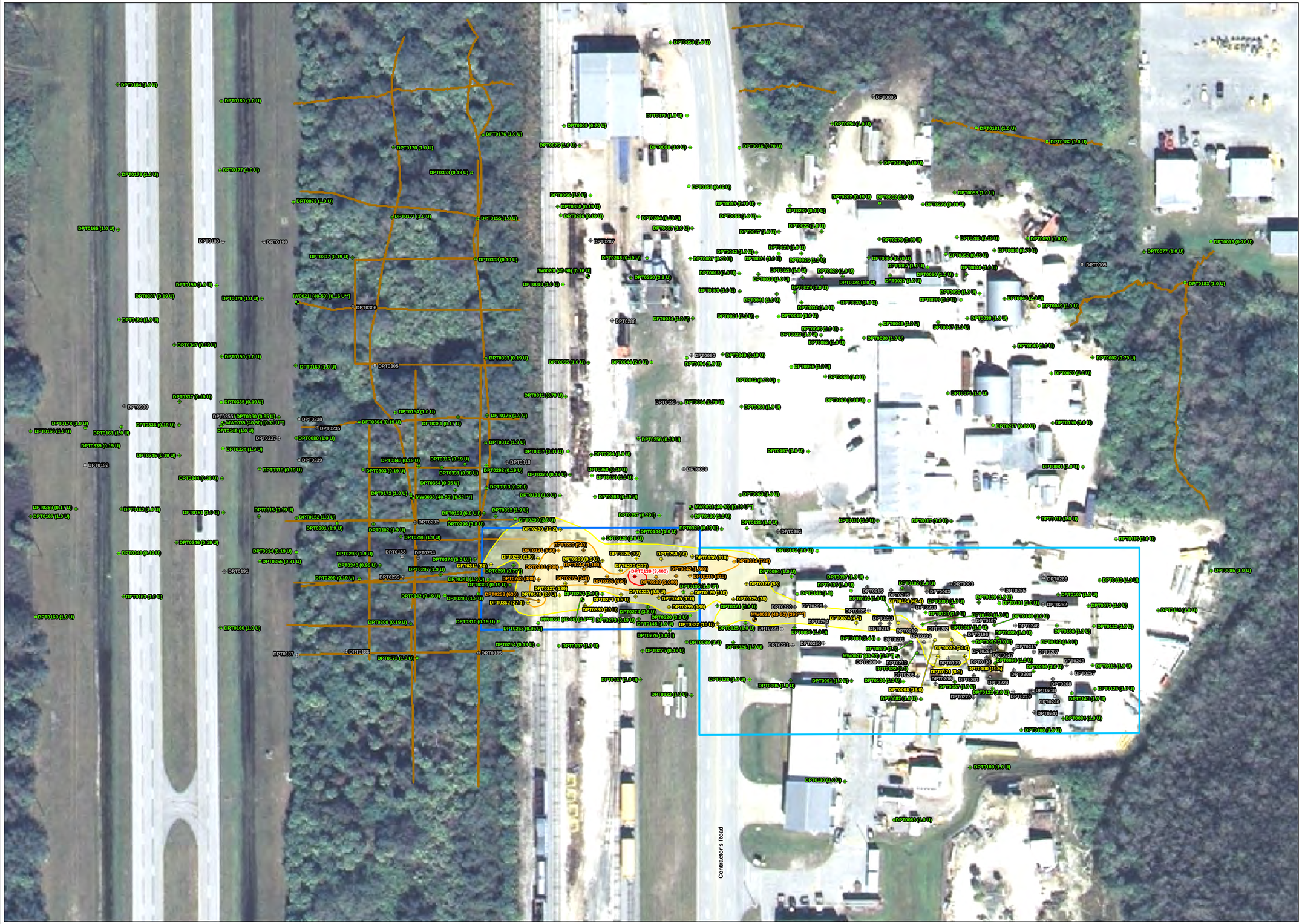
Figure 15
CRHE Area Summary of TCE Results in Groundwater 16 to 30 ft BLS




Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. TCE indicates trichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. * indicates result was not used for contouring.
7. ** indicates well screens fall within more than one mapping interval.
8. GCTL indicates Groundwater Cleanup Target Level.
9. NADC indicates Natural Attenuation Default Concentration.
10. Prefix for all sampling locations is "CRHE-".
11. Only monitoring wells that were sampled in March 2012 & December 2013 are shown on this map.
12. Dashed line without shading indicates contour was based on "U" values.

Path: I:\Tauvolle-01\Data\P-0\GIS\FR1681_CRHE\MXDs\OCT2014\TCE_31_to46_ftbls_OCT2014.mxd 23 Mar 2015 MAH

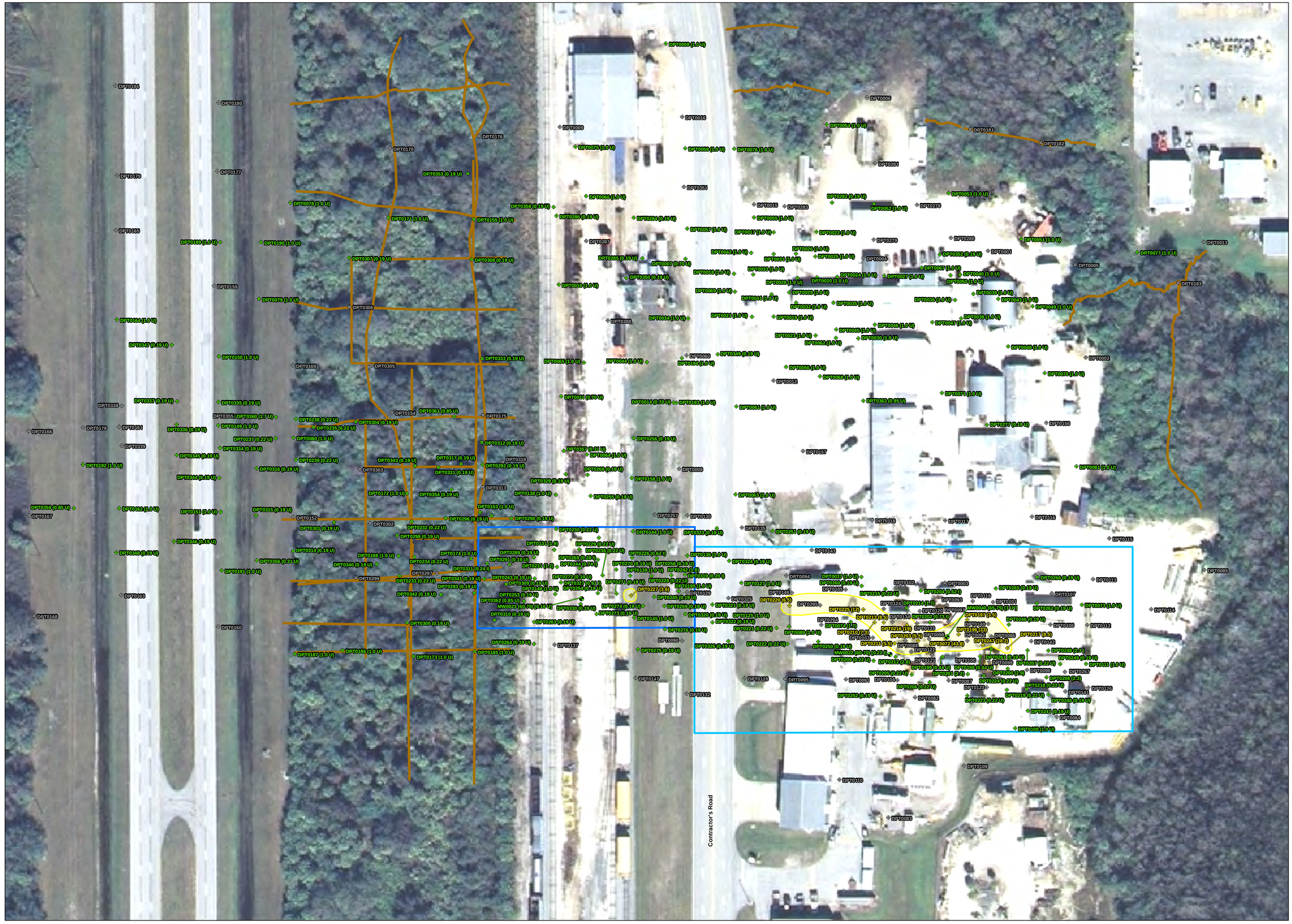
Figure 16
CRHE Area Summary of TCE Results in Groundwater 31 to 46 ft BLS




Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. TCE indicates trichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. * indicates result was not used for contouring.
7. ** indicates well screens fall within more than one mapping interval.
8. *** indicates result was not used for contouring as the well screen falls within more than one mapping interval.
9. GCTL indicates Groundwater Cleanup Target Level.
10. NADC indicates Natural Attenuation Default Concentration.
11. Prefix for all sampling locations is "CRHE-".
12. Only monitoring wells that were sampled in March 2012 & December 2013 are shown on this map.
13. DPT0195 data is from 51 to 55 ft BLS which is deeper than DPT0129 data, so it was not used for contouring.

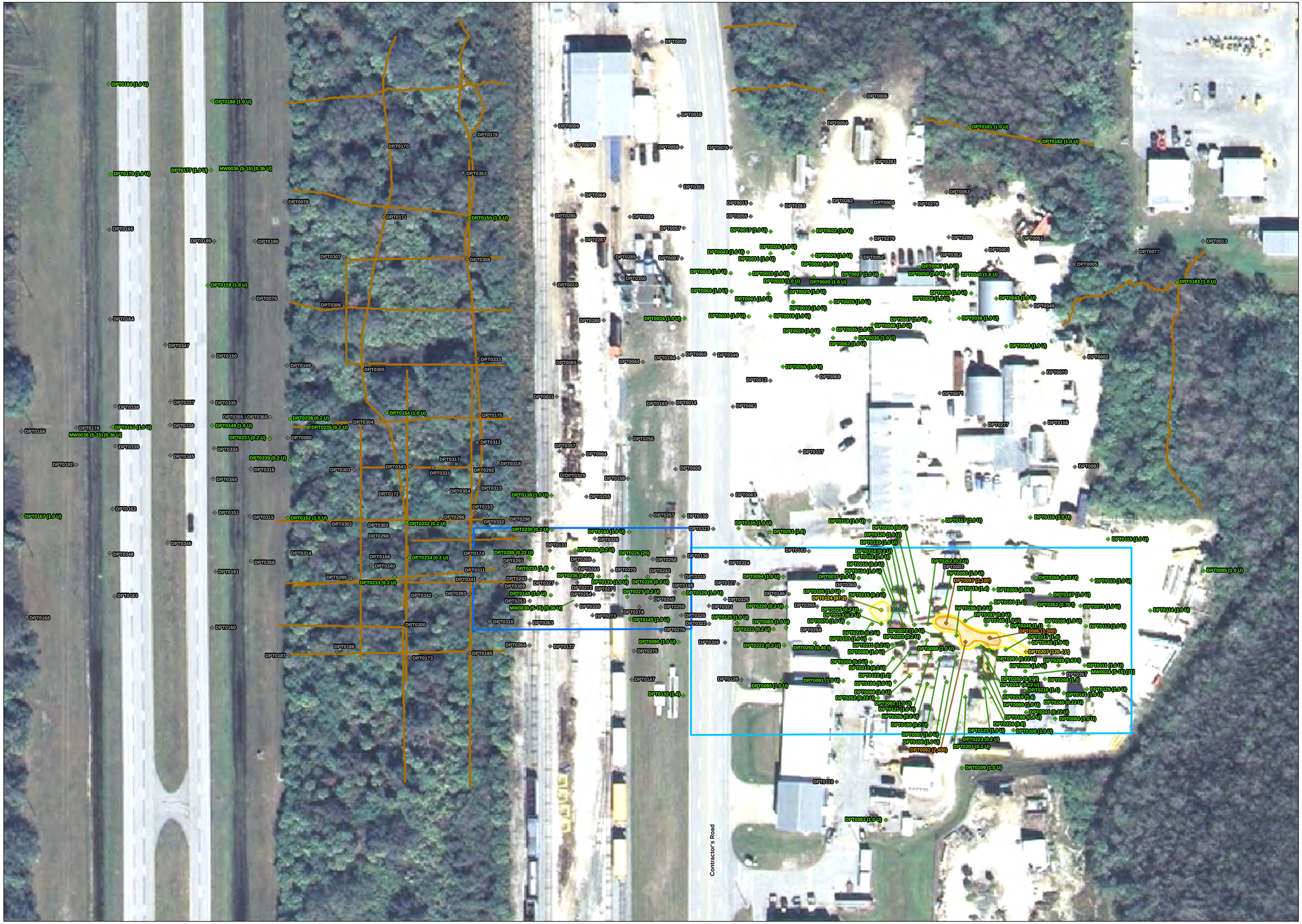


Figure 17
CRHE Area Summary of TCE Results in Groundwater 46 to 56 ft BLS




Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. TCE indicates trichloroethene.
4. U indicates value was not detected above the method detection limit.
5. GCTL indicates Groundwater Cleanup Target Level.
6. NADC indicates Natural Attenuation Default Concentration.
7. Prefix for all sampling locations is "CRHE-".
8. Data presented is from the bottom depth interval for each location.
9. * indicates not used for contouring.

Figure 18
CRHE Area Summary of TCE Results in Groundwater Greater than 56 ft BLS




## Legend

- DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest cDCE Concentration)**

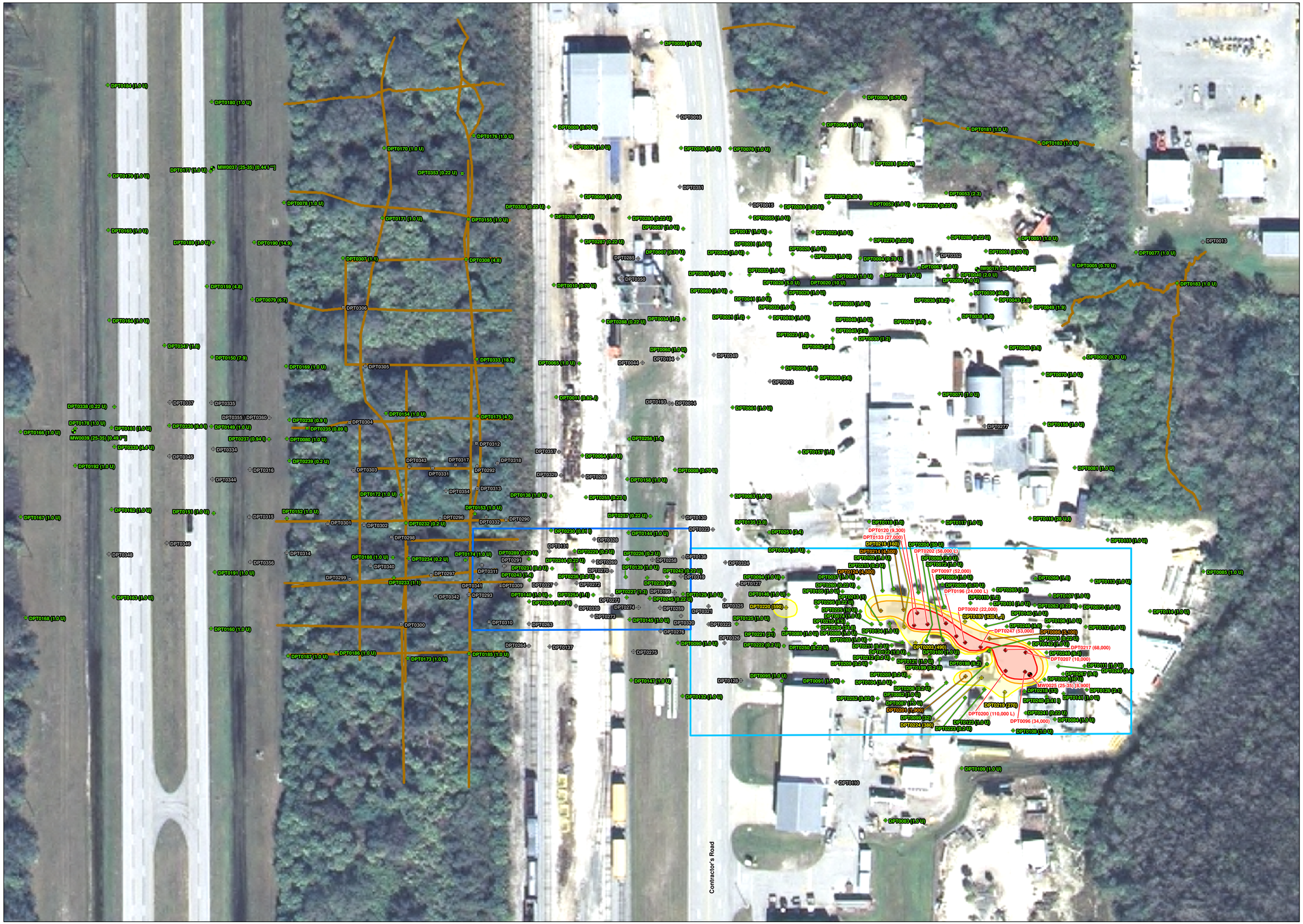
- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)

**Monitoring Well Location showing (screen interval (ft BLS) and [cDCE Concentration])**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)
- 70 µg/L cDCE Isopleth
- 700 µg/L cDCE Isopleth
- Hot Spot 1
- Hot Spot 2
- Cleared Trails

Notes:
1. Results are presented in micrograms per liter (µg/L).
2. ft BLS indicates feet below land surface.
3. U indicates value was not detected above the method detection limit.
4. cDCE indicates cis-1,2-dichloroethene.
5. GCTL indicates Groundwater Cleanup Target Level.
6. NADC indicates Natural Attenuation Default Concentration.
7. Prefix for all sampling locations is "CRHE-".

Figure 19
CRHE Area Summary of cDCE Results in Groundwater 8 to 16 ft BLS




Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. U indicates value was not detected above the method detection limit.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. J indicates estimated value.
6. cDCE indicates cis-1,2-dichloroethene.
7. GCTL indicates Groundwater Cleanup Target Level.
8. NADC indicates Natural Attenuation Default Concentration.
9. Prefix for all sampling locations is "CRHE-".
10. ** indicates well screens fall within more than one mapping interval.



Figure 20
CRHE Area Summary of cDCE Results in Groundwater 16 to 30 ft BLS

N

50 25 0 50
Feet

## Legend

DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest cDCE Concentration)**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)
- cDCE concentration greater than 7,000 µg/L (10X NADC)

**Monitoring Well Location showing (screen interval (ft BLS) and [cDCE Concentration])**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)
- cDCE concentration greater than 7,000 µg/L (NADC)

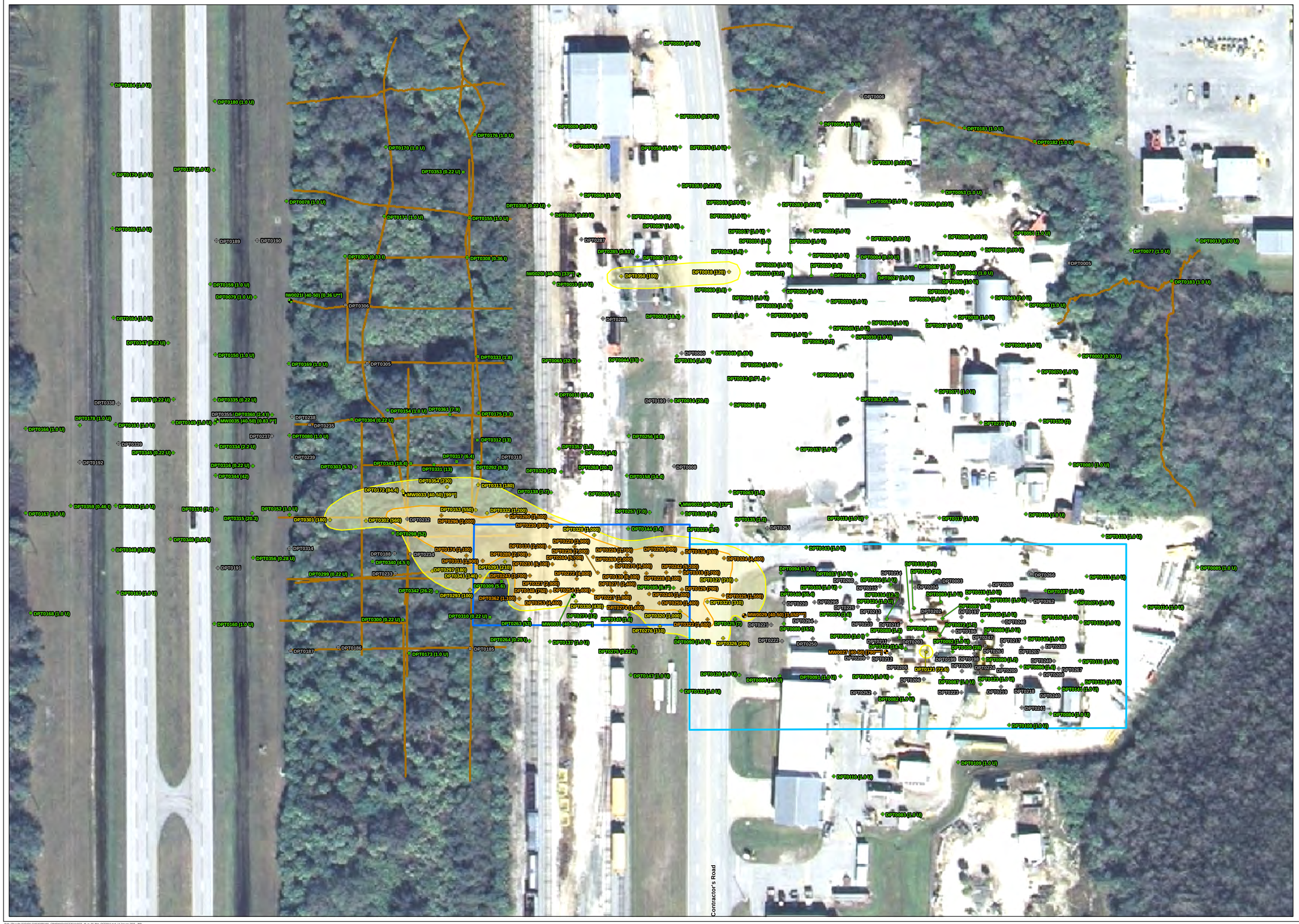
- 70 µg/L cDCE Isopleth
- 700 µg/L cDCE Isopleth
- 7,000 µg/L cDCE Isopleth
- Hot Spot 1
- Hot Spot 2
- Cleared Trails

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. cDCE indicates cis-1,2-dichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. U indicates value was not detected above the method detection limit.
6. * indicates result was not used for contouring.
7. ** indicates well screens fall within more than one mapping interval.
8. *** indicates result was not used for contouring as the well screen falls within more than one mapping interval.
9. GCTL indicates Groundwater Cleanup Target Level.
10. NADC indicates Natural Attenuation Default Concentration.
11. Prefix for all sampling locations is "CRHE-".
12. Only monitoring wells that were sampled in November 2009 are shown on this map.

Contractor's Road

Path: I:\Business-91\DATA\ P-0\DISTFR\581_CRHE\MXDs\OCT2014\cDCE_31_to46_lbls_OCT2014.mxd 23 March 2015 MAH

Figure 21
CRHE Area Summary of cDCE Results in Groundwater 31 to 46 ft BLS




N

50 25 0 50 Feet

**Legend**

- DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest cDCE Concentration)**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)

**Monitoring Well Location showing (screen interval (ft BLS) and [cDCE Concentration])**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)

- 70 µg/L cDCE Isopleth
- 700 µg/L cDCE Isopleth
- Hot Spot 1
- Hot Spot 2
- Cleared Trails

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. cDCE indicates cis-1,2-dichloroethene.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. J indicates estimated value.
6. U indicates value was not detected above the method detection limit.
7. * indicates result was not used for contouring.
8. ** indicates well screens fall within more than one mapping interval.
9. *** indicates result was not used for contouring as the well screen falls within more than one mapping interval.
10. DPT0195 data is from 51 to 55 ft BLS which is deeper than DPT0129 data, so it was not used for contouring.
11. GCTL indicates Groundwater Cleanup Target Level.
12. NADC indicates Natural Attenuation Default Concentration.
13. Prefix for all sampling locations is "CRHE-".
14. Only monitoring wells that were sampled in November 2009 are shown on this map.

Path: J:\Tasville-EIS\DATA\ TYDS\FIFR\181_CRHEWMSmOCT2014\cDCE_46_to_56_fbls_OCT2014.mxd 14 January 2015 JRB

Figure 22
CRHE Area Summary of cDCE Results in Groundwater 46 to 56 ft BLS

N

50 25 0 50 Feet

## Legend

- DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest cDCE Concentration)**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)

**Monitoring Well Location showing (screen interval (ft BLS) and [cDCE Concentration])**

- cDCE concentration less than or equal to 70 µg/L
- cDCE concentration greater than 70 µg/L (GCTL)
- cDCE concentration greater than 700 µg/L (NADC)
- 70 µg/L cDCE Isopleth
- Hot Spot 1
- Hot Spot 2
- Cleared Trails

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. cDCE indicates cis-1,2-dichloroethene.
4. U indicates value was not detected above the method detection limit.
5. GCTL indicates Groundwater Cleanup Target Level.
6. NADC indicates Natural Attenuation Default Concentration.
7. Prefix for all sampling locations is "CRHE-".
8. Data presented is from the bottom depth interval for each location.

Contractor's Road

Figure 23
CRHE Area Summary of cDCE Results in Groundwater Greater than 56 ft BLS

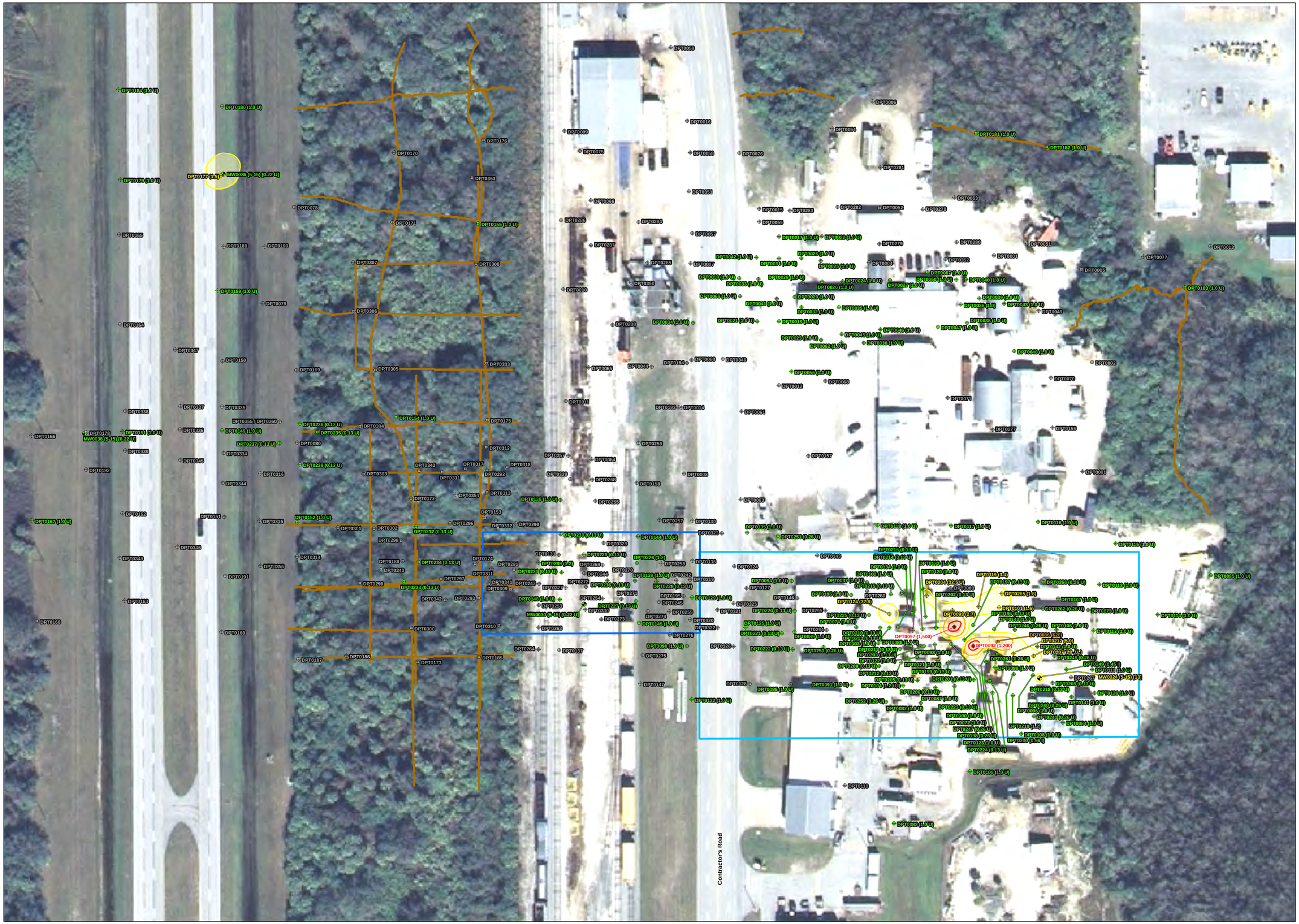
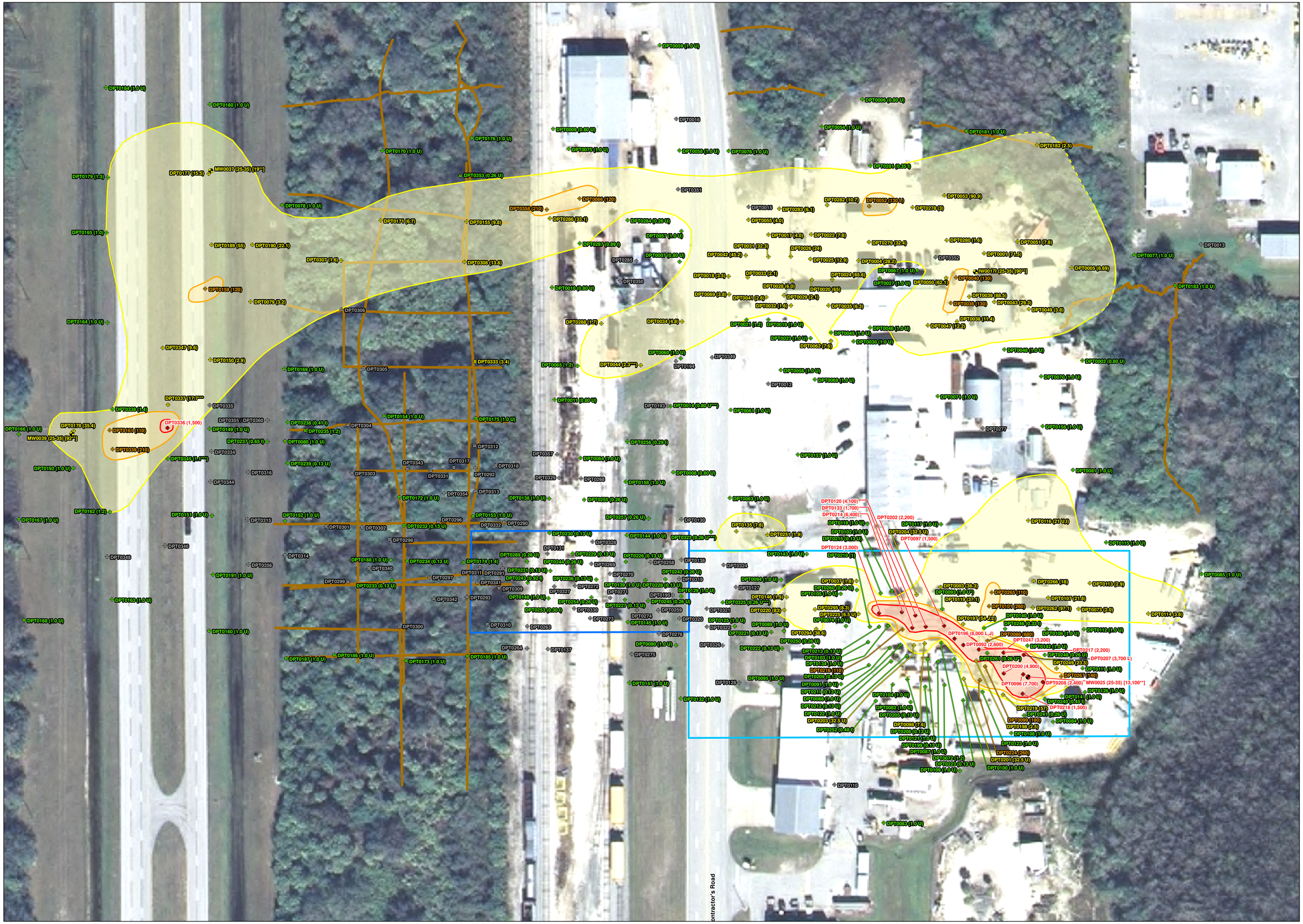



Figure 24
CRHE Area Summary of VC Results in Groundwater 8 to 16 ft BLS




N

50 25 0 50 Feet

## Legend

- DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest VC Concentration)**

- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)
- VC concentration greater than 1,000 µg/L (10X NADC)

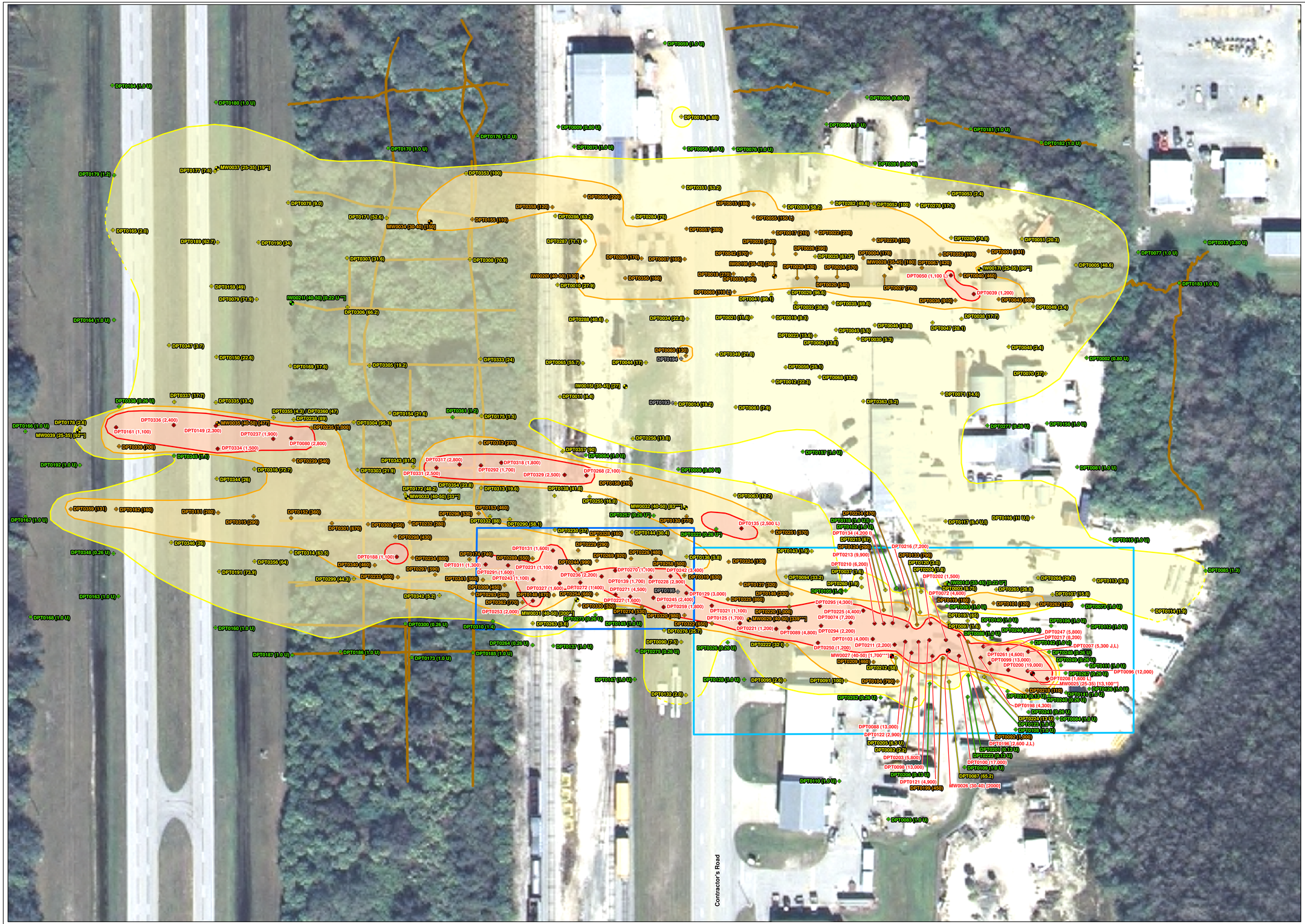
**Monitoring Well Location showing (screen interval (ft BLS) and [VC Concentration])**

- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)
- Inferred 1 µg/L VC Isopleth
- 1 µg/L VC Isopleth
- 100 µg/L VC Isopleth
- 1,000 µg/L VC Isopleth
- Hot Spot 1
- Hot Spot 2
- Cleared Trails

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (ug/L).
3. VC indicates vinyl chloride.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. J indicates value is estimated.
6. L indicates value exceeds calibration range.
7. U indicates value was not detected above the method detection limit.
8. GCTL indicates Groundwater Cleanup Target Level.
9. NADC indicates Natural Attenuation Default Concentration.
10. Prefix for all sampling locations is "CRHE-".
11. * indicates data not used to generate contours.
12. ** indicates well screens fall within more than one mapping interval.
13. ***indicates that data from the 31 - 35 or 36 - 40 ft bls interval is shown.

Path: (T:\pyelle-01\DATA\ TI\GIS\FY16\81_CRHE\MXDs\OCT2014\VC_16_bz30_fdss_OCT2014.mxd 22 April 2015 JPB

Figure 25
CRHE Area Summary of VC Results in Groundwater 16 to 30 ft BLS




Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. VC indicates vinyl chloride.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. J indicates estimated value.
6. L indicates value exceeds calibration range.
7. U indicates value was not detected above the method detection limit.
8. * indicates data not used to generate contours.
9. ** indicates well screens fall within more than one mapping interval.
10. *** indicates result was not used for contouring as the well screen falls within more than one mapping interval.
11. GCTL indicates Groundwater Cleanup Target Level.
12. NADC indicates Natural Attenuation Default Concentration.
13. Prefix for all sampling locations is "CRHE-".
14. Only monitoring wells that were sampled in November 2009 are shown on this map.

Path: I:\Tauzile-01\Data\71\005\FR1681_CRHE\MXD\OCT2014\VC_31_to46_Wells_OCT2014.mxd 17 Apr 2015 MAH

Figure 26
CRHE Area Summary of VC Results in Groundwater 31 to 46 ft BLS

N

50 25 0 50 Feet

## Legend

- DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest VC Concentration)**

- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)

**Monitoring Well Location showing (screen interval (ft BLS) and [VC Concentration])**

- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)
- VC concentration greater than 1,000 µg/L (NADC)
- Inferred 1 µg/L VC Isopleth
- 1 µg/L VC Isopleth
- 100 µg/L VC Isopleth
- Hot Spot 1
- Hot Spot 2
- Cleared Trails

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. VC indicates vinyl chloride.
4. I indicates reported value is between the method detection limit and the practical quantitation limit.
5. J indicates estimated value.
6. U indicates value was not detected above the method detection limit.
7. * indicates data not used to generate contours.
8. GCTL indicates Groundwater Cleanup Target Level.
9. NADC indicates Natural Attenuation Default Concentration.
10. Prefix for all sampling locations is "CRHE-".
11. Only monitoring wells that were sampled in November 2009 are shown on this map.

Path: I:\Tauvella-01\Data\T-DGB\SFR1681_CRHE\MXDs\OCT2014\VC_46_to_56_fbls_OCT2014.mxd 17 Apr 2015 JRB

Figure 27
CRHE Area Summary of VC Results in Groundwater 46 to 56 ft BLS

N

50 25 0 50 Feet

## Legend

- DPT Location Not Sampled in this Interval

**DPT Sampling Location showing (highest VC Concentration)**

- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)

**Monitoring Well Location showing (screen interval (ft BLS) and [VC Concentration])**

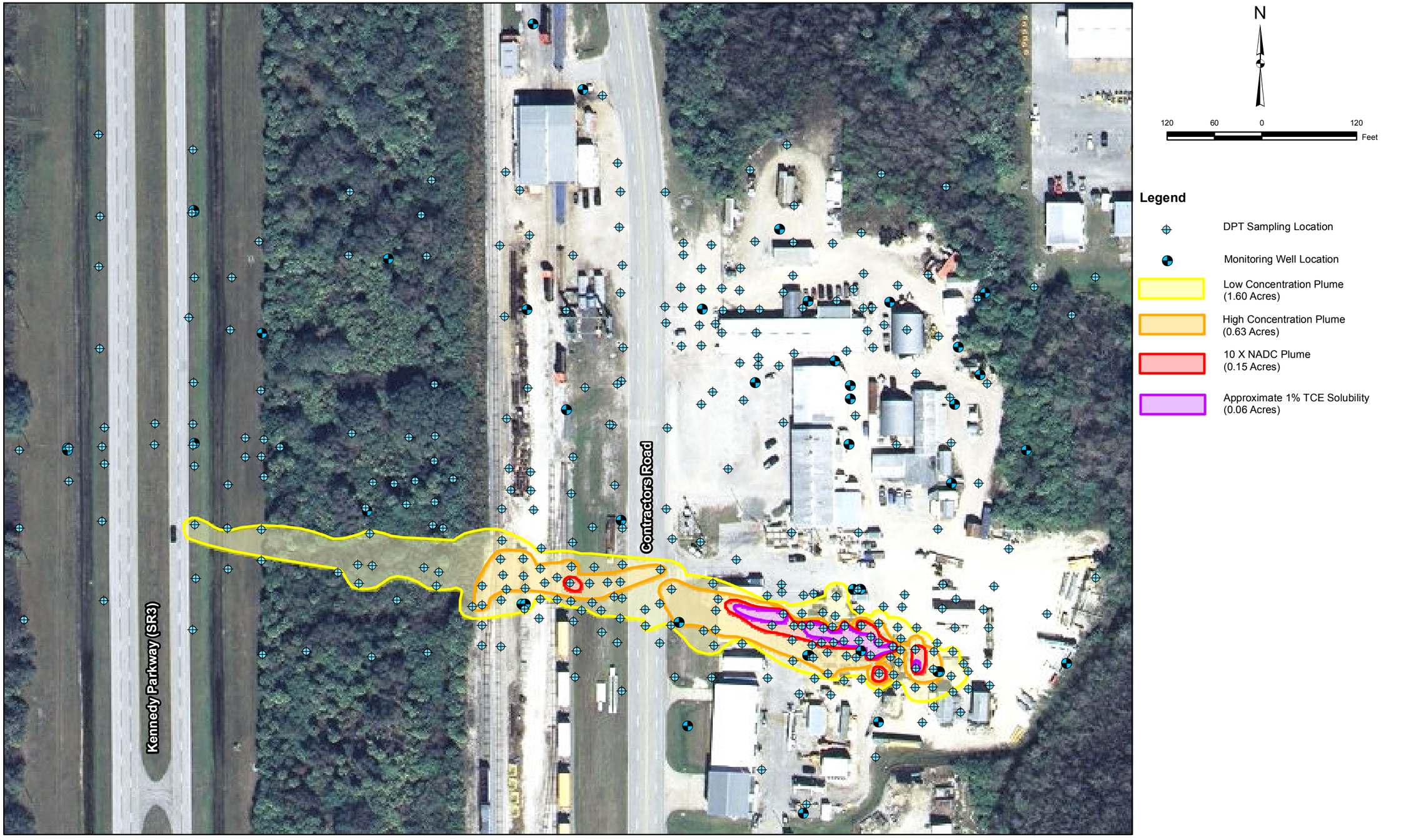
- VC concentration less than or equal to 1 µg/L
- VC concentration greater than 1 µg/L (GCTL)
- VC concentration greater than 100 µg/L (NADC)
- 1 µg/L VC Isopleth
- 100 µg/L VC Isopleth
- Hot Spot 1
- Hot Spot 2
- Cleared Trails

Notes:
1. ft BLS indicates feet below land surface.
2. Results are presented in micrograms per liter (µg/L).
3. VC indicates vinyl chloride.
4. J indicates estimated value.
5. U indicates value was not detected above the method detection limit.
6. * indicates data for DPT0193 was used for this location.
7. GCTL indicates Groundwater Cleanup Target Level.
8. NADC indicates Natural Attenuation Default Concentration.
9. Prefix for all sampling locations is "CRHE-".
10. Data presented is from the bottom depth interval for each location.

Contractor's Road

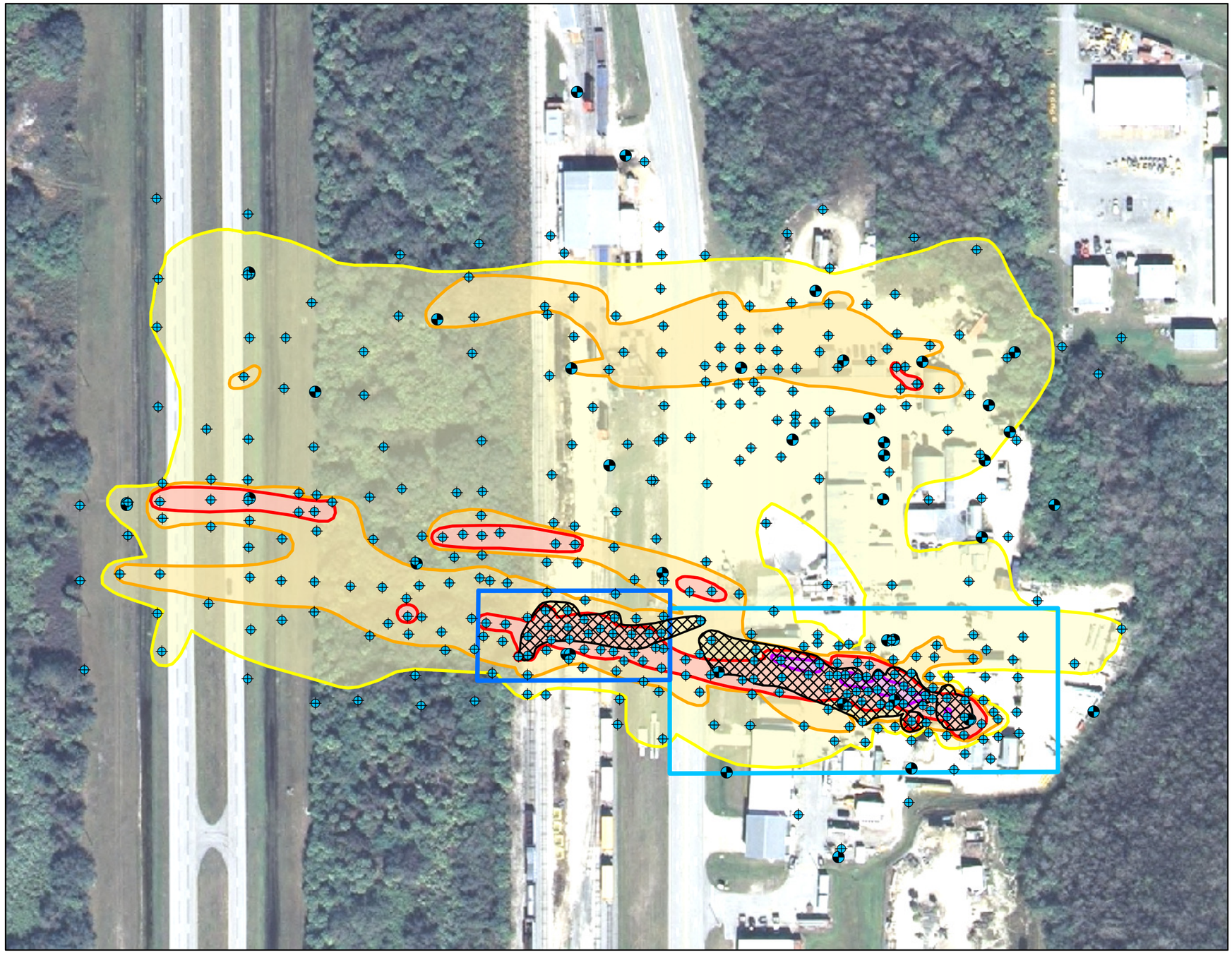
Path: I:\Tauvella-01\Data\TYGSS\FY1501_CRHE\MXDs\OCT2014\VC_greater_than_56_fttbls_OCT2014.mxd 17 Apr 2015 JRB

Figure 28
CRHE Area Summary of VC Results in Groundwater Greater than 56 ft BLS




Path: (Titusville-01\Data)T:\0GIS\FR1681_CRHE\MXDs\MAR2015\Composite_TCE_Plume_DEC2014_ADP.mxd 19 Mar 2015 JRB

Figure 29
Composite TCE Plume - November 2014



N

140 70 0 140

Feet

**Legend**

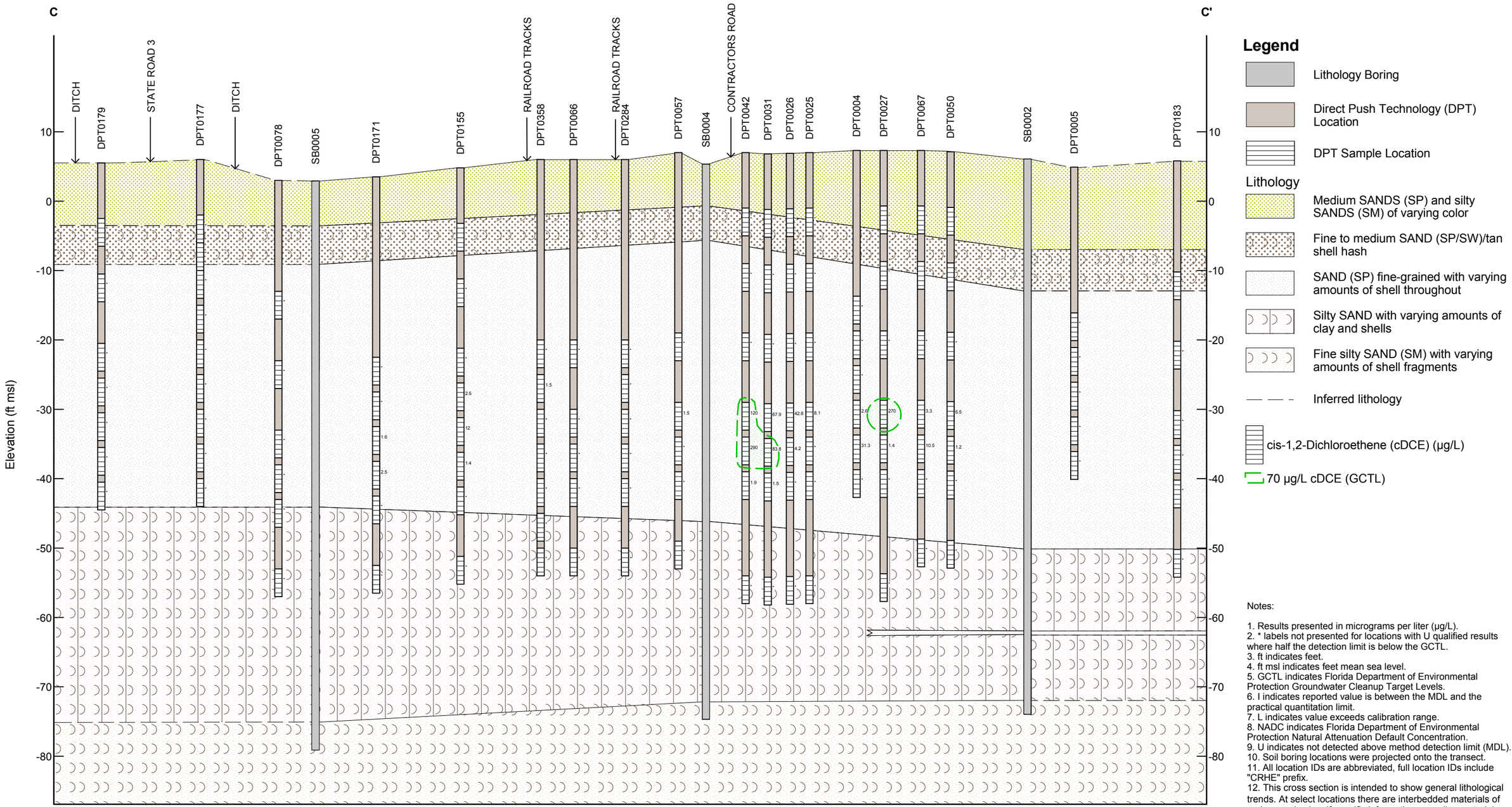
- DPT Location
- Monitoring Well Location
- Hot Spot 2
- Hot Spot 1
- Low Concentration Plume (Concentrations Greater than GCTL)
- High Concentration Plume (Concentrations Greater than NADC)
- TCE High Concentration Plume
- Hot Spot (Concentrations Greater than 10X NADC)
- Approximate 1% TCE Solubility

| Site Plumes | Site Area (acres) |
|---|---|
| Low Concentration Plume (Concentrations Greater than GCTL) | 14.90 |
| High Concentration Plume (Concentrations Greater than NADC) | 4.37 |
| TCE High Concentration Plume | 0.63 |
| Hot Spot (Concentrations Greater than 10X NADC) | 1.01 |
| Approximate 1% TCE Solubility (TCE Concentrations Greater than 11,000 µg/L) | 0.06 |

Notes:
1. GCTL indicates Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Level.
2. NADC indicates FDEP Natural Attenuation Default Concentration.

Path: (Titusville-01\Data\)P:\0GIS\FR1681_CRHE\MXDs\JAN2015\Greater_GCTL_NADC_10XNADC_JAN2015.mxd 23 Mar 2015 MAH

Figure 30
Overall Extent of Groundwater Isopleths at CRHE




## Legend

- Lithology Boring
- Direct Push Technology (DPT) Location
- DPT Sample Location

Lithology

- Medium SANDS (SP) and silty SANDS (SM) of varying color
- Fine to medium SAND (SP/SW)/tan shell hash
- SAND (SP) fine-grained with varying amounts of shell throughout
- Silty SAND with varying amounts of clay and shells
- Fine silty SAND (SM) with varying amounts of shell fragments
- Inferred lithology
- cis-1,2-Dichloroethene (cDCE) (µg/L)
- 70 µg/L cDCE (GCTL)

113 57 0 113 Feet

Horizontal 1" = 113'
Vertical exaggeration is 8

Notes:

1. Results presented in micrograms per liter (µg/L).
2. * labels not presented for locations with U qualified results where half the detection limit is below the GCTL.
3. ft indicates feet.
4. ft msl indicates feet mean sea level.
5. GCTL indicates Florida Department of Environmental Protection Groundwater Cleanup Target Levels.
6. I indicates reported value is between the MDL and the practical quantitation limit.
7. L indicates value exceeds calibration range.
8. NADC indicates Florida Department of Environmental Protection Natural Attenuation Default Concentration.
9. U indicates not detected above method detection limit (MDL).
10. Soil boring locations were projected onto the transect.
11. All location IDs are abbreviated, full location IDs include "CRHE" prefix.
12. This cross section is intended to show general lithological trends. At select locations there are interbedded materials of various grain size. If specific information regarding material encountered at specific depths is needed, soil boiring logs should be reviewed.

**FIGURE 31**
**CRHE Site**
**cis-1,2-Dichloroethene Concentrations (µg/L)**
**for C to C' Section**

C

C'

DITCH
DPT0179
STATE ROAD 3
DPT0177
DITCH
DPT0078
SB0005
DPT0171
DPT0155
RAILROAD TRACKS
DPT0358
DPT0066
RAILROAD TRACKS
DPT0284
DPT0057
SB0004
CONTRACTORS ROAD
DPT0042
DPT0031
DPT0026
DPT0025
DPT0004
DPT0027
DPT0067
DPT0050
SB0002
DPT0005
DPT0183

Elevation (ft msl)

10
0
-10
-20
-30
-40
-50
-60
-70
-80

## Legend

Lithology Boring

Direct Push Technology (DPT) Location

DPT Sample Location

Lithology

Medium SANDS (SP) and silty SANDS (SM) of varying color

Fine to medium SAND (SP/SW)/tan shell hash

SAND (SP) fine-grained with varying amounts of shell throughout

Silty SAND with varying amounts of clay and shells

Fine silty SAND (SM) with varying amounts of shell fragments

Inferred lithology

Vinyl Chloride (VC) (µg/L)

1 µg/L VC (GCTL)
100 µg/L VC (NADC)
1,000 µg/L VC (10x NADC)

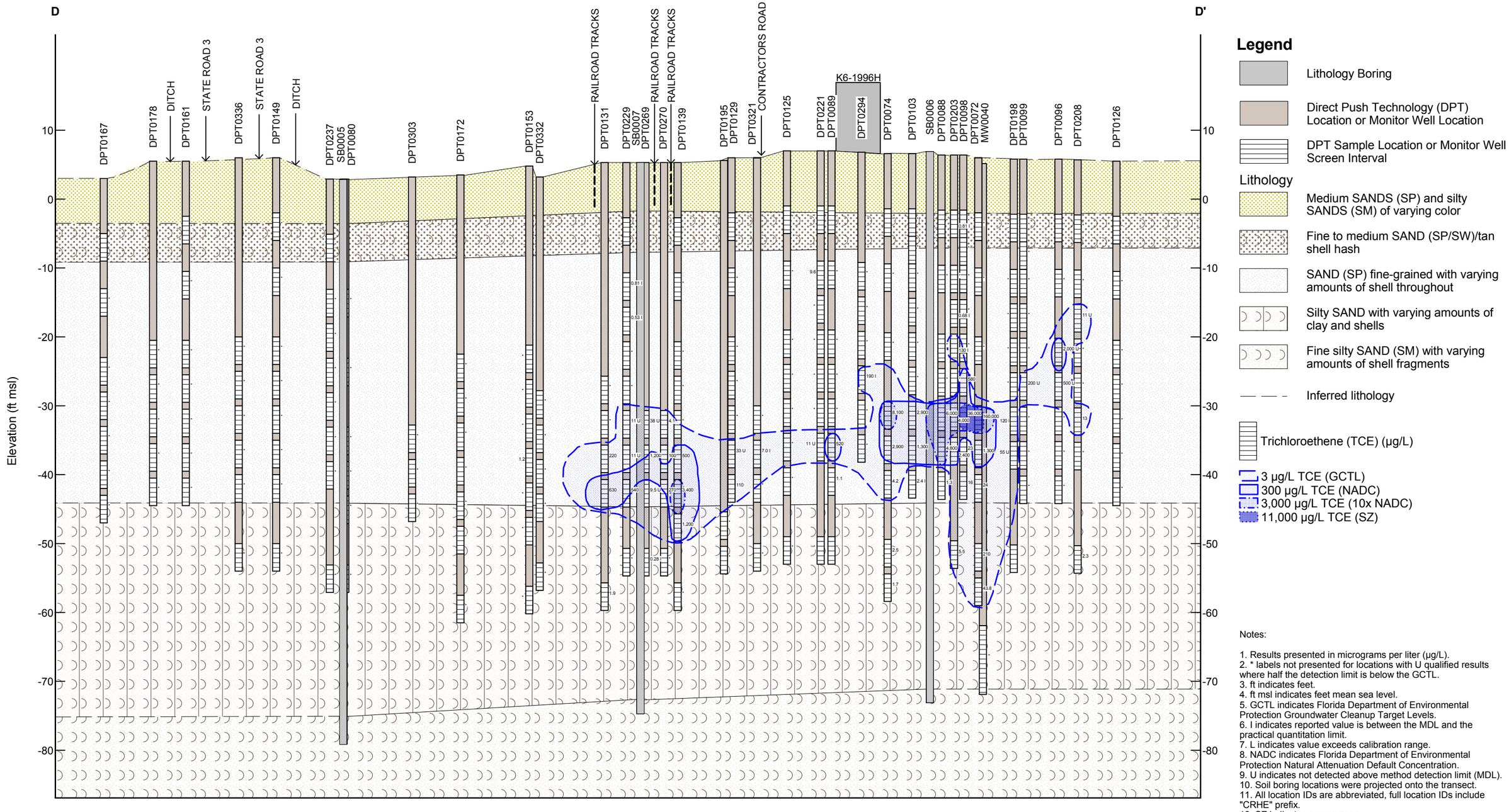
Notes:

1. Results presented in micrograms per liter (µg/L).
2. * labels not presented for locations with U qualified results where half the detection limit is below the GCTL.
3. ft indicates feet.
4. ft msl indicates feet mean sea level.
5. GCTL indicates Florida Department of Environmental Protection Groundwater Cleanup Target Levels.
6. I indicates reported value is between the MDL and the practical quantitation limit.
7. L indicates value exceeds calibration range.
8. NADC indicates Florida Department of Environmental Protection Natural Attenuation Default Concentration.
9. U indicates not detected above method detection limit (MDL).
10. Soil boring locations were projected onto the transect.
11. All location IDs are abbreviated, full location IDs include "CRHE" prefix.

113 57 0 113
Feet

Horizontal 1" = 113'
Vertical exaggeration is 8

**FIGURE 32**
**CRHE Site**
**Vinyl Chloride Concentrations (µg/L)**
**for C to C' Section**




## Legend

- Lithology Boring
- Direct Push Technology (DPT) Location or Monitor Well Location
- DPT Sample Location or Monitor Well Screen Interval

### Lithology

- Medium SANDS (SP) and silty SANDS (SM) of varying color
- Fine to medium SAND (SP/SW)/tan shell hash
- SAND (SP) fine-grained with varying amounts of shell throughout
- Silty SAND with varying amounts of clay and shells
- Fine silty SAND (SM) with varying amounts of shell fragments
- Inferred lithology

- Trichloroethene (TCE) (µg/L)
- 3 µg/L TCE (GCTL)
- 300 µg/L TCE (NADC)
- 3,000 µg/L TCE (10x NADC)
- 11,000 µg/L TCE (SZ)

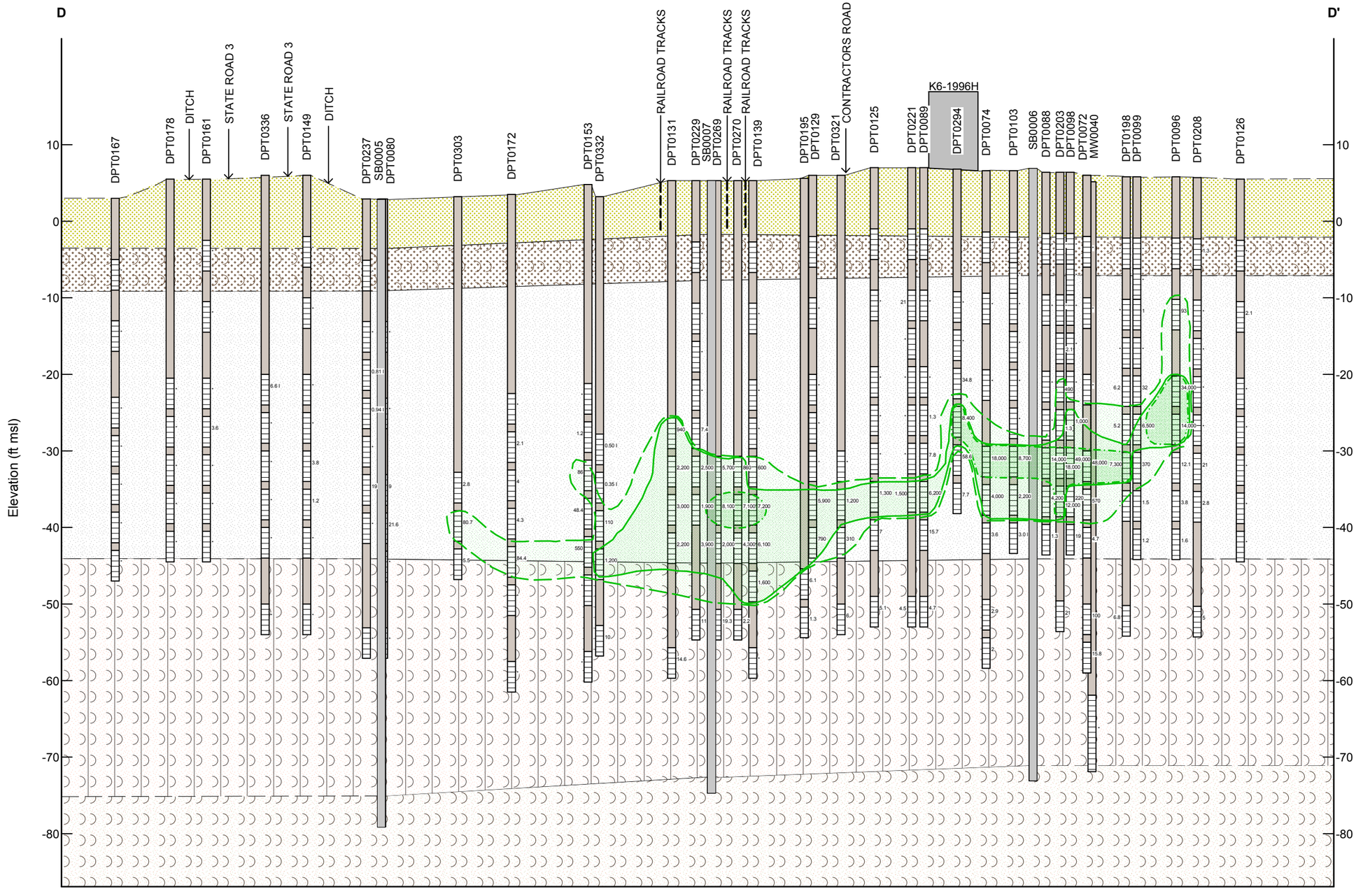
122 61 0 122 Feet

Horizontal 1" = 122'
Vertical exaggeration is 9

Notes:

1. Results presented in micrograms per liter (µg/L).
2. * labels not presented for locations with U qualified results where half the detection limit is below the GCTL.
3. ft indicates feet.
4. ft msl indicates feet mean sea level.
5. GCTL indicates Florida Department of Environmental Protection Groundwater Cleanup Target Levels.
6. I indicates reported value is between the MDL and the practical quantitation limit.
7. L indicates value exceeds calibration range.
8. NADC indicates Florida Department of Environmental Protection Natural Attenuation Default Concentration.
9. U indicates not detected above method detection limit (MDL).
10. Soil boring locations were projected onto the transect.
11. All location IDs are abbreviated, full location IDs include "CRHE" prefix.
12. SZ indicates source zone.

**FIGURE 33**
**CRHE Site**
**Trichloroethene Concentrations (µg/L)**
**for D to D' Section**




## Legend

- Lithology Boring
- Direct Push Technology (DPT) Location or Monitor Well Location
- DPT Sample Location or Monitor Well Screen Interval

### Lithology

- Medium SANDS (SP) and silty SANDS (SM) of varying color
- Fine to medium SAND (SP/SW)/tan shell hash
- SAND (SP) fine-grained with varying amounts of shell throughout
- Silty SAND with varying amounts of clay and shells
- Fine silty SAND (SM) with varying amounts of shell fragments
- Inferred lithology

- cis-1,2-dichloroethene (cDCE) (µg/L)

- 70 µg/L cDCE (GCTL)
- 700 µg/L cDCE (NADC)
- 7,000 µg/L cDCE (10x NADC)

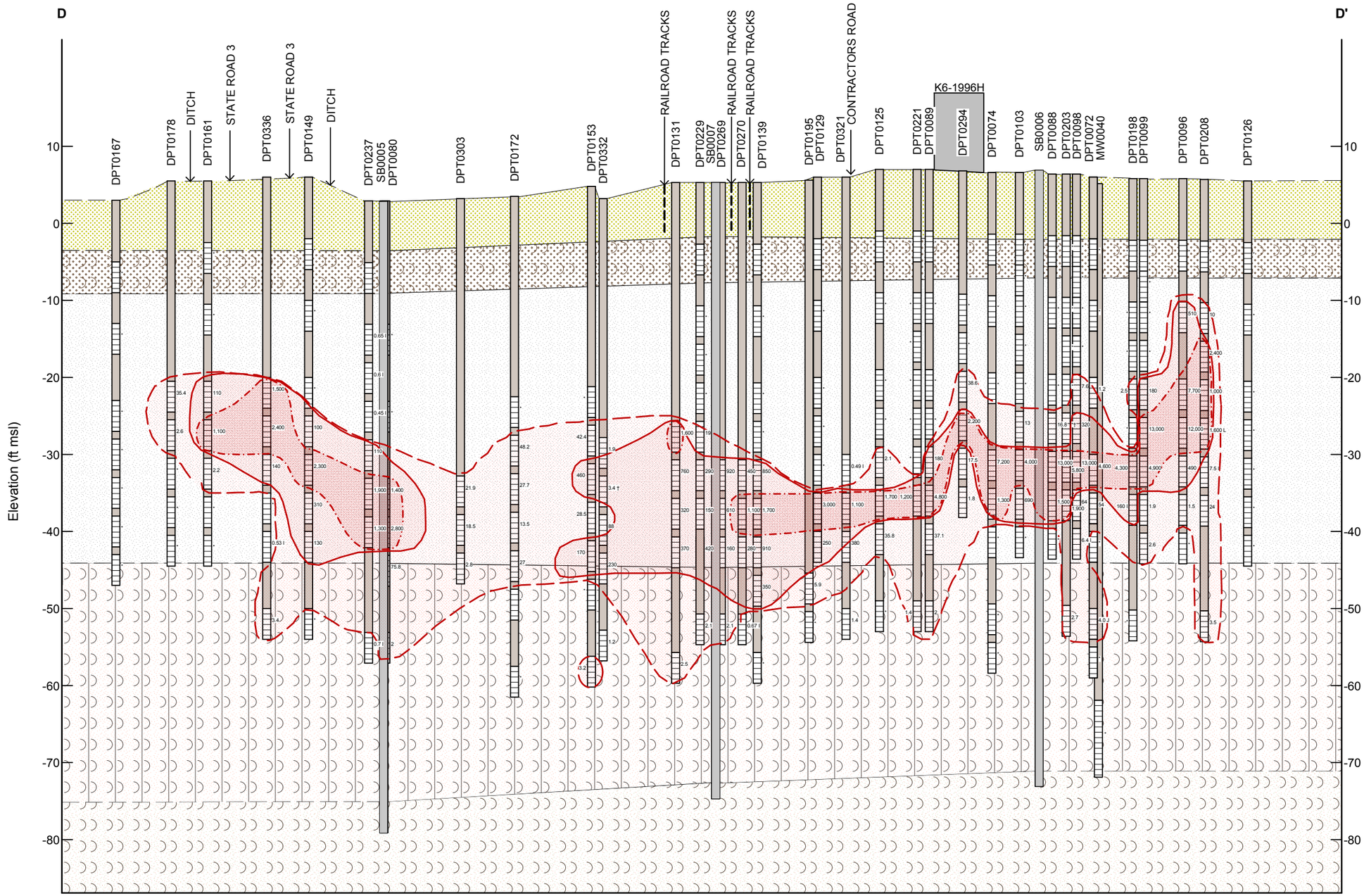
Notes:

1. Results presented in micrograms per liter (µg/L).
2. * labels not presented for locations with U qualified results where half the detection limit is below the GCTL.
3. ft indicates feet.
4. ft msl indicates feet mean sea level.
5. GCTL indicates Florida Department of Environmental Protection Groundwater Cleanup Target Levels.
6. I indicates reported value is between the MDL and the practical quantitation limit.
7. L indicates value exceeds calibration range.
8. NADC indicates Florida Department of Environmental Protection Natural Attenuation Default Concentration.
9. U indicates not detected above method detection limit (MDL).
10. Soil boring locations were projected onto the transect.
11. All location IDs are abbreviated, full location IDs include "CRHE" prefix.

122 61 0 122
Feet

Horizontal 1" = 122'
Vertical exaggeration is 9

**FIGURE 34**
**CRHE Site**
**cis-1,2-Dichloroethene Concentrations (µg/L)**
**for D to D' Section**




## Legend

- Lithology Boring
- Direct Push Technology (DPT) Location or Monitor Well Location
- DPT Sample Location or Monitor Well Screen Interval

Lithology

- Medium SANDS (SP) and silty SANDS (SM) of varying color
- Fine to medium SAND (SP/SW)/tan shell hash
- SAND (SP) fine-grained with varying amounts of shell throughout
- Silty SAND with varying amounts of clay and shells
- Fine silty SAND (SM) with varying amounts of shell fragments
- Inferred lithology

- Vinyl Chloride (VC) (µg/L)
- 1 µg/L VC (GCTL)
- 100 µg/L VC (NADC)
- 1,000 µg/L VC (10x NADC)

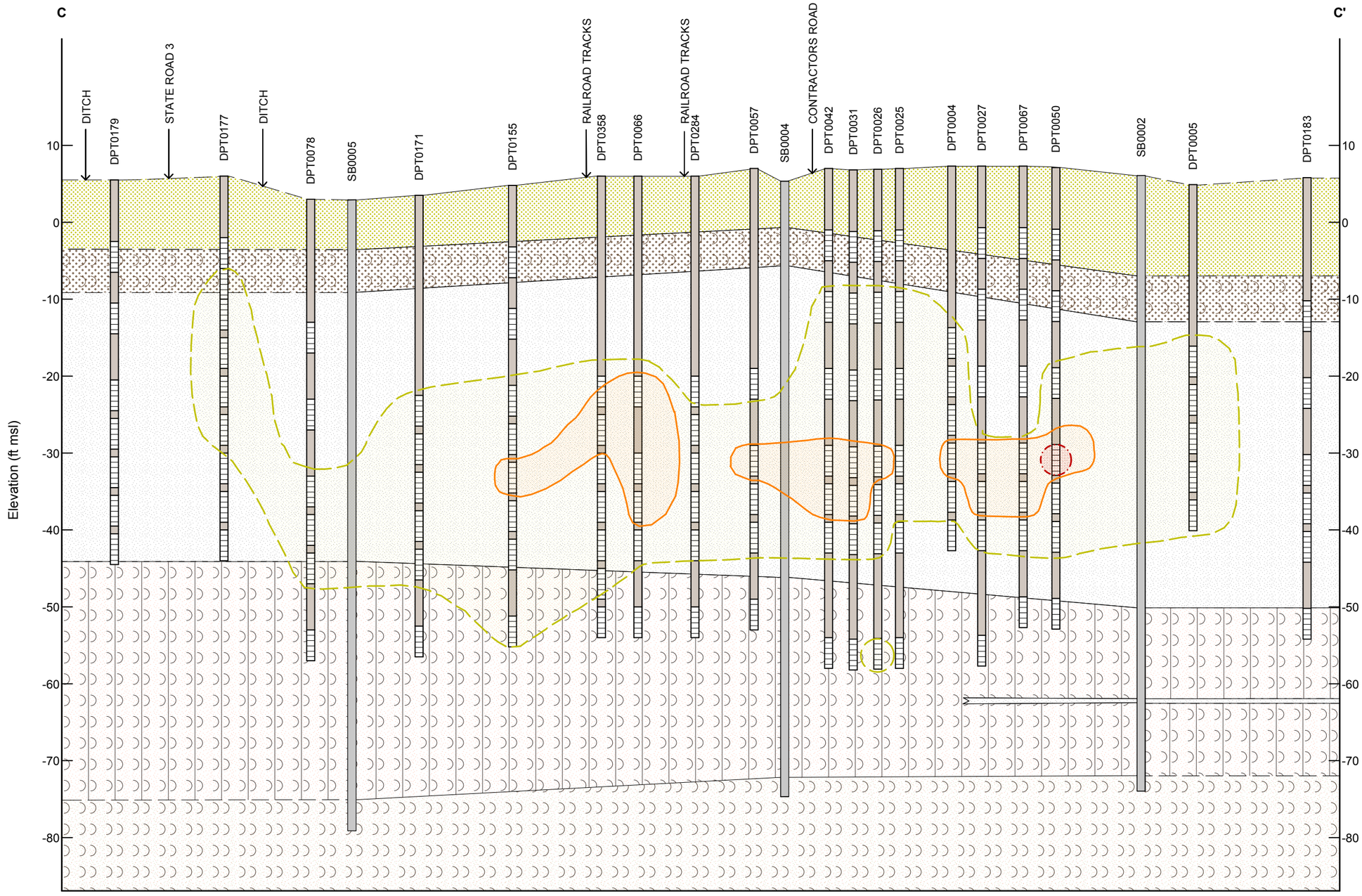
Notes:

1. Results presented in micrograms per liter (µg/L).
2. * labels not presented for locations with U qualified results where half the detection limit is below the GCTL.
3. ft indicates feet.
4. ft msl indicates feet mean sea level.
5. GCTL indicates Florida Department of Environmental Protection Groundwater Cleanup Target Levels.
6. I indicates reported value is between the MDL and the practical quantitation limit.
7. L indicates value exceeds calibration range.
8. NADC indicates Florida Department of Environmental Protection Natural Attenuation Default Concentration.
9. U indicates not detected above method detection limit (MDL).
10. Soil boring locations were projected onto the transect.
11. All location IDs are abbreviated, full location IDs include "CRHE" prefix.
12. † value not used for contouring.

122 61 0 122 Feet

Horizontal 1" = 122'
Vertical exaggeration is 9

**FIGURE 35**
**CRHE Site**
**Vinyl Chloride Concentrations (µg/L)**
**for D to D' Section**




## Legend

- Lithology Boring
- Direct Push Technology (DPT) Location
- DPT Sample Location

**Lithology**

- Medium SANDS (SP) and silty SANDS (SM) of varying color
- Fine to medium SAND (SP/SW)/tan shell hash
- SAND (SP) fine-grained with varying amounts of shell throughout
- Silty SAND with varying amounts of clay and shells
- Fine silty SAND (SM) with varying amounts of shell fragments
- Inferred lithology
- Combined CVOC LCP
- Combined CVOC HCP
- Combined CVOC 10x NADC

Notes:

1. ft indicates feet.
2. ft msl indicates feet mean sea level.
3. GCTL indicates Florida Department of Environmental Protection Groundwater Cleanup Target Levels.
4. NADC indicates Florida Department of Environmental Protection Natural Attenuation Default Concentration.
5. Soil boring locations were projected onto the transect.
6. All location IDs are abbreviated, full location IDs include "CRHE" prefix.
7. CVOC indicates chlorinated volatile organic compounds.
8. LCP indicates low concentration plume.
9. HCP indicates high concentration plume.

113 57 0 113 Feet

Horizontal 1" = 113'
Vertical exaggeration is 8

**FIGURE 36**
**CRHE Site**
**Chlorinated Volatile Organic Compound Concentrations (µg/L) for C to C' Section**

D

D'

Elevation (ft msl)

10
0
-10
-20
-30
-40
-50
-60
-70
-80

DPT0167
DPT0178
DITCH
DPT0161
STATE ROAD 3
DPT0336
STATE ROAD 3
DPT0149
DITCH
DPT0237
SB0005
DPT0080
DPT0303
DPT0172
DPT0153
DPT0332
RAILROAD TRACKS
DPT0131
DPT0229
SB0007
DPT0269
RAILROAD TRACKS
DPT0270
RAILROAD TRACKS
DPT0139
DPT0195
DPT0129
DPT0321
CONTRACTORS ROAD
DPT0125
DPT0221
DPT0089
K6-1996H
DPT0294
DPT0074
DPT0103
SB0006
DPT0088
DPT0203
DPT0098
DPT0072
MW0040
DPT0198
DPT0099
DPT0096
DPT0208
DPT0126

## Legend

- Lithology Boring
- Direct Push Technology (DPT) Location or Monitor Well Location
- DPT Sample Location or Monitor Well Screen Interval

Lithology

- Medium SANDS (SP) and silty SANDS (SM) of varying color
- Fine to medium SAND (SP/SW)/tan shell hash
- SAND (SP) fine-grained with varying amounts of shell throughout
- Silty SAND with varying amounts of clay and shells
- Fine silty SAND (SM) with varying amounts of shell fragments
- Inferred lithology

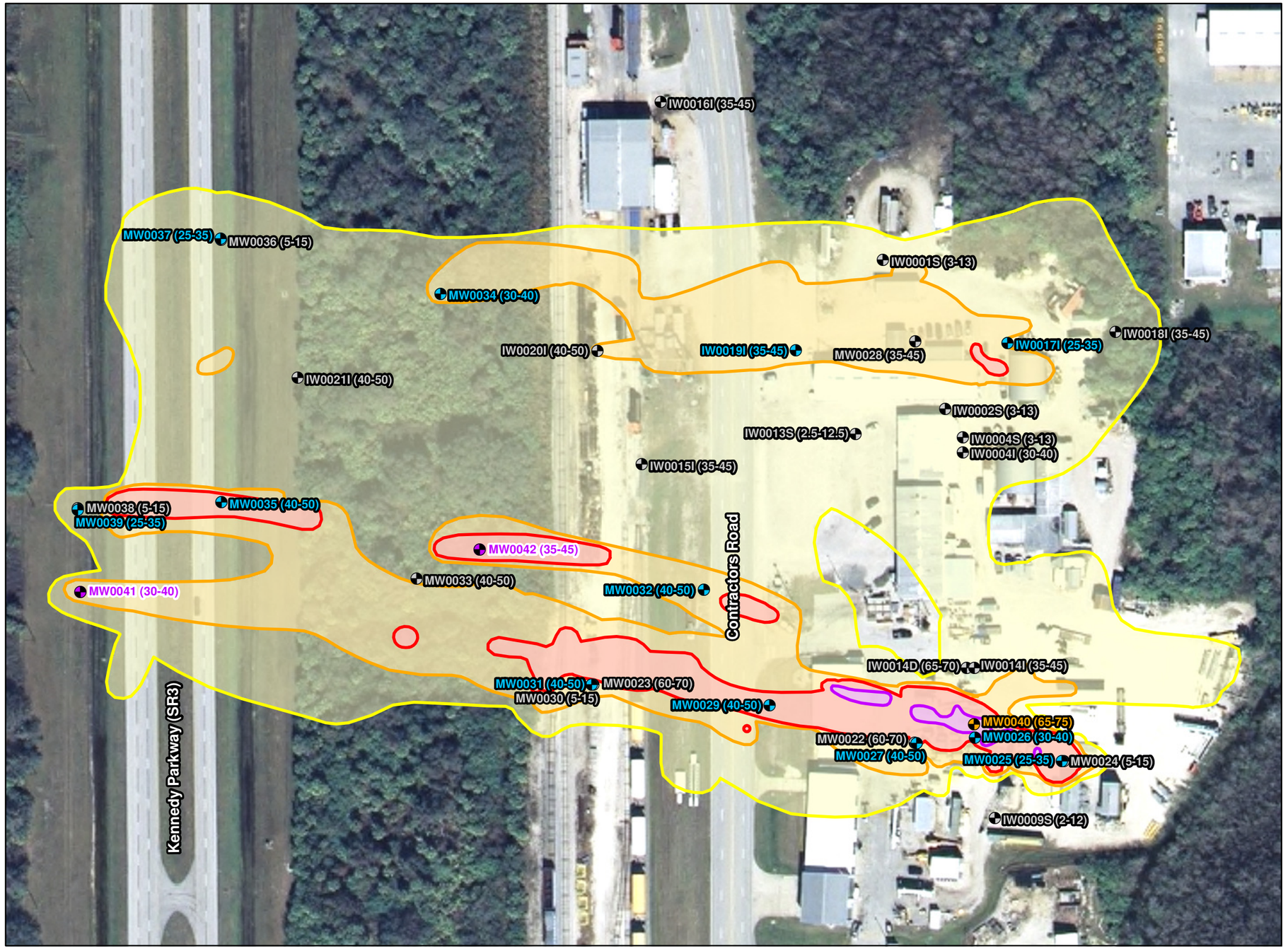
- Combined CVOC LCP
- Combined CVOC HCP
- Combined CVOC 10x NADC

122 61 0 122
Feet
Horizontal 1" = 122'
Vertical exaggeration is 9

Notes:

1. ft indicates feet.
2. ft msl indicates feet mean sea level.
3. GCTL indicates Florida Department of Environmental Protection Groundwater Cleanup Target Levels.
4. NADC indicates Florida Department of Environmental Protection Natural Attenuation Default Concentration.
5. Soil boring locations were projected onto the transect.
6. All location IDs are abbreviated, full location IDs include "CRHE" prefix.
7. CVOC indicates chlorinated volatile organic compounds.
8. LCP indicates low concentration plume.
9. HCP indicates high concentration plume.

**FIGURE 37**
**CRHE Site**
**Chlorinated Volatile Organic Compound Concentrations (µg/L) for D to D' Section**




N

120 60 0 120

Feet

**Legend**

- Proposed Monitoring Well Location (Screen Interval)
- Intermediate Monitoring Well Location (Screen Interval)
- Deep Monitoring Well Location (Screen Interval)
- Monitoring Well - Not Part of Interim Groundwater Sampling Plan (Screen Interval)
- Low Concentration Plume
- High Concentration Plume
- Hot Spot
- 1% TCE Solubility Plume

Note:
1. Screen interval is presented in feet, below land surface (ft, BLS).

Path: {Titusville-01\Data\}P:\0GIS\FR1681_CRHE\MXDs\MAR2015\Proposed_MW_MARCH2015.mxd 25 March 2015 MAH

Figure 38
Proposed Monitoring Well Sampling Locations

Geosyntec consultants

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Pensacola, Florida 32502
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# MEMORANDUM

| | |
|---|---|
| Date: | 22 April 2015 |
| To: | Anne Chrest |
| Copies to: | NASA Remediation Team |
| From: | Lane Dorman, P.G. and Jim Langenbach, P.E. |
| Subject: | Contractor's Road Heavy Equipment Area (CRHE) (SWMU055)<br>Step 1A/1B Engineering Evaluations – Response to Comments |

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Comments on the CRHE Step 1A/1B Engineering Evaluations have been reviewed and responses, where applicable, are provided below. The comment is provided and Geosyntec's response, in italics, is below the comment.

**Tetra Tech Comments:**

**Step 1A:**
**Technical Comments**

1. Slide 12
   Suggest showing the site conditions for the HS2 area, as photos show conditions of HS1.

   *Response: Comment noted; pictures of HS2 included.*

2. Slide 14
   Is the lithologic unit present from approximately 48 to 78 feet bls a continuous silty sand with clay unit? Suggest showing any details that may relate to confining/semi-confining conditions, as a relatively thin unit with higher clay content is typically present where the top of this layer is depicted (global to cross sections).

   *Response: Comment noted; see revised cross section notes.*

3. Slide 38
   [a] Should the LCP plume be shown as inferred south of DPT0044,
   [b] west of DPT0146/0220,
   [c] east of DPT0135? Samples were not collected from this interval at those locations.
   [d] Additionally, the DPT spacing around DPT0336 does not appear to meet KSC spacing conventions.

[e] For consistency, the LCP should be extended to include DPT0179 (e.g., DPT0162 was included).

*Response:*
*[a] Geosyntec does not agree that the LCP should be shown as inferred S of DPT0044. The distance between DPT0060 and DPT0065, which both had VC concentrations below 2.0 µg/L in this mapping interval, is approximately 120 ft. Based on the VC concentrations at DPT0060 and DPT0065 and at the following locations, the LCP is delineated in this area:*

- *31-35 ft BLS interval from DPT0044 (2.3 µg/L),*
- *31-35 ft BLS interval from DPT0014 (0.80 U µg/L), and*
- *26-30 ft BLS interval from DPT0011 (0.80 U µg/L).*

*The VC 16-30 ft BLS plume map has been revised to show VC concentrations from the 31-35 ft BLS intervals of DPT0044 and DPT0014 for lateral delineation interpretation.*

*[b] Geosyntec does not agree that the LCP should be shown as inferred W of DPT0146/220 based on the VC concentration in the 36-40 ft BLS interval from DPT0325 (0.26 U µg/L).*

*[c] Geosyntec does not agree that the LCP should be shown as inferred W of DPT0135 based on the VC concentration in the 36-40 ft BLS interval from DPT0323 (0.26 U µg/L). The VC 16-30 ft BLS plume map has been revised to show VC concentrations from the 36-40 ft BLS intervals of DPT0323 for lateral delineation interpretation.*

*[d] Comment noted; although DPT spacing around DPT0336 shown on the 16-30 ft BLS interval map does not meet the specific spacing suggestion in the Step process, VC detections at DPT0337 (17.7 µg/L) and DPT0345 (1.1 µg/L) from the 31-35 ft BLS interval (i.e. the interval immediately below the 1,500 µg/L VC detection in DPT0336) indicate that the current contour interpretation is valid. The VC 16-30 ft BLS plume map has been revised to show VC concentrations from the 31-35 ft BLS intervals of DPT0337 and DPT0345 for lateral delineation interpretation. If an interim measure is necessary in this area, additional sampling may be completed at that time.*

*[e] Comment noted; the VC 16-30 ft BLS plume map was adjusted slightly to include DPT0179 and DPT0165 in the 1.0 µg/L contour; however, this does not represent a material impact to the LCP.*

4. Slide 39
[a] Suggest showing LCP as inferred in the northeast most portion of the LCP northeast of DPT005, as there are not points bounding the plume in this direction between DPT0182 and DPT0077.
[b] Please also identify the area south of MW0034 as a data gap, as the HCP is not delineated to the south of this location.

*Response:*
*[a] Geosyntec's contour interpretation of the peripheral DPT locations in this area is based on observed VC concentrations less than 1.0 µg/L in DPT0181, DPT0182, DPT0077, and DPT0013.*

*[b] Comment noted. Geosyntec agrees that there is not a DPT location that meets the specific spacing suggestion in the Step process south of MW0034. However, given the VC concentrations detected in DPT0307 (31.6 µg/L) and DPT0308 (70.9 µg/L), we are comfortable with the delineation as presented. Sampling in this area has not occurred to date due to wetland conditions. If accessible, additional sampling may be conducted at a later date, if needed.*

5. Slide 40
[a] The HCP is not bound in the northern direction of DPT0301 and DPT0302 to the north and northwest. Suggest more conservative contouring in this area as well as identification of data gap.

[b] We also suggest south of DPT0350 and IW0020I be identified as an HCP data gap, as data is not available in this direction near the referenced locations.

*Response:*
*[a] Geosyntec agrees that there is a data gap at this location when comparing to the specific spacing suggestions in the Step process; however, this data gap can be filled at a later date, if needed. The VC 46-56 ft BLS plume map has been updated with more conservative contouring.*

*[b] Geosyntec agrees that there is not a DPT location that meets the specific spacing suggestion in the Step process in this area of the 46-56 ft BLS mapping interval; however, based on the VC detections in the 41-45 ft BLS interval at DPT0288 (40.6 µg/L) and 46-50 ft BLS interval at DPT0010 (48.4 µg/L), we are comfortable with the delineation as presented.*

6. Slide 40
Agree with inferred plume boundary along southwestern tail near DPT0163. Suggest plume boundaries be shown as inferred boundaries near DPT0264 and around DPT0016 (northern isolated detection)?

*Response: Comment noted; plume boundary near DPT0264 and around DPT0016 shown as inferred.*

7. Slide 40
   The LCP south of the Hot Spot 1 area appears to not be delineated, as the plume south of DPT0091 and DPT0095 is not bound to the south by single-digit detections.

   *Response: DPT0110 meets the spacing requirements of S of DPT0091 and our request to collect a sample S of DPT0095 was denied due to utilities. Based on the results at DPT0110 and our understanding of the conceptual site model, we are comfortable with the delineation presented.*

8. Slide 53
   Please list mass information by COC for each plume interval (e.g., X lbs of VC in LCP, Y lbs of VC in HCP, and Z lbs of VC in HS, etc.).

   *Response: The mass evaluation was prepared consistent with the Step 1 requirements; however, COC mass by plume intervals are provided for review.*

**Jacobs**

We reviewed the CRHE Step 1 EE data package. It meets all of the Step 1 EE objectives; the data collected delineates HS2/HCP/LCP adequately and the technology evaluation is complete. Please consider the comments below.

1) Figure 10
   For locations that have 2 sample dates (i.e., DPT0105), which dataset is included in the tag box?

   *Response: Each sample date is included in the tag box. Multiple sampling dates at the same locations were employed to collect samples from intervals that had not been sampled.*

2) Slide 31 (Figure 18)
   a) According to Figure 13, the TCE result of 3.6 µg/L at DPT0227 is from the 46-50 ft bls interval, not "greater than 56 ft bls". No data is shown for DPT0227 past the 46-50 ft bls interval on Figure 13, so it appears that it should be "gray" on Figure 18.

      *Response: Comment noted; Figure 13 has been updated.*

   b) It is understood that "note #8" on this figure explains that the data shown is from the bottom depth interval for each location. However, consider showing the highest result from the intervals sampled below 56 ft bls. In this case, for a location like DPT0244, which had two depths sampled below 56 ft bls (56-60 ft bls and 66-70 ft bls), the TCE data from the 56-60 ft bls interval would be shown (11 µg/L) and would be part of the 3

µg/L isopleth. Currently, the figure shows the TCE data (0.74 µg/L) for the lowest interval (66-70 ft bls) and is, therefore, not part of the 3 µg/L isopleth.

*Response: Comment noted; the objective of this figure is to show vertical delineation. If the highest detection in this mapping interval is shown, it may give the impression that delineation has not been achieved.*

3) Slide 36 (Figure 23)
It is understood that "note #8" on this figure explains that the data shown is from the bottom depth interval for each location. However, consider showing the highest result from the intervals sampled below 56 ft bls. In this case, for a location like DPT0244, which had two depths sampled below 56 ft bls (56-60 ft bls and 66-70 ft bls), the cDCE data from the 56-60 ft bls interval would be shown (110 µg/L) and would be part of the 70 µg/L isopleth. Currently, the figure shows the cDCE data (7.4 µg/L) for the lowest interval (66-70 ft bls) and is, therefore, not part of the 70 µg/L isopleth.

*Response: See response 2b.*

4) Slide 41 (Figure 28)
It is understood that "note #10" on this figure explains that the data shown is from the bottom depth interval for each location. However, consider showing the highest result from the intervals sampled below 56 ft bls. In this case, for a location like DPT0244, which had two depths sampled below 56 ft bls (56-60 ft bls and 66-70 ft bls), the VC data from the 56-60 ft bls interval would be shown (10 µg/L) and would be part of the 1 µg/L isopleth. Currently, the figure shows the VC data 0.58 µg/L) for the lowest interval (66-70 ft bls) and is, therefore, not part of the 1 µg/L isopleth.

*Response: See response 2b.*

# APPENDIX G

# SUMMARY OF DIRECT-PUSH TECHNOLOGY SAMPLING RESULTS

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0001 | 16 to 20 | 05/09/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 21 to 25 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **11.9** |
| | 26 to 30 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **71.5** |
| | 31 to 35 | | 0.50 U | 0.70 U | 1.3 | 0.50 U | 0.70 U | **141** |
| | 36 to 40 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **37.4** |
| | 41 to 45 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **3.2** |
| | 46 to 50 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| DPT0002 | 16 to 20 | 05/09/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 21 to 25 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 26 to 30 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 31 to 35 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 36 to 40 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 41 to 45 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 46 to 50 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| DPT0003 | 16 to 20 | 05/10/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **12.1** |
| | 21 to 25 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **36.3** |
| | 26 to 30 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **24.3** |
| | 31 to 35 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **6.8** |
| | 36 to 40 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 41 to 45 | 05/09/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| DPT0004 | 21 to 25 | 05/09/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **5.0** |
| | 26 to 30 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **28.2** |
| | 31 to 35 | 05/10/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **35.8** |
| | 36 to 40 | | 0.50 U | 0.70 U | 2.6 | 0.50 U | 0.70 U | **178** |
| | 41 to 45 | | 0.50 U | 0.70 U | 31.3 | 3.7 | 0.70 U | **78.1** |
| | 46 to 50 | 07/26/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| DPT0005 | 21 to 25 | 05/10/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **2.3** |
| | 26 to 30 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **8.7** |
| | 31 to 35 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **48.6** |
| | 36 to 40 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **44.8** |
| | 41 to 45 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **3.2** |
| DPT0006 | 26 to 30 | 05/11/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 31 to 35 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 36 to 40 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 41 to 45 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| DPT0007 | 26 to 30 | 05/11/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 31 to 35 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **40.5** |
| | 36 to 40 | | 0.50 U | 0.70 U | 5.5 | 0.50 U | 0.70 U | **165** |
| | 41 to 45 | | 0.50 U | 0.70 U | 9.6 | 0.50 U | 0.70 U | **150** |
| | 46 to 50 | 07/25/2006 | 0.50 U | 0.70 U | 3.7 | 0.50 U | 0.70 U | **272** |
| | 51 to 55 | | 0.50 U | 0.70 U | 1.7 | 0.50 U | 0.70 U | **29.9** |
| | 56 to 60 | 07/26/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 61 to 65 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| DPT0008 | 26 to 30 | 05/11/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 31 to 35 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 36 to 40 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 41 to 45 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| DPT0009 | 26 to 30 | 07/24/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 31 to 35 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 36 to 40 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 41 to 45 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 46 to 50 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| DPT0010 | 26 to 30 | 07/24/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 31 to 35 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 36 to 40 | | 0.50 U | 0.70 U | 7.9 | 0.50 U | 0.70 U | **11.1** |
| | 41 to 45 | | 0.50 U | 0.70 U | 42.0 | 0.50 U | 0.70 U | **27.9** |
| | 46 to 50 | | 0.50 U | 0.70 U | 9.8 | 0.50 U | 0.70 U | **48.4** |
| | 51 to 55 | 10/04/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.0** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0011 | 26 to 30 | 07/24/2006 | 0.50 U | 0.70 U | 0.92 J | 0.50 U | 0.70 U | 0.80 U |
| | 31 to 35 | | 0.50 U | 0.70 U | 3.3 | 0.50 U | 0.70 U | 0.80 U |
| | 36 to 40 | | 0.50 U | 0.70 U | 18.6 | 0.50 U | 0.70 U | 0.80 U |
| | 41 to 45 | | 0.50 U | 0.70 U | 18.5 | 0.50 U | 0.70 U | **4.4** |
| | 46 to 50 | | 0.50 U | 0.70 U | 31.4 | 0.50 U | 0.70 U | **13.6** |
| | 51 to 55 | 07/25/2006 | 0.50 U | 0.70 U | 9.5 | 0.50 U | 0.70 U | **38.6** |
| | 61 to 65 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| DPT0012 | 31 to 35 | 07/25/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 36 to 40 | | 0.50 U | 0.70 U | 39.2 | 0.50 U | 0.70 U | **16.1** |
| | 41 to 45 | | 0.50 U | 0.70 U | 34.0 | 1.0 | 0.70 U | **22.3** |
| | 46 to 50 | | 0.50 U | 0.70 U | 0.71 J | 0.50 U | 0.70 U | **15.0** |
| | 51 to 55 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| DPT0013 | 31 to 35 | 07/25/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 36 to 40 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 41 to 45 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 46 to 50 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 51 to 55 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| DPT0014 | 31 to 35 | 07/26/2006 | 0.50 U | 0.70 U | 8.2 | 0.50 U | 0.70 U | 0.80 U |
| | 36 to 40 | | 0.50 U | 0.70 U | **80.4** | 0.50 U | 0.70 U | **18.1** |
| | 41 to 45 | | 0.50 U | 0.70 U | 40.4 | 0.50 U | 0.70 U | **19.2** |
| | 46 to 50 | | 0.50 U | 0.70 U | 20.3 | 0.50 U | 0.70 U | **13.6** |
| | 51 to 55 | | 0.50 U | 0.70 U | 3.2 | 0.50 U | 0.70 U | **17.7** |
| | 61 to 65 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **7.1** |
| DPT0015 | 31 to 35 | 07/26/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **8.8** |
| | 36 to 40 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **172** |
| | 41 to 45 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **186** |
| | 46 to 50 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 51 to 55 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| DPT0016 | 31 to 35 | 07/26/2006 | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 36 to 40 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | 0.80 U |
| | 41 to 45 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **6.7** |
| | 46 to 50 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **4.3** |
| | 51 to 55 | | 0.50 U | 0.70 U | 0.70 U | 0.50 U | 0.70 U | **11.2** |
| DPT0017 | 8 to 12 | 06/22/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.7** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **4.0** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.6 | 1.1 | 1.0 U | **210** |
| | 41 to 45 | | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | **42.0** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **11.8** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0018 | 8 to 12 | 06/22/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **3.5** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 5.0 U | 5.0 U | 6.1 | 5.0 U | 5.0 U | **78.0** |
| | 41 to 45 | | 5.0 U | 5.0 U | **300** | 4.2 I | 5.0 U | **270** |
| | 46 to 50 | | 1.0 U | 1.0 U | **120** | 4.0 | 1.0 U | **270** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 | 1.0 U | 1.0 U | 1.0 U |
| DPT0019 | 8 to 12 | 06/22/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 16.1 | 2.0 | 1.0 U | **8.3** |
| | 41 to 45 | | 5.0 U | 5.0 U | 22.0 | 5.0 U | 5.0 U | **7.6** |
| | 46 to 50 | | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | **5.0 U** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0020 | 8 to 12 | 06/23/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | **10 U** | **10 U** | 10 U | 10 U | 10 U | **65.0** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **57.4** |
| | 36 to 40 | | 5.0 U | 5.0 U | **800** | 13.0 | 5.0 U | **540** |
| | 41 to 45 | | 5.0 U | 5.0 U | **380** | 21.0 | 5.0 U | **470** |
| | 46 to 50 | | 1.0 U | 1.0 U | 3.6 | 1.0 U | 1.0 U | **3.3** |
| | 61 to 65 | | 1.0 U | 1.0 U | **140** | 3.4 | 1.0 U | **120** |
| | 71 to 75 | 06/24/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0021 | 8 to 12 | 06/23/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.2 | 1.0 U | 1.0 U | 1.2 |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 33.5 | 2.9 | 1.0 U | **11.7** |
| | 41 to 45 | | 1.0 U | 1.0 U | 47.9 | 3.6 | 1.0 U | **11.8** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.6 | 1.0 U | 1.0 U | **3.2** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.2 | 1.0 U | 1.0 U | 1.0 U |
| DPT0022 | 8 to 12 | 06/23/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **5.8** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **7.8** |
| | 36 to 40 | | 1.0 U | 1.0 U | 2.3 | 1.4 | 1.0 U | **230** |
| | 41 to 45 | 06/24/2009 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | **16.0** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **3.8** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **4.6** |
| | 71 to 75 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 |
| DPT0023 | 8 to 12 | 06/24/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.3 | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | **94.2** | 8.0 | 1.0 U | **11.6** |
| | 41 to 45 | | 1.0 U | 1.0 U | 52.4 | 4.0 | 1.0 U | **15.6** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.7** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0024 | 8 to 12 | 06/24/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.4** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **65.6** |
| | 36 to 40 | | **10 U** | **10 U** | **590** | 10.0 | 10 U | **570** |
| | 41 to 45 | | 5.0 U | 5.0 U | **210** | 17.0 | 5.0 U | **390** |
| | 46 to 50 | | 1.0 U | 1.0 U | 2.3 | 1.0 U | 1.0 U | **1.9** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0025 | 8 to 12 | 06/25/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **11.3** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **12.9** |
| | 36 to 40 | | 1.0 U | 1.0 U | 8.1 | 1.1 | 1.0 U | **67.3** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **4.1** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0026 | 8 to 12 | 06/25/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **24.0** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.7** |
| | 36 to 40 | | 1.0 U | 1.0 U | 42.8 | 3.2 | 1.0 U | **390** |
| | 41 to 45 | | 1.0 U | 1.0 U | 4.2 | 1.1 | 1.0 U | **27.9** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.6** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.9** |
| DPT0027 | 8 to 12 | 06/25/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 5.0 U | 5.0 U | **270** | 38.0 | 5.0 U | **770** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.4 | 20.5 | 1.0 U | **310** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **3.7** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0028 | 8 to 12 | 06/26/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.7** |
| | 26 to 30 | | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | **6.0** |
| | 36 to 40 | | **20 U** | **20 U** | **1,000** | 20 U | **20 U** | **290** |
| | 41 to 45 | | 5.0 U | 5.0 U | **440** | 14.0 | 5.0 U | **430** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **3.2** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0029 | 8 to 12 | 06/26/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.5** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.1** |
| | 36 to 40 | | 1.0 U | 1.0 U | 8.5 | 1.0 U | 1.0 U | **96.6** |
| | 41 to 45 | | 1.0 U | 1.0 U | 6.3 | 1.0 U | 1.0 U | **58.2** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.2** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0030 | 8 to 12 | 06/26/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.2 | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 12.6 | 2.1 | 1.0 U | **4.2** |
| | 41 to 45 | | 1.0 U | 1.0 U | 26.0 | 3.5 | 1.0 U | **5.3** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0031 | 8 to 12 | 07/16/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **32.3** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.4 |
| | 36 to 40 | | 1.0 U | 1.0 U | 67.9 | 2.9 | 1.0 U | **340** |
| | 41 to 45 | | 1.0 U | 1.0 U | **83.8** | 7.3 | 1.0 U | **200** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.5 | 1.0 U | 1.0 U | **9.3** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0032 | 8 to 12 | 07/16/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.6** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 5.9 | 1.0 U | 1.0 U | **38.1** |
| | 41 to 45 | | 1.0 U | 1.0 U | 12.3 | 1.0 | 1.0 U | **23.1** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **5.4** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0033 | 8 to 12 | 07/16/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.4 | **2.1** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.9 | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 23.4 | 1.0 U | 1.0 U | **190** |
| | 41 to 45 | | 5.0 U | 5.0 U | **780** | 72.0 | **18.0** | **360** |
| | 46 to 50 | | 1.0 U | 1.0 U | 13.7 | 2.3 | 1.0 U | **120** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0034 | 8 to 12 | 07/17/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.2 | 1.0 U | 1.0 U | **4.8** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 34 to 38 | | 1.0 U | 1.0 U | **99.2** | 1.7 | 1.0 U | **22.8** |
| | 41 to 45 | | 2.0 U | 2.0 U | **140** | 2.8 | 2.0 U | **21.0** |
| | 46 to 50 | | 1.0 U | 1.0 U | 18.5 | 1.0 U | 1.0 U | **15.6** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0035 | 8 to 12 | 07/17/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **6.3** |
| | 36 to 40 | | 1.0 U | 1.0 U | 9.6 | 1.0 U | 1.0 U | **69.8** |
| | 41 to 45 | | 1.0 U | 2.0 U | 5.2 | 1.0 U | 1.0 U | **13.8** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.6** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0036 | 8 to 12 | 07/17/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 19.2 | 1.0 U | 1.0 U | **130** |
| | 36 to 40 | | **100 U** | **100 U** | **2,100** | **280** | **100 U** | **910** |
| | 41 to 45 | | 2.0 U | 2.0 U | **130** | 19.0 | 2.0 U | **110** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0037 | 8 to 12 | 08/04/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.8** |
| | 24 to 28 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.6** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0038 | 8 to 12 | 08/04/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 6.0 | 1.0 U | 1.0 U | **11.4** |
| | 36 to 40 | | 1.0 U | 1.0 U | 19.3 | 3.7 | 1.0 U | **17.7** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0039 | 8 to 12 | 08/04/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | 08/05/2009 | 1.0 U | 1.0 U | 1.3 | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 48.2 | 1.5 | 1.0 U | **88.5** |
| | 36 to 40 | | 5.0 U | 5.0 U | **730** | **290** | 5.3 | **1,200** |
| | 41 to 45 | | 1.0 U | 1.0 U | 2.0 | 1.0 U | 1.0 U | **7.3** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0040 | 8 to 12 | 08/05/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | **130** |
| | 36 to 40 | | 1.0 U | 1.0 U | 2.3 | 5.5 | 1.0 U | **290** |
| | 41 to 45 | | 1.0 U | 1.0 U | 2.1 | 8.2 | 1.0 U | **460** |
| | 46 to 50 | 08/06/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0041 | 8 to 12 | 08/06/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.6** |
| | 36 to 40 | | 1.0 U | 1.0 U | 7.6 | 1.0 U | 1.0 U | **60.8** |
| | 41 to 45 | | 1.0 U | 1.0 U | 15.1 | 1.0 U | 1.0 U | **99.1** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.7** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0042 | 8 to 12 | 08/06/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **18.7** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **45.2** |
| | 36 to 40 | | 2.0 U | 2.0 U | **120** | 2.7 | 2.0 U | **570** |
| | 41 to 45 | | 1.0 U | 1.0 U | **290** | 15.4 | 1.7 | **430** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.9 | 1.0 U | 1.0 U | **21.2** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0043 | 8 to 12 | 08/06/2009 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 2.0 | 3.7 | 1.0 U | **29.3** |
| | 36 to 40 | | **10 U** | **10 U** | 28.0 | 47.0 | 10 U | **600** |
| | 41 to 45 | | 1.0 U | 1.0 U | 3.0 | 1.0 U | 1.0 U | **4.7** |
| | 46 to 50 | | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0044 | 31 to 35 | 08/06/2009 | 1.0 U | 1.0 U | 9.6 | 1.0 U | 1.0 U | **2.3** |
| | 36 to 40 | | 1.0 U | 1.0 U | 20.8 | 1.0 U | 1.0 U | **3.9** |
| | 41 to 45 | | 5.0 U | 5.0 U | **79.0** | 5.0 U | 5.0 U | **17.0** |
| | 46 to 50 | | 2.0 U | 2.0 U | 13.0 | 2.0 U | 2.0 U | **34.0** |
| | 56 to 60 | 10/04/2012 | 1.0 U | 1.0 U | 51.7 | 1.0 U | 1.0 U | **28.3** |
| | 66 to 70 | 10/5/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0045 | 8 to 12 | 01/25/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 2.0 | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 13.6 | 1.6 | 1.0 U | **5.0** |
| | 42 to 46 | | **5.1** | 1.0 U | 19.0 | 1.6 | 1.0 U | **5.5** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0046 | 8 to 12 | 01/25/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 6.7 | 1.8 | 1.0 U | **10.0** |
| | 41 to 45 | | 1.0 U | 1.0 U | 9.5 | 3.4 | 1.0 U | **4.4** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0047 | 8 to 12 | 01/25/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 4.0 | 1.0 U | 1.0 U | **12.2** |
| | 36 to 40 | | 1.0 U | 1.0 U | 21.2 | 5.1 | 1.0 U | **28.1** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.8 | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0048 | 8 to 12 | 01/26/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 3.5 | 4.9 | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 2.6 | 1.0 U | **14.4** | **2.4** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0049 | 26 to 30 | 01/26/2010 | 1.0 U | 1.0 U | 1.9 | 17.9 | 1.0 U | **3.8** |
| | 36 to 40 | | 1.0 U | 1.0 U | 3.1 | 1.0 U | 1.0 U | **3.4** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0050 | 8 to 12 | 01/26/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **62.1** |
| | 36 to 40 | | 1.0 U | 1.0 U | 6.5 | 39.1 | 1.0 U | **1,100 L** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.2 | 1.0 U | 1.0 U | **3.3** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0051 | 26 to 30 | 01/26/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **7.8** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **20.3** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | 01/27/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0052 | 26 to 30 | 01/27/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **130 L** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **100** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **40.5** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0053 | 26 to 30 | 01/27/2010 | 1.0 U | 1.0 U | 2.3 | 1.0 U | 1.0 U | **90.9** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.4** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0054 | 26 to 30 | 01/27/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0055 | 26 to 30 | 01/27/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **4.0** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 | 1.0 U | 1.0 U | **150 L** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **38.5** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **12.7** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0056 | 8 to 12 | 01/28/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 7.6 | 1.0 U | 1.0 U | **7.3** |
| | 41 to 45 | | 1.0 U | 1.0 U | 8.4 | 2.1 | 1.0 U | **25.1** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.4 |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0057 | 26 to 30 | 01/28/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.5 | 1.0 U | 1.0 U | **280** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **71.4** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **15.7** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0058 | 26 to 30 | 01/28/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0059 | 26 to 30 | 01/28/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0060 | 26 to 30 | 01/28/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | **140** | 3.8 | 1.0 U | **22.3** |
| | 41 to 45 | | 5.0 U | 5.0 U | **120** | 12.0 | 5.0 U | **130** |
| DPT0061 | 26 to 30 | 01/29/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 57.3 | 1.0 U | 1.0 U | **7.9** |
| | 41 to 45 | | 1.0 U | 1.0 U | 3.4 | 1.0 U | 1.0 U | **4.4** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.3 | 1.0 U | 1.0 U | **7.3** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0062 | 8 to 12 | 01/29/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 2.8 | 1.0 U | 1.0 U | **7.6** |
| | 36 to 40 | | 1.0 U | 1.0 U | 45.1 | 4.8 | 1.0 U | **3.8** |
| | 41 to 45 | | 1.0 U | 1.0 U | 50.5 | 4.9 | 1.0 U | **13.8** |
| | 46 to 50 | | 1.0 U | 1.0 U | 3.7 | 1.0 U | 1.0 U | **3.3** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0063 | 26 to 30 | 01/29/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.3 |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **12.7** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.9 | 1.0 U | 1.0 U | **5.7** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0064 | 26 to 30 | 02/01/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.1 | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 2.9 | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 4.6 | 1.0 U | 1.0 U | 1.4 |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0065 | 26 to 30 | 02/01/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.2 |
| | 36 to 40 | | 1.0 U | 1.0 U | **110** | 1.0 U | 1.0 U | **55.7** |
| | 41 to 45 | | 1.0 U | 1.0 U | **86.6** | 1.0 U | 1.0 U | **36.9** |
| | 46 to 50 | | 1.0 U | 1.0 U | 32.1 | 1.2 | 1.0 U | **34.5** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0066 | 26 to 30 | 02/01/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **120** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **220** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **110** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **10.3** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0067 | 8 to 12 | 02/01/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 3.3 | 9.3 | 1.0 U | **420** |
| | 41 to 45 | | 1.0 U | 1.0 U | 10.5 | 9.0 | 1.0 U | **200** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **5.3** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0068 | 26 to 30 | 02/02/2010 | 1.0 U | 1.0 U | 2.6 | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 4.4 | 1.0 U | 1.0 U | **6.1** |
| | 41 to 45 | | 1.0 U | 1.0 U | 2.3 | 1.0 U | 1.0 U | **13.3** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **5.2** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0069 | 8 to 12 | 02/02/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.8 | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **3.8** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **3.4** |
| | 36 to 40 | | 1.0 U | 1.0 U | 7.5 | 1.0 U | 1.0 U | **82.2** |
| | 41 to 45 | | 1.0 U | 1.0 U | 14.8 | 1.0 U | 1.0 U | **110 L** |
| | 46 to 50 | | 1.0 U | 1.0 U | 3.8 | 1.0 U | 1.0 U | **31.6** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0070 | 26 to 30 | 02/02/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 2.9 | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **15.6** | **5.4** |
| | 41 to 45 | | **10 U** | **10 U** | 10 U | 10 U | **26.0** | **37.0** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0071 | 26 to 30 | 02/02/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.4 | 3.1 | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 2.7 | 1.0 U | 1.0 U | **14.6** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0072 | 8 to 12 | 02/03/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.2 |
| | 36 to 40 | | **1,000 U** | **160,000** | **48,000** | **1,000 U** | **1,000 U** | **4,600** |
| | 41 to 45 | | **20 U** | **1,300** | **570** | 20 U | **20 U** | **54.0** |
| | 46 to 50 | | 1.0 U | **24.0** | 4.7 | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 5.0 U | **210** | **100** | 5.0 U | 5.0 U | **4.0 J** |
| | 61 to 65 | | 1.0 U | **43.8** | 15.8 | 1.0 U | 1.0 U | 1.0 U |
| DPT0073 | 8 to 12 | 02/03/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.0** |
| | 36 to 40 | | 1.0 U | 1.6 | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0074 | 8 to 12 | 02/03/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | **500 U** | **8,100** | **18,000** | **500 U** | **500 U** | **7,200** |
| | 41 to 45 | | **100 U** | **2,900** | **4,000** | 100 U | **100 U** | **1,300** |
| | 46 to 50 | | 1.0 U | **4.2** | 3.6 | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 2.5 | 2.9 | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.7 | 2.0 | 1.0 U | 1.0 U | 1.0 U |
| DPT0075 | 16 to 20 | 02/22/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0076 | 16 to 20 | 02/22/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0077 | 16 to 20 | 02/22/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0078 | 16 to 20 | 02/22/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | 02/23/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **9.0** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **5.3** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **4.7** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0079 | 16 to 20 | 02/23/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 6.7 | 1.0 U | 1.0 U | **3.2** |
| | 36 to 40 | | 1.0 U | 1.0 U | **140** | 1.2 | 1.0 U | **71.9** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.9** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0080 | 16 to 20 | 02/23/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 9.0 | 5.4 | 1.0 U | **1,400** |
| | 41 to 45 | | 1.0 U | 1.0 U | 21.6 | 15.2 | 1.0 U | **2,800** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **75.8** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.0** |
| DPT0081 | 26 to 30 | 02/23/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0082 | 8 to 12 | 02/24/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.2** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0083 | 8 to 12 | 02/24/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0084 | 8 to 12 | 02/24/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0085 | 8 to 12 | 02/25/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.3 |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0086 | 8 to 12 | 02/25/2010 | **100 U** | **100 U** | **1,000** | 100 U | **100 U** | **560** |
| | 12 to 16 | | **100 U** | **100 U** | **3,300** | 100 U | **100 U** | **620** |
| | 16 to 20 | | **50 U** | **50 U** | **5,100** | 56.0 | **50 U** | **680** |
| | 21 to 25 | | **20 U** | **20 U** | **770** | 20 U | **20 U** | **480** |
| | 26 to 30 | | 5.0 U | 5.0 U | **96.0** | 5.0 U | 5.0 U | **55.0** |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.4 | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.1 | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0087 | 8 to 12 | 02/25/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **65.2** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0088 | 8 to 12 | 02/25/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | 02/26/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **16.8** |
| | 36 to 40 | | **500 U** | **6,000** | **14,000** | **500 U** | **500 U** | **13,000** |
| | 41 to 45 | | **200 U** | **4,800** | **4,200** | 200 U | **200 U** | **1,500** |
| | 46 to 50 | | 1.0 U | 1.3 | 1.3 | 1.0 U | 1.0 U | 1.0 U |
| DPT0089 | 8 to 12 | 02/26/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.3 | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 7.8 | 1.0 U | 1.0 U | **180** |
| | 41 to 45 | | **200 U** | **520** | **6,200** | 200 U | **200 U** | **4,800** |
| | 46 to 50 | | 1.0 U | 1.1 | 15.7 | 1.2 | 1.0 U | **37.1** |
| | 56 to 60 | 10/16/2012 | 1.0 U | 1.0 U | 4.7 | 1.0 U | 1.0 U | **2.0** |
| DPT0090 | 8 to 12 | 02/26/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 2.2 | 1.0 U | **7.5** |
| | 46 to 50 | 02/26/2010 | 1.0 U | 1.0 U | 1.0 U | 1.4 | 1.0 U | **3.0** |
| DPT0091 | 8 to 12 | 03/01/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.1 | 1.0 U | **100** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **11.2** |
| DPT0092 | 8 to 12 | 03/01/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **4.3** |
| | 12 to 16 | | **50 U** | **50 U** | **2,400** | 74.0 | **50 U** | **1,200** |
| | 16 to 20 | | **1,000 U** | **3,000** | **22,000** | **900 I** | **1,000 U** | **2,600** |
| | 26 to 30 | | 5.0 U | 5.0 U | **130** | 18.0 | 5.0 U | **540** |
| | 31 to 35 | | **200 U** | **3,800** | **5,100** | 200 U | **200 U** | **1,000** |
| | 36 to 40 | | **100 U** | **4,900** | **3,600** | 100 U | **100 U** | **970** |
| | 41 to 45 | | 1.0 U | 2.3 | 2.8 | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0093 | 8 to 12 | 03/01/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.7** |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0094 | 8 to 12 | 03/01/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | 03/02/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | **4.7** | 22.8 | 2.0 | 1.0 U | **33.2** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0095 | 8 to 12 | 03/02/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.6** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **13.3** |
| DPT0096 | 8 to 12 | 03/02/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 5.0 U | 5.0 U | **93.0** | 5.0 | 5.0 U | **510** |
| | 26 to 30 | | **2,000 U** | **2,000 U** | **34,000** | **2,000 U** | **2,000 U** | **7,700** |
| | 31 to 35 | | **500 U** | **500 U** | **14,000** | **500 U** | **500 U** | **12,000** |
| | 36 to 40 | | 1.0 U | 1.0 U | 12.1 | 1.0 U | 1.0 U | **490** |
| | 41 to 45 | | 1.0 U | 1.0 U | 3.8 | 1.0 U | 1.0 U | **1.5** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.6 | 1.0 U | 1.0 U | 1.0 U |
| DPT0097 | 8 to 12 | 06/14/2010 | 1.0 U | 1.0 U | 28.8 | 1.0 U | 1.0 U | **160** |
| | 12 to 16 | | **20 U** | 5.8 U,I | **3,100** | 72.0 | **20 U** | **1,500** |
| | 16 to 20 | | **200 U** | **58 U,I** | **16,000** | **520** | **200 U** | **1,000** |
| | 21 to 25 | | **1,000 U** | **3,800** | **52,000** | **2,100** | **1,000 U** | **1,500** |
| | 26 to 30 | | **100 U** | **29 U,I** | **3,200** | **110** | **100 U** | **1,400** |
| | 31 to 35 | | 5.0 U | 1.4 U,I | 4.6 I | 5.0 U | 5.0 U | **1.6 I** |
| | 36 to 40 | | 1.0 U | 1.0 U | 8.9 | 1.0 U | 1.0 U | **1.6** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.4 | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 8.6 | 1.0 U | 1.0 U | 1.0 U |
| DPT0098 | 8 to 12 | 06/14/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 2.0 U | 1.0 U,I | 2.0 U | 2.0 U | 2.0 U | **7.6** |
| | 31 to 35 | | **100 U** | **580** | **1,000** | **120** | **100 U** | **320** |
| | 36 to 40 | | **2,000 U** | **36,000** | **49,000** | **700 I** | **2,000 U** | **13,000** |
| | 41 to 45 | | **20 U** | **23.0** | **220** | 5.4 I | **20 U** | **64.0** |
| | 46 to 50 | | **10 U** | **16.0** | 19.0 | 10 U | 10 U | **6.4 I** |
| DPT0099 | 8 to 12 | 06/14/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | 06/15/2010 | 1.0 U | 1.0 U | 1.0 | 1.0 U | 1.0 U | 1.0 U |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 5.0 U | 1.4 U,I | 32.0 | 8.8 | 5.0 U | **180** |
| | 31 to 35 | | **200 U** | **200 U** | **6,500** | 82 I | **200 U** | **13,000** |
| | 36 to 40 | | **10 U** | 2.9 U,I | **370** | 11.0 | 10 U | **4,900** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.5 | 1.0 U | 1.0 U | **1.9** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.2 | 1.0 U | 1.0 U | **2.6** |
| DPT0100 | 8 to 12 | 06/15/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | **1,000 U** | **21,000** | **31,000** | **620 I** | **1,000 U** | **7,400** |
| | 36 to 40 | | **2,000 U** | **32,000** | **59,000** | **780 I** | **2,000 U** | **17,000** |
| | 41 to 45 | | 5.0 U | **210** | **380** | 6.6 | 5.0 U | **72.0** |
| | 46 to 50 | | 1.0 U | **19.5** | 28.0 | 1.0 U | 1.0 U | **5.4** |
| DPT0101 | 8 to 12 | 06/15/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.1 | 1.0 U | 1.0 U | **1.6** |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 | 1.0 U | 1.0 U | **8.8** |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **30.1** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **260** |
| | 31 to 35 | | **10 U** | 2.9 U,I | 10 U | 10 U | 10 U | **120** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **12.1** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **3.0** |
| DPT0102 | 8 to 12 | 06/16/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0103 | 8 to 12 | 06/16/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 2.0 U | 1.0 U,I | 2.0 U | 2.0 U | 2.0 U | **13.0** |
| | 36 to 40 | | **200 U** | **2,900** | **8,700** | **160 I** | **200 U** | **4,000** |
| | 41 to 45 | | **100 U** | **1,300** | **2,200** | 57 I | **100 U** | **690** |
| | 46 to 50 | | 5.0 U | 2.4 I | 3.0 I | 5.0 U | 5.0 U | 1.2 U,I |
| DPT0104 | 8 to 12 | 06/16/2010 | 5.0 U | 1.4 U,I | 5.0 U | 5.0 U | 5.0 U | 1.2 U,I |
| | 12 to 16 | | 5.0 U | 1.4 U,I | 5.0 U | 5.0 U | 5.0 U | 1.2 U,I |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.8 | 1.0 U | **530** |
| | 41 to 45 | 06/17/2010 | **10 U** | 2.8 U,I | 61.0 | 10 U | 10 U | **790** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.6** |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0105 | 8 to 12 | 06/17/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.4 |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0106 | 8 to 12 | 06/17/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0107 | 8 to 12 | 06/18/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **21.8** |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **15.8** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **3.9** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.5** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0108 | 8 to 12 | 06/18/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0109 | 8 to 12 | 06/21/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0110 | 31 to 35 | 06/21/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0111 | 8 to 12 | 06/21/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0112 | 8 to 12 | 06/21/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0113 | 8 to 12 | 06/22/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.9** |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **6.8** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **3.8** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.4** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0114 | 8 to 12 | 06/22/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **3.6** |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.9** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0115 | 8 to 12 | 06/22/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0116 | 8 to 12 | 08/02/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | **18 U,I** | **26 U,I** | 28 U,I | 100 U | **100 U** | **21 U,I** |
| | 26 to 30 | | **18 U,I** | **26 U,I** | 28 U,I | 100 U | **100 U** | **21 U,I** |
| | 31 to 35 | | **9.0 U,I** | **13 U,I** | 14 U,I | 50 U | **50 U** | **11 U,I** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0117 | 8 to 12 | 08/02/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | **11 U,I** | **6.6 U,I** | 8.0 U,I | 20 U | **20 U** | **6.4 U,I** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **4.7** |
| DPT0118 | 8 to 12 | 08/02/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 2.6 U,I | 1.7 U,I | 2.0 U,I | 5.0 U | 5.0 U | 1.6 U,I |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0119 | 8 to 12 | 08/03/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.5** |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.4 | 1.0 U | 1.0 U | **3.4** |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.2 | 1.0 U | 1.0 U | **4.9** |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **12.6** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **37.1** |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **180** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **8.7** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0120 | 8 to 12 | 08/03/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 5.2 U,I | 3.3 U,I | **170** | 10 U | 10 U | **400** |
| | 21 to 25 | | **52 U,I** | **33 U,I** | **9,300** | **230** | **100 U** | **4,100** |
| | 26 to 30 | | 1.1 U,I | 1.0 U,I | 20.0 | 2.0 U | 2.0 U | **190** |
| | 31 to 35 | | 1.0 U | 1.0 U | 3.9 | 1.0 U | 1.0 U | **1.5** |
| | 36 to 40 | | 1.0 U | 1.0 U | 12.1 | 1.0 U | 1.0 U | **1.8** |
| | 41 to 45 | | 1.0 U | 1.0 U | 14.0 | 1.0 U | 1.0 U | **3.0** |
| | 46 to 50 | | 1.0 U | 1.0 U | 29.0 | 1.0 U | 1.0 U | **5.6** |
| DPT0121 | 8 to 12 | 08/03/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | 08/04/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | **52 U,I** | **33 U,I** | **6,400** | 100 U | **100 U** | **4,900** |
| | 41 to 45 | | **26 U,I** | **1,700** | **4,900** | 66.0 | **50 U** | **1,200** |
| | 46 to 50 | | 1.0 U | **8.3** | **72.6** | 1.0 U | 1.0 U | **28.0** |
| DPT0122 | 8 to 12 | 08/04/2010 | 1.0 U | 1.0 U | 1.2 | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | **52 U,I** | **120** | **6,400** | 100 U | **100 U** | **2,900** |
| | 41 to 45 | | **52 U,I** | **2,700** | **6,800** | **110** | **100 U** | **1,600** |
| | 46 to 50 | | 1.0 U | 3.1 | 14.5 | 1.0 U | 1.0 U | **2.6** |
| DPT0123 | 8 to 12 | 08/04/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | 08/05/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0124 | 8 to 12 | 08/05/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | **87.2** | 1.9 | 1.0 U | **37.8** |
| | 16 to 20 | | 1.0 U | 1.0 U | **3,600** | 6.6 | 1.0 U | **560** |
| | 21 to 25 | | **26 U,I** | **17 U,I** | **4,500** | 50 U | **50 U** | **3,000** |
| | 26 to 30 | | 1.0 U | 1.0 U | 2.9 | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.1 | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 2.6 U,I | 1.7 U,I | **360** | 8.5 | 5.0 U | **290** |
| | 41 to 45 | | 1.0 U | 1.0 U | 2.2 | 1.0 U | 1.0 U | 1.2 |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0125 | 8 to 12 | 08/05/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.1** |
| | 41 to 45 | | **11 U,I** | **6.6 U,I** | **1,300** | 24.0 | **20 U** | **1,700** |
| | 46 to 50 | | 1.0 U | 1.0 U | 7.0 | 1.7 | 1.0 U | **35.8** |
| | 56 to 60 | 10/16/2012 | 1.0 U | 1.0 U | 5.1 | 1.0 U | 1.0 U | 1.0 U |
| DPT0126 | 8 to 12 | 08/05/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 2.1 | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | 08/06/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0127 | 31 to 35 | 08/06/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.7** |
| | 41 to 45 | | **52 U,I** | **2,400** | **2,700** | **120** | **100 U** | **320** |
| | 46 to 50 | | 2.6 U,I | **66.0** | **210** | 6.2 | 5.0 U | **15.0** |
| | 56 to 60 | 10/05/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0128 | 31 to 35 | 08/06/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **3.1** |
| DPT0129 | 8 to 12 | 08/06/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | **52 U,I** | **33 U,I** | **5,900** | **110** | **100 U** | **3,000** |
| | 46 to 50 | | 5.2 U,I | **110** | **790** | 22.0 | 10 U | **250** |
| DPT0130 | 31 to 35 | 08/06/2010 | 1.0 U | 1.0 U | 1.4 | 1.4 | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 10.5 | 1.0 U | **770** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.6 | 3.6 | 1.0 U | **170** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.2 | 1.0 U | 1.0 U | **3.6** |
| DPT0131 | 31 to 35 | 08/09/2010 | **11 U,I** | **6.6 U,I** | **940** | 65.0 | **20 U** | **1,600** |
| | 36 to 40 | | **26 U,I** | **17 U,I** | **2,200** | 71.0 | **50 U** | **760** |
| | 41 to 45 | | **26 U,I** | **220** | **3,000** | 84.0 | **50 U** | **320** |
| | 46 to 50 | | **52 U,I** | **630** | **2,200** | 100 U | **100 U** | **370** |
| | 61 to 65 | 08/10/2010 | 1.0 U | 1.9 | 14.6 | 1.0 U | 1.0 U | **2.5** |
| DPT0132 | 8 to 12 | 08/09/2010 | 1.0 U | 1.0 U | 1.4 | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 22 to 26 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.0** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0133 | 8 to 12 | 08/09/2010 | 1.6 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | **11 U,I** | **6.6 U,I** | **710** | 13 I | **20 U** | **400** |
| | 21 to 25 | | **260 U,I** | **170 U,I** | **27,000** | **610** | **500 U** | **1,700** |
| | 26 to 30 | | **110 U,I** | **66 U,I** | **15,000** | **210** | **200 U** | **910** |
| | 31 to 35 | | **11 U,I** | **6.6 U,I** | **1,100** | 15 I | **20 U** | **580** |
| | 36 to 40 | | **26 U,I** | **50.0** | **2,800** | 38 I | **50 U** | **790** |
| | 41 to 45 | | 1.0 U | 1.0 U | 12.9 | 1.0 U | 1.0 U | **4.0** |
| | 46 to 50 | | 1.0 U | 1.0 U | 3.7 | 1.0 U | 1.0 U | 1.0 U |
| DPT0134 | 8 to 12 | 08/09/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | 08/10/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | **11 U,I** | **94.0** | **500** | 73.0 | **20 U** | **200** |
| | 36 to 40 | | **2,600 U,I** | **100,000** | **39,000** | **5,000 U** | **5,000 U** | **4,200 I** |
| | 41 to 45 | | **26 U,I** | **1,500** | **1,500** | 43 I | **50 U** | **200** |
| | 46 to 50 | | 1.0 U | **46.4** | 12.5 | 1.0 U | 1.0 U | 1.0 U |
| DPT0135 | 8 to 12 | 08/10/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 3.0 | 1.0 U | 1.0 U | **7.8** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 73.6 | 1.0 U | **2,500 L** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 3.5 | 1.0 U | **72.4** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.3 | 1.0 U | 1.0 U | **3.7** |
| DPT0136 | 31 to 35 | 08/10/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.7** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.8 | 1.0 U | 1.0 U | **5.8** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.1** |
| | 46 to 50 | | **11 U,I** | **110** | **930** | 31.0 | **20 U** | **78.0** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0137 | 31 to 35 | 08/10/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0138 | 8 to 12 | 08/11/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **4.9** |
| | 41 to 45 | | 1.0 U | 1.0 U | 2.4 | 1.0 U | 1.0 U | **41.8** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.7 | 1.0 U | 1.0 U | **9.2** |
| | 51 to 55 | 10/04/2012 | 1.0 U | 1.0 U | 1.5 | 1.0 U | 1.0 U | **5.0** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0139 | 8 to 12 | 08/11/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 5.2 U,I | 3.3 U,I | **600** | 34.0 | 10 U | **850** |
| | 41 to 45 | | **52 U,I** | **500** | **7,200** | **190** | **100 U** | **1,700** |
| | 46 to 50 | | **110 U,I** | **3,400** | **6,100** | **180 I** | **200 U** | **910** |
| | 51 to 55 | 10/12/2010 | **26 U,I** | **1,200** | **1,600** | 88.0 | **15 U,I** | **350** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0140 | 8 to 12 | 08/11/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0141 | 8 to 12 | 10/11/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0142 | 8 to 12 | 10/11/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0143 | 26 to 30 | 10/11/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.9** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.9** |
| DPT0144 | 8 to 12 | 10/11/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | 10/12/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.5** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.4 | 1.0 U | **30.4** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **7.3** |
| | 51 to 55 | | 1.0 U | 1.0 U | 3.4 | 1.0 U | 1.0 U | **2.0** |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0145 | 8 to 12 | 10/12/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.6 | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.6 | 3.9 | 1.0 U | **150** |
| | 51 to 55 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0146 | 26 to 30 | 10/12/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.5** |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.1 |
| | 36 to 40 | | 1.0 U | 1.0 U | 7.1 | 4.3 | 1.0 U | **18.4** |
| | 41 to 45 | | **26 U,I** | **2,500** | **1,900** | 100 | **15 U,I** | **330** |
| | 46 to 50 | | 1.0 U | 1.8 | 55.4 | 3.0 | 1.0 U | **40.4** |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0147 | 26 to 30 | 10/13/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0148 | 8 to 12 | 10/13/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 2.9 | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 8.6 | 7.6 | 1.0 U | **470** |
| | 46 to 50 | | **10 U,I** | **6.6 U,I** | **260** | 11 I | 6.0 U,I | **720** |
| | 51 to 55 | 10/04/2012 | **20 U** | **20 U** | **750** | 13 I | **20 U** | **370** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0149 | 8 to 12 | 10/13/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **100** |
| | 36 to 40 | | 1.0 U | 1.0 U | 3.8 | 10.9 | 1.0 U | **2,300** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.2 | 1.0 U | 1.0 U | **310** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **130** |
| | 56 to 60 | 10/03/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0150 | 26 to 30 | 10/13/2010 | 1.0 U | 1.0 U | 7.9 | 1.0 U | 1.0 U | **2.9** |
| | 31 to 35 | 10/14/2010 | 1.0 U | 1.0 U | 20.1 | 1.0 U | 1.0 U | **11.3** |
| | 36 to 40 | | 1.0 U | 1.0 U | 14.4 | 1.0 U | 1.0 U | **15.2** |
| | 41 to 45 | | 1.0 U | 1.0 U | 21.5 | 1.0 U | 1.0 U | **22.6** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 51 to 55 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0151 | 26 to 30 | 10/14/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.3 |
| | 36 to 40 | | 2.6 U,I | **5.2** | **220** | 11.0 | 1.5 U,I | **280** |
| | 41 to 45 | | 1.0 U | 1.0 U | 6.7 | 1.0 U | 1.0 U | **30.4** |
| | 46 to 50 | | 1.0 U | 1.0 U | 7.2 | 1.6 | 1.0 U | **37.3** |
| | 51 to 55 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0152 | 8 to 12 | 10/14/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.9** |
| | 41 to 45 | | 2.6 U,I | **4.0 I** | **300** | 17.0 | 1.5 U,I | **360** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0153 | 26 to 30 | 10/14/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | 10/15/2010 | 1.0 U | 1.0 U | 1.2 | 1.0 U | 1.0 U | **42.4** |
| | 36 to 40 | | 5.2 U,I | 3.3 U,I | **86.0** | 8.6 I | 3.0 U,I | **460** |
| | 41 to 45 | | 1.0 U | 1.2 | 48.4 | 1.4 | 1.0 U | **28.5** |
| | 46 to 50 | | **10 U,I** | **6.6 U,I** | **550** | 16 I | 6.0 U,I | **170** |
| | 51 to 55 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **3.2** |
| DPT0154 | 8 to 12 | 10/15/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 6.5 | 1.0 U | 1.0 U | 1.2 |
| | 36 to 40 | | 1.0 U | 1.0 U | 6.4 | 1.0 U | 1.0 U | **3.3** |
| | 41 to 45 | | 1.0 U | 1.0 U | 2.7 | 1.0 U | 1.0 U | **21.6** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0155 | 8 to 12 | 10/15/2010 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **9.8** |
| | 31 to 35 | | 1.0 U | 1.0 U | 2.5 | 1.0 U | 1.0 U | **42.3** |
| | 36 to 40 | | 1.0 U | 1.0 U | 12.0 | 1.0 U | 1.0 U | **110** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.4 | 1.0 U | 1.0 U | **79.4** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **12.0** |
| | 56 to 60 | 10/05/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.5** |
| DPT0156 | 26 to 30 | 10/19/2011 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.2 | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 2 | 1.0 U | 5.9 | **12.3** |
| DPT0157 | 26 to 30 | 10/19/2011 | 1.0 U | 1.0 U | 1.3 | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 3.7 | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 3.3 | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 3.0 | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0158 | 26 to 30 | 10/19/2011 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 3.3 | 1.0 U | 1.0 U | **110** |
| | 41 to 45 | | 1.0 U | 1.0 U | 6.2 | 2.2 | 1.0 U | **210** |
| | 46 to 50 | | 1.0 U | 1.0 U | 14.4 | 1.1 | 1.0 U | **59.9** |
| | 51 to 55 | 10/4/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.5** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.1 |
| DPT0159 | 8 to 12 | 02/07/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.2 | 1.0 U | 1.0 U | **16.8** |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **53.6** |
| | 26 to 30 | 10/19/2011 | 1.0 U | 1.0 U | 4.8 | 1.0 U | 1.0 U | **120** |
| | 31 to 35 | | 5.0 U | 5.0 U | **140** | 5.0 U | 5.0 U | **49** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0160 | 26 to 30 | 10/20/2011 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0161 | 8 to 12 | 02/07/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | 10/20/2011 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **110** |
| | 31 to 35 | | 1.0 U | 1.0 U | 3.6 | 4.4 | 1.0 U | **1,100** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.2** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0162 | 26 to 30 | 10/20/2011 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.2 |
| | 31 to 35 | | **5.0 U** | 1.5 I | **83** | 4.2 I | 5.0 U | **160** |
| | 36 to 40 | | 1.0 U | 1.0 U | 4.4 | 1.0 U | 1.0 U | **14** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 51 to 55 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0163 | 26 to 30 | 10/20/2011 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.2** |
| DPT0164 | 26 to 30 | 10/21/2011 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 51 to 55 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0165 | 26 to 30 | 10/21/2011 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.6** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0166 | 26 to 30 | 01/09/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0167 | 8 to 12 | 02/07/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | 01/09/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0168 | 26 to 30 | 01/09/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0169 | 26 to 30 | 01/09/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 5 | 1.0 U | 1.0 U | 1.2 |
| | 36 to 40 | | 1.0 U | 1.0 U | 32.2 | 1.0 U | 1.0 U | **17.6** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0170 | 26 to 30 | 01/10/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0171 | 26 to 30 | 01/10/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **6.7** |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **18.3** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.6 | 1.0 U | 1.0 U | **52.6** |
| | 41 to 45 | | 1.0 U | 1.0 U | 2.5 | 1.0 U | 1.0 U | **50.7** |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **7.0** |
| | 56 to 60 | 10/5/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0172 | 26 to 30 | 01/10/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 2.1 | 1.0 U | 1.0 U | **48.2** |
| | 36 to 40 | | 1.0 U | 1.0 U | 4.0 | 1.0 U | 1.0 U | **27.7** |
| | 41 to 45 | | 1.0 U | 1.0 U | 4.3 | 1.0 U | 1.0 U | **13.5** |
| | 46 to 50 | | 1.0 U | 1.0 U | **84.4** | 2.2 | 1.0 U | **27.0** |
| | 51 to 55 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0173 | 26 to 30 | 01/10/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | 01/11/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 51 to 55 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 61 to 65 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0174 | 26 to 30 | 01/11/2012 | 1.0 U | 1.0 U | 1.0 U | 2.4 | 1.0 U | 1.4 |
| | 31 to 35 | | **10 U** | **22** | **1,600** | 48 | 6.5 I | **720** |
| | 36 to 40 | | **50 U** | **13 U,I** | **2,800** | 80 | **50 U** | **740** |
| | 41 to 45 | | **50 U** | **31 I** | **2,600** | 85 | **50 U** | **400** |
| | 46 to 50 | | **20 U** | 5 U,I | **1,100** | 37 | **20 U** | **280** |
| | 51 to 55 | 10/3/2012 | 1.0 U | 1.0 U | **170** | 3.5 | 1.0 U | **76** |
| | 56 to 60 | | 1.0 U | 1.0 U | 3.8 | 1.0 U | 1.0 U | 1.0 U |
| DPT0175 | 26 to 30 | 01/11/2012 | 1.0 U | 1.0 U | 4.5 | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 7.6 | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 19.1 | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 19.8 | 1.0 U | 1.0 U | **1.5** |
| | 46 to 50 | | 1.0 U | 1.0 U | 3.3 | 1.0 U | 1.0 U | **6.5** |
| DPT0176 | 26 to 30 | 01/11/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0177 | 8 to 12 | 02/09/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 12 to 16 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.5** |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.7** |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.4** |
| | 26 to 30 | 01/12/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **15.5** |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **7.6** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.2 |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0178 | 26 to 30 | 01/12/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **35.4** |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.6** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0179 | 8 to 12 | 02/07/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.3 |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.2 |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0180 | 8 to 12 | 02/07/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0181 | 8 to 12 | 02/08/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0182 | 8 to 12 | 02/08/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **2.5** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0183 | 8 to 12 | 02/08/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0184 | 8 to 12 | 02/09/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 16 to 20 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 46 to 50 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0185 | 16 to 20 | 10/2/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0186 | 26 to 30 | 10/2/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0187 | 26 to 30 | 10/2/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0188 | 26 to 30 | 10/2/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | **100** | 10.5 | 1.0 U | **420** |
| | 36 to 40 | 10/3/2012 | **10 U** | **10 U** | **990** | 26 | 10 U | **800** |
| | 41 to 45 | | **20 U** | **20 U** | **2,000** | 27 | **20 U** | **1,100** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.2 | 1.0 U | 1.0 U | 1.0 U |
| DPT0189 | 16 to 20 | 10/3/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **3.3** |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **5.2** |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **55** |
| | 31 to 35 | | 1.0 U | 1.0 U | 3.5 | 1.0 U | 1.0 U | **62.7** |
| | 36 to 40 | | 1.0 U | 1.0 U | 2.0 | 1.0 U | 1.0 U | **11.1** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **4.2** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0190 | 26 to 30 | 10/3/2012 | 1.0 U | 1.0 U | 14.9 | 1.0 U | 1.0 U | **22.1** |
| | 31 to 35 | | 1.0 U | 1.0 U | 13.5 | 1.0 U | 1.0 U | **34** |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 | 1.0 U | 1.0 U | **8.7** |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **7.3** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0191 | 26 to 30 | 10/3/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **3.2** |
| | 41 to 45 | | 1.0 U | 1.0 U | 7.4 | 1.4 | 1.0 U | **73.9** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0192 | 16 to 20 | 10/4/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 21 to 25 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 26 to 30 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 31 to 35 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 36 to 40 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 41 to 45 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0193 | 67 to 71 | 10/4/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0194 | 51 to 55 | 10/5/2012 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **3.3** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| DPT0195 | 51 to 55 | 10/5/2012 | 1.0 U | 1.0 U | 6.1 | 1.0 U | 1.0 U | **5.9** |
| | 56 to 60 | | 1.0 U | 1.0 U | 1.3 | 1.0 U | 1.0 U | 1.0 U |
| DPT0196 | 8 to 12 | 03/18/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | **1,600 L** | 77 | 0.18 U | **290 L** |
| | 21 to 25 | | 0.32 U | **7,700 L** | **24,000 L** | **2300 L** | **86** | **1,300 L** |
| | 26 to 30 | | 0.32 U | **140 J,L** | **15,000 J,L** | **920 J,L** | **51** | **8,000 J,L** |
| | 31 to 35 | | **40 U** | **2,000** | **4,300** | 70 U | **45 U** | **310** |
| | 36 to 40 | | 0.32 U | **15,000 J,L** | **14,000 J,L** | **260 J,L** | **150** | **2,600 J,L** |
| | 41 to 45 | | **80 U** | **14,000** | **15,000** | 140 U | **90 U** | **65 U** |
| | 56 to 60 | | 0.32 U | **120** | **220** | 5.6 | 0.36 U | **12 J,L** |
| | 66 to 70 | | 0.16 U | **33** | **84** | 0.28 U | 0.18 U | 0.13 U |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0197 | 8 to 12 | 03/18/2013 | 0.16 U | 0.56 I | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | **20** | 65 | 0.28 U | 0.18 U | **24** |
| | 21 to 25 | | 0.32 U | **11 J,L** | **430 J,L** | 0.56 U | 0.36 U | **54 J,L** |
| | 26 to 30 | | 0.32 U | **8.6 J,L** | 26 J,L | 0.56 U | 0.36 U | **10 J,L** |
| | 31 to 35 | | 0.32 U | **6.7 J,L** | 0.4 U | 0.56 U | 0.36 U | 0.26 U |
| | 36 to 40 | | 0.16 U | 0.22 U | 0.74 I | 0.28 U | 0.18 U | 1.1 |
| | 41 to 45 | | 0.32 U | **390 J,L** | **1,200 L** | 8.3 | 0.36 U | **65** |
| | 56 to 60 | | 0.32 U | **3.5** | 4.6 | 0.56 U | 0.36 U | 0.26 U |
| DPT0198 | 8 to 12 | 03/18/2013 | 0.32 U | 0.44 U | 0.4 U | 0.56 U | 0.36 U | 0.26 U |
| | 16 to 20 | | 0.32 U | 0.44 U | 0.4 U | 0.56 U | 0.36 U | 0.26 U |
| | 21 to 25 | | 0.32 U | 0.44 U | 0.4 U | 0.56 U | 0.36 U | 0.26 U |
| | 26 to 30 | | 0.32 U | 0.44 U | 6.2 | 0.56 U | 0.36 U | **2.5** |
| | 31 to 35 | | 0.32 U | 0.44 U | 5.2 | 0.56 U | 0.36 U | 0.26 U |
| | 36 to 40 | | **40 U** | **120 I** | **7,300** | 70 U | **45 U** | **4,300** |
| | 41 to 45 | | **40 U** | **55 U** | 50 U | 70 U | **45 U** | **160 I** |
| | 56 to 60 | | 0.32 U | 0.44 U | 6.8 | 0.56 U | 0.36 U | 0.26 U |
| DPT0199 | 8 to 12 | 03/19/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | 0.8 U | 1.1 U | 19 | 0.56 U | 0.36 U | **450** |
| | 41 to 45 | | 0.32 U | 0.44 U | **88** | 0.56 U | 0.36 U | **200** |
| | 56 to 60 | | 0.32 U | 0.44 U | 21 | 0.56 U | 0.36 U | **7.6** |
| DPT0200 | 8 to 12 | 03/19/2013 | 0.16 U | 0.4 I | 0.97 I | 0.28 U | 0.18 U | 0.56 I |
| | 16 to 20 | | 1.6 U | 2.2 U | 2 U | 4.1 I | 1.8 U | **4.6 I** |
| | 21 to 25 | | **40 U** | **55 U** | **10,000** | 70 U | **45 U** | **1,300** |
| | 26 to 30 | | **40 U** | **13,000** | **110,000 L** | **1,300** | **45 U** | **4,900** |
| | 31 to 35 | | **40 U** | **3,300** | **58,000 J,L** | **650** | **45 U** | **19,000** |
| | 36 to 40 | | **40 U** | **340** | **2,700 J,L** | 70 U | **45 U** | **32.5 U** |
| | 41 to 45 | | 0.16 U | 2.5 | 8.2 | 0.28 U | 0.18 U | 0.13 U |
| | 56 to 60 | | 0.16 U | 2.9 | 28 | 0.28 U | 0.18 U | 0.13 U |
| DPT0201 | 8 to 12 | 03/19/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | **40 U** | **9,400** | **1,900** | 70 U | **45 U** | **32.5 U** |
| | 21 to 25 | | **40 U** | **1,700** | **1,300** | 70 U | **45 U** | **32.5 U** |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | 0.64 I | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | 0.16 U | **15** | 5.6 | 0.28 U | 0.18 U | 0.13 U |
| | 41 to 45 | | 0.16 U | 2 | 1.8 | 0.28 U | 0.18 U | 0.13 U |
| | 56 to 60 | | 0.16 U | 2.2 | 20 | 0.28 U | 0.18 U | 0.13 U |
| DPT0202 | 8 to 12 | 03/20/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | **8 U** | **37 I** | 10 U | 14 U | 9 U | **6.5 U** |
| | 21 to 25 | | **40 U** | **55 U** | **42,000** | **1,100** | **45 U** | **1,900** |
| | 26 to 30 | | **16 U** | **22 U** | **58,000 L** | **1,500** | **18 U** | **2,200** |
| | 31 to 35 | | **8 U** | **11 U** | **6,500 J,L** | **120** | 9 U | **1,500** |
| | 36 to 40 | | **40 U** | **22,000** | **23,000 J,L** | **500** | **45 U** | **1,500** |
| | 41 to 45 | | **40 U** | **450** | **4,700 J,L** | 70 U | **45 U** | **270** |
| | 56 to 60 | | 0.16 U | **10** | **330 L** | 7.2 | 0.18 U | **14** |
| | 66 to 70 | 03/21/2013 | 0.16 U | 0.73 I | 21 | 0.28 U | 0.18 U | 0.97 I |
| DPT0203 | 8 to 12 | 03/20/2013 | 0.16 U | 0.81 I | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.68 I | 2.1 | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | **40 U** | **130 I** | **490** | 70 U | **45 U** | **32.5 U** |
| | 31 to 35 | | 0.16 U | 0.22 U | 1.3 | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | **40 U** | **4,000** | **18,000** | **230 I** | **45 U** | **5,800** |
| | 41 to 45 | | **40 U** | **2,400** | **12,000** | 70 U | **45 U** | **1,900** |
| | 56 to 60 | | 0.16 U | **5.5** | 21 | 0.28 U | 0.18 U | **2.7** |
| DPT0204 | 8 to 12 | 03/20/2013 | **40 U** | **55 U** | 50 U | 70 U | **45 U** | **32.5 U** |
| | 16 to 20 | | **40 U** | **55 U** | 50 U | 70 U | **45 U** | **32.5 U** |
| | 21 to 25 | | **40 U** | **55 U** | 50 U | 70 U | **45 U** | **32.5 U** |
| | 26 to 30 | | **40 U** | **55 U** | 50 U | 70 U | **45 U** | **32.5 U** |
| | 31 to 35 | 03/21/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | 0.16 U | 0.22 U | 2.3 | 0.28 U | 0.18 U | **1.8** |
| | 41 to 45 | | 0.16 U | 0.22 U | 0.66 I | 0.28 U | 0.18 U | 1 |
| | 56 to 60 | | 0.16 U | 0.52 I | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| DPT0205 | 8 to 12 | 03/21/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.55 I |
| | 41 to 45 | | **8 U** | **370** | **760** | 14 U | 9 U | **6.5 U** |
| | 56 to 60 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| DPT0206 | 8 to 12 | 03/21/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 41 to 45 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 56 to 60 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| DPT0207 | 8 to 12 | 03/21/2013 | 1.6 U | **79** | **120 J,L** | 2.8 U | 1.8 U | **28 J,L** |
| | 16 to 20 | | **40 U** | **760** | **10,000** | 70 U | **45 U** | **1,100** |
| | 21 to 25 | | 0.16 U | 2.5 | **5,900 L** | **320 L** | **40** | **3,700 L** |
| | 26 to 30 | | **40 U** | **55 U** | **510 J,L** | 70 U | **45 U** | **960 J,L** |
| | 31 to 35 | | **40 U** | **55 U** | **4,400 J,L** | 70 U | **45 U** | **5300 J,L** |
| | 36 to 40 | | 1.6 U | 2.2 U | 47 J,L | 2.8 U | 1.8 U | **290 J,L** |
| | 41 to 45 | | 0.16 U | 0.22 U | 3.6 | 0.28 U | 0.18 U | **2.9** |
| | 56 to 60 | | 0.16 U | 0.22 U | 6.4 | 0.28 U | 0.18 U | 1.3 |
| DPT0208 | 8 to 12 | 03/21/2013 | 0.16 U | 0.22 U | 1.3 | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | **10** |
| | 21 to 25 | | **8 U** | **11 U** | 10 U | 14 U | 9 U | **2,400** |
| | 26 to 30 | | 0.8 U | 1.1 U | 1 U | 9.6 | 0.9 U | **1,000** |
| | 31 to 35 | | 0.8 U | 1.1 U | 1 U | 1.4 U | 0.9 U | **1,600 L** |
| | 36 to 40 | 03/22/2013 | 1.6 U | **13** | 21 | 2.8 U | 1.8 U | **7.5 I** |
| | 41 to 45 | | 0.16 U | 0.22 U | 2.8 | 0.28 U | 0.18 U | **24** |
| | 56 to 60 | | 0.16 U | 2.3 | 5 | 0.28 U | 0.18 U | **3.5** |
| DPT0209 | 8 to 12 | 03/22/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | **16 U** | **39 J** | 20 U | 28 U | **18 U** | **110** |
| | 41 to 45 | | **16 U** | **36 I** | 20 U | 28 U | **18 U** | **460** |
| | 56 to 60 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 1.2 |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0210 | 8 to 12 | 03/22/2013 | 0.16 U | 0.43 I | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.35 I | 4.5 | 0.28 U | 0.18 U | 1 |
| | 26 to 30 | | 0.16 U | **4.4** | 1.1 | 0.28 U | 0.18 U | 0.27 I |
| | 31 to 35 | | **8 U** | **56** | **160** | 60 | 9 U | **130** |
| | 36 to 40 | | **8 U** | **3,800** | **21,000 L** | **300** | 9 U | **6,200** |
| | 41 to 45 | | **8 U** | **3,900** | **11,000 L** | **180** | **58** | **2,100** |
| | 56 to 60 | | 0.16 U | **7.3** | 26 | 0.28 U | 0.18 U | **1.7** |
| DPT0211 | 8 to 12 | 03/22/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | 03/25/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | **80 U** | **110 U** | **3,800** | 140 U | **90 U** | **2,000** |
| | 41 to 45 | | **40 U** | **1,100** | **6,900** | 70 U | **45 U** | **2,200** |
| | 56 to 60 | | 0.16 U | **5.5** | 38 | 0.28 U | 0.18 U | **6.4** |
| DPT0212 | 8 to 12 | 03/25/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 I | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | 0.16 U | 0.22 U | 0.2 U | 0.9 I | 0.18 U | **58** |
| | 41 to 45 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | **8.9** |
| | 56 to 60 | | 0.16 U | 2.8 | 6.9 | 0.28 U | 0.18 U | 0.84 I |
| DPT0213 | 8 to 12 | 03/25/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.78 I | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.85 I | 1 | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.80 U | 1.1 U | **340** | **140** | 0.9 U | **210** |
| | 36 to 40 | | **160 U** | **9,700** | **30,000** | **280 U** | **180 U** | **9,900** |
| | 41 to 45 | | **40 U** | **330** | **7,300** | 70 U | **45 U** | **2,500** |
| | 56 to 60 | | 0.16 U | **27** | **150** | 2.2 | 0.18 U | **20** |
| | 66 to 70 | 03/26/2013 | 0.16 U | **8.5** | 37 | 0.28 U | 0.18 U | **1.6** |
| DPT0214 | 8 to 12 | 03/25/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | **36** |
| | 21 to 25 | | **8 U** | **11 U** | **4,500** | 14 U | 9 U | **6,400** |
| | 26 to 30 | | **8 U** | **11 U** | **230** | 14 U | 9 U | **1,900** |
| | 31 to 35 | | 0.32 U | 1.9 I | 2.8 | 0.56 U | 0.36 U | **3.8** |
| | 36 to 40 | | 1.8 I | 3 | 6.5 | 0.56 U | 0.36 U | **6.7** |
| | 41 to 45 | | **16 U** | **22 U** | **1,700** | **5,600** | **18 U** | **470** |
| | 56 to 60 | | 0.16 U | **10** | 70 | 0.28 U | 0.18 U | **9.2** |
| | 66 to 70 | 03/26/2013 | 0.16 U | 1.7 | 7.4 | 0.28 U | 0.18 U | 1.3 |
| DPT0215 | 8 to 12 | 03/26/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 41 to 45 | | 0.32 U | 0.44 U | **230** | 3.7 | 0.36 U | **67** |
| | 56 to 60 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| DPT0216 | 8 to 12 | 03/26/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 1.6 U | 2.2 U | **160** | 2.8 U | 1.8 U | **110** |
| | 26 to 30 | | 1.6 U | **240** | 2 U | 2.8 U | 1.8 U | 1.3 U |
| | 31 to 35 | | **40 U** | **130 I** | **640** | 70 U | **45 U** | **120 I** |
| | 36 to 40 | | **160 U** | **26,000** | **34,000** | **280 U** | **180 U** | **7,200** |
| | 41 to 45 | | **40 U** | **4,400** | **15,000** | 70 U | **45 U** | **1,800** |
| | 56 to 60 | | 0.16 U | **62** | **110** | 1.6 | 0.18 U | **6.3** |
| | 66 to 70 | 03/27/2013 | 0.16 U | **19** | 22 | 1.7 | 0.18 U | **1.5** |
| DPT0217 | 8 to 12 | 03/26/2013 | 0.16 U | 0.22 U | 1.4 | 0.28 U | 0.18 U | **5.9** |
| | 16 to 20 | | **8 U** | 11 U | **5,800** | **170** | 9 U | **440** |
| | 21 to 25 | | **160 U** | **7,700** | **68,000** | **1,600** | **180 U** | **1,200** |
| | 26 to 30 | | **40 U** | **2,100** | **4,900** | **1,400** | **45 U** | **2,200** |
| | 31 to 35 | | **40 U** | **2,100** | **4,500** | **740** | **6,800** | **8,200** |
| | 36 to 40 | | **16 U** | **85 I** | **2,900** | 28 U | **18 U** | **2,100** |
| | 41 to 45 | | 0.16 U | **23** | 38 | 0.28 U | 0.18 U | **2.4** |
| | 56 to 60 | | **16 U** | **1,400** | **6,000** | 55 I | **18 U** | **260** |
| | 66 to 70 | 03/27/2013 | 0.16 U | **8.5** | 5.9 | 0.28 U | 0.18 U | 0.13 U |
| DPT0218 | 8 to 12 | 03/27/2013 | 0.16 U | 0.22 U | 1.1 | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 1.1 |
| | 21 to 25 | | 0.16 U | 2 | 13 | 1.9 | 0.18 U | **18** |
| | 26 to 30 | | **8 U** | **11 U** | 10 U | 14 U | 9 U | **1,500** |
| | 31 to 35 | | **8 U** | **23 I** | **120** | 14 U | 9 U | **6.5 U** |
| | 36 to 40 | | **8 U** | **290** | **330** | 14 U | 9 U | **110** |
| | 41 to 45 | | 0.16 U | **61** | **88** | 2.3 | 0.18 U | **12** |
| | 56 to 60 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| DPT0219 | 8 to 12 | 03/27/2013 | 0.16 U | 3.1 | 5.4 | 0.28 U | 0.18 U | 1.2 |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | **150** | **270** | 0.28 U | 0.18 U | **57** |
| | 26 to 30 | | **8 U** | **27 I** | 35 I | 14 U | 9 U | **6.5 U** |
| | 31 to 35 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 41 to 45 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 56 to 60 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| DPT0220 | 8 to 12 | 03/27/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 1.5 | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.85 I | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | **8 U** | **680** | **590** | 76 | **150** | **83** |
| | 31 to 35 | | 0.16 U | 0.22 U | 2.1 | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 41 to 45 | | **8 U** | **1,400** | **4,300** | **100** | 9 U | **1,000** |
| | 56 to 60 | | 0.16 U | **12** | 23 | 0.28 U | 0.18 U | **2.1** |
| | 66 to 70 | | 0.16 U | **6.5** | 14 | 1.5 | 0.18 U | 1.1 |
| DPT0221 | 8 to 12 | 03/28/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | **9.6** | 21 | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 41 to 45 | | **8 U** | **11 U** | **1,500** | 14 U | 9 U | **1,200** |
| | 56 to 60 | | 0.16 U | 0.22 U | 4.5 | 0.28 U | 0.18 U | 1.4 |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0222 | 8 to 12 | 03/28/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 1.2 | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.71 I | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 41 to 45 | | **8 U** | **11 U** | 10 U | 14 U | 9 U | **32 I** |
| | 56 to 60 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| DPT0223 | 8 to 12 | 03/28/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 41 to 45 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 56 to 60 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| DPT0224 | 8 to 12 | 03/28/2013 | 0.16 U | **11** | 9.8 | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | **8 U** | **230** | **380** | 81 | 9 U | **260** |
| | 31 to 35 | 03/29/2013 | **16 U** | **54 I** | 64 I | 28 U | **18 U** | **13 U** |
| | 36 to 40 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 41 to 45 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 56 to 60 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| DPT0225 | 8 to 12 | 03/29/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | **8 U** | **53** | 10 U | 14 U | 9 U | **6.5 U** |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | **16 U** | **57 I** | **980** | 87 I | **18 U** | **210** |
| | 36 to 40 | | **160 U** | **37,000** | **40,000** | **800 I** | **180 U** | **4,400** |
| | 41 to 45 | | **40 U** | **1,800** | **4,400** | 70 U | **45 U** | **620** |
| | 56 to 60 | | 0.16 U | **16** | 14 | 1.7 | 0.18 U | **2.6** |
| | 66 to 70 | | 0.16 U | **12** | 8.4 | 0.28 U | 0.18 U | 0.57 I |
| DPT0226 | 8 to 12 | 04/01/2013 | 0.16 U | 1.9 | 26 | 0.86 I | 0.18 U | 1.2 |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 3.3 | 3.6 | 0.28 U | 0.18 U | **2.2** |
| | 36 to 40 | | **16 U** | **44 I** | **4,200** | **170** | **18 U** | **670** |
| | 41 to 45 | | **40 U** | **1,000** | **6,900** | **260** | **45 U** | **480** |
| | 46 to 50 | 05/23/2013 | 2.3 U | **32** | **1,700** | 37 | 3.0 U | **140** |
| | 56 to 60 | 04/01/2013 | 0.16 U | 0.62 I | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| DPT0227 | 8 to 12 | 04/01/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.83 I | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 2.3 | 1.3 | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | **95** | 0.54 I | 0.18 U | **10** |
| | 36 to 40 | | **16 U** | **22 U** | **1,100** | 57 I | **18 U** | **970** |
| | 41 to 45 | | **16 U** | **42 I** | **8,200** | **210** | **18 U** | **1,600** |
| | 46 to 50 | 05/29/2014 | **12 U** | **9.5 U** | **1,900** | 37 I | **15 U** | **1,300** |
| | 56 to 60 | 04/01/2013 | 0.16 U | **3.6** | 51 | 1.2 | 0.18 U | **5.3** |
| DPT0228 | 8 to 12 | 04/01/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | 04/01/2013 | 0.16 U | 0.54 I | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | 04/01/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | 04/01/2013 | 0.16 U | **6.1** | 2.3 | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | 04/01/2013 | 0.16 U | 1.1 | 1 | 0.62 I | 0.18 U | **1,000** |
| | 36 to 40 | 04/01/2013 | **8 U** | **11 U** | **130** | 31 I | 9 U | **1,000** |
| | 41 to 45 | 04/01/2013 | **16 U** | **76 I** | **300** | 28 U | **18 U** | **2,900** |
| | 46 to 50 | 05/22/2013 | 0.23 U | **2,600** | **8,100** | **300** | **12.2** | **760** |
| | 56 to 60 | 04/01/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | **4.6** |
| DPT0229 | 8 to 12 | 04/01/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | 04/02/2013 | 0.16 U | 0.81 I | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | 04/02/2013 | 0.16 U | 0.53 I | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | 04/02/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | 04/02/2013 | 0.16 U | 0.22 U | 7.4 | 2.3 | 0.18 U | **19** |
| | 36 to 40 | 04/02/2013 | **8 U** | **11 U** | **2,500** | 71 | 9 U | **290** |
| | 41 to 45 | 04/02/2013 | **8 U** | **11 U** | **1,900** | 55 | 9 U | **150** |
| | 46 to 50 | 06/03/2013 | **23 U** | **540** | **3,900** | **150** | **30 U** | **420** |
| | 56 to 60 | 4/2/2013 | 0.16 U | 0.22 U | 11 | 0.28 U | 0.18 U | **2.1** |
| DPT0230 | 8 to 12 | 04/02/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | 04/02/2013 | 0.16 U | 1.5 | 0.81 I | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | 04/02/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | 04/02/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | 04/02/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | 04/02/2013 | 0.16 U | 0.22 U | 0.2 U | 0.58 I | 0.18 U | **1.7** |
| | 41 to 45 | 04/02/2013 | 1.6 U | 2.2 U | 13 | 2.8 U | 1.8 U | **37** |
| | 46 to 50 | 05/23/2013 | 0.23 U | **10.2** | **810** | 28.6 | 1 | **94.5** |
| | 56 to 60 | 04/02/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| DPT0231 | 8 to 12 | 04/02/2013 | 0.16 U | **3.5** | 1.4 | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | 04/02/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | 04/02/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | 04/02/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | 04/02/2013 | 0.16 U | 0.22 U | 0.2 U | 1.2 | 0.18 U | 0.82 I |
| | 36 to 40 | 04/02/2013 | **8 U** | **11 U** | **2,600** | 78 | 9 U | **1,100** |
| | 41 to 45 | 04/02/2013 | **8 U** | **650** | **9,900** | **290** | 9 U | **910** |
| | 46 to 50 | 05/23/2013 | 0.23 U | **990** | **6,100** | **200** | 6.3 | **590** |
| | 56 to 60 | 04/02/2013 | 0.16 U | 1.2 | 7.2 | 0.28 U | 0.18 U | **2.2** |
| DPT0232 | 8 to 12 | 04/03/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 1.6 U | **3.9 I** | **180** | 2.8 U | 1.8 U | **280** |
| | 36 to 40 | | 1.6 U | **8.6 I** | **230** | 7.9 I | 1.8 U | **250** |
| | 41 to 45 | | **8 U** | **24 I** | **810** | 26 I | 9 U | **210** |
| | 56 to 60 | | 0.16 U | 0.22 U | 1.2 | 0.28 U | 0.18 U | 0.61 I |
| DPT0233 | 8 to 12 | 04/03/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 1.4 | 1.1 | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | **16 U** | **83 I** | 20 U | 28 U | **18 U** | **37 I** |
| | 41 to 45 | | **16 U** | **28 I** | **97 I** | 28 U | **18 U** | **600** |
| | 56 to 60 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0234 | 8 to 12 | 04/03/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 2.2 | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | 0.2 U | 4.5 | 0.18 U | **46** |
| | 36 to 40 | | 1.6 U | 2.2 U | **360** | 20 | 1.8 U | **700** |
| | 41 to 45 | | **8 U** | **11 U** | **2,400** | 50 | 9 U | **800** |
| | 56 to 60 | | 0.16 U | 0.22 U | 4.8 | 0.28 U | 0.18 U | **1.6** |
| DPT0235 | 8 to 12 | 04/03/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | 04/04/2013 | 0.16 U | 0.22 U | 0.77 I | 0.28 U | 0.84 I | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.69 I | 0.28 U | 1.1 | 1.2 |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.89 I | 0.28 U | 0.65 I | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | 7.4 | 0.64 I | 0.18 U | **120** |
| | 36 to 40 | | 1.6 U | 2.2 U | 25 | 5.7 I | 1.8 U | **470** |
| | 41 to 45 | | 1.6 U | 2.2 U | 2 U | 18 | 1.8 U | **1,000** |
| | 56 to 60 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| DPT0236 | 8 to 12 | 04/04/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | 1.6 U | 2.2 U | 19 | 14 | 1.8 U | **480** |
| | 41 to 45 | | **8 U** | **11 U** | **5,200** | **120** | 9 U | **2,200** |
| | 46 to 50 | 06/03/2013 | **23 U** | **490** | **7,000** | **120** | **30 U** | **1,200** |
| | 56 to 60 | 04/04/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | **5.5** |
| DPT0237 | 8 to 12 | 04/05/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.65 I |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.81 I | 0.28 U | 0.18 U | 0.6 I |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.94 I | 0.28 U | 0.18 U | 0.45 I |
| | 31 to 35 | | 1.6 U | 2.2 U | 2 U | 2.8 U | 1.8 U | **110** |
| | 36 to 40 | | 1.6 U | 2.2 U | 19 | 16 | 1.8 U | **1,900** |
| | 41 to 45 | | 1.6 U | 2.2 U | 2 U | 13 | 1.8 U | **1,300** |
| | 56 to 60 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.7 I |
| DPT0238 | 8 to 12 | 04/05/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.85 I | 0.28 U | 2.2 | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.9 I | 0.28 U | 2 | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.76 I | 0.28 U | 0.18 U | 0.41 I |
| | 31 to 35 | | 1.6 U | 2.2 U | 2 U | 2.8 U | 1.8 U | **5.2 I** |
| | 36 to 40 | | 1.6 U | 2.2 U | 9.7 I | 2.8 U | 1.8 U | **38** |
| | 41 to 45 | | 1.6 U | 2.2 U | 2 U | 2.8 U | 1.8 U | **89** |
| | 56 to 60 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| DPT0239 | 8 to 12 | 04/05/2013 | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 16 to 20 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 21 to 25 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 26 to 30 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 31 to 35 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| | 36 to 40 | | 1.6 U | 2.2 U | 2 U | 2.8 U | 1.8 U | **540** |
| | 41 to 45 | | 0.16 U | 0.22 U | 3.7 | 0.28 U | 0.18 U | **62** |
| | 56 to 60 | | 0.16 U | 0.22 U | 0.2 U | 0.28 U | 0.18 U | 0.13 U |
| DPT0240 | 8 to 12 | 05/20/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 16 to 20 | | 0.23 U | 0.19 U | 0.41 I | 0.29 U | 0.30 U | 0.45 I |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 1 |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.31 I |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0241 | 8 to 12 | 05/20/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 16 to 20 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0242 | 16 to 20 | 05/20/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 2.6 | 0.29 U | 0.30 U | 0.28 I |
| | 36 to 40 | | 0.23 U | 0.19 U | 3.6 | 1.6 | 0.30 U | **8.9** |
| | 41 to 45 | | **12 U** | **18 I** | **3,300** | **310** | **16 I** | **3,400** |
| | 46 to 50 | | **12 U** | **1,800** | **5,200** | **190** | **15 U** | **420** |
| | 56 to 60 | | 0.23 U | **9.5** | 30.8 | 0.88 I | 0.30 U | **1.9** |
| | 66 to 70 | 05/21/2013 | 0.23 U | 1 | 3.2 | 0.29 U | 0.30 U | 0.26 U |
| DPT0243 | 16 to 20 | 05/21/2013 | 0.23 U | 0.19 U | 0.44 I | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 1.5 | 1.4 | 1.3 | 0.30 U | 0.92 I |
| | 31 to 35 | | **12 U** | **9.5 U** | **560** | 63 | **15 U** | **1,100** |
| | 36 to 40 | | **12 U** | **9.5 U** | **2,600** | 86 | **15 U** | **510** |
| | 41 to 45 | | **12 U** | **130** | **4,900** | **140** | **15 U** | **330** |
| | 46 to 50 | | **12 U** | **480** | **3,700** | **110** | **15 U** | **270** |
| | 56 to 60 | | 0.23 U | 0.19 U | 2.3 | 0.29 U | 0.30 U | 0.26 U |
| DPT0244 | 16 to 20 | 05/21/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.62 I | 0.30 U | 0.26 U |
| | 36 to 40 | | **12 U** | **25 I** | **5,000** | **120** | **15 U** | **990** |
| | 41 to 45 | | **23 U** | **1,100** | **9,000** | **240** | **30 U** | **840** |
| | 46 to 50 | | **12 U** | **1,100** | **5,700** | **180** | **15 U** | **590** |
| | 56 to 60 | | 1.2 U | **11** | **110** | 3.0 I | 1.5 U | **10** |
| | 66 to 70 | 05/23/2013 | 0.23 U | 0.74 I | 7.4 | 0.29 U | 0.30 U | 0.58 I |
| DPT0245 | 16 to 20 | 05/21/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | 05/22/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **1.5** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 11 | 0.30 U | **2,400** |
| | 41 to 45 | | 0.23 U | **110** | **760** | 31.2 | 5.4 | **1,300** |
| | 46 to 50 | | 0.23 U | **110** | **1,300** | 44.2 | 5.1 | **940** |
| | 56 to 60 | | 0.23 U | 0.19 U | 12.4 | 0.33 I | 0.30 U | **6.5** |
| DPT0246 | 8 to 12 | 05/22/2013 | 0.23 U | 0.19 U | 1.1 | 0.29 U | 0.30 U | 0.26 U |
| | 16 to 20 | | 0.23 U | 1.4 | 4.9 | 0.29 U | 0.30 U | 0.33 I |
| | 21 to 25 | | 0.23 U | 0.45 I | 1.8 | 0.29 U | 0.30 U | 0.41 I |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.80 I | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.51 I | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.45 I | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.35 I | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0247 | 8 to 12 | 05/22/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 16 to 20 | | **23 U** | **19 U** | **12,000** | **430** | **30 U** | **1,200** |
| | 21 to 25 | | **120 U** | **450 I** | **53,000** | **2,300** | **150 U** | **3,200** |
| | 26 to 30 | | **12 U** | **16 I** | **2,800** | **250** | **15 U** | **2,600** |
| | 31 to 35 | | **23 U** | **5,100** | **10,000** | **170** | **30 U** | **580** |
| | 36 to 40 | | **230 U** | **81,000** | **55,000** | **580 I** | **300 U** | **5,800** |
| | 41 to 45 | | **23 U** | **19,000** | **15,000** | **110** | **30 U** | **1,500** |
| | 56 to 60 | | 2.3 U | **750** | **920** | 9.0 I | 3.0 U | **34** |
| | 66 to 70 | 05/23/2013 | 0.23 U | **28.2** | 20.4 | 0.29 U | 0.30 U | 1 |
| DPT0248 | 8 to 12 | 05/22/2013 | 0.23 U | 0.41 I | 0.64 I | 0.29 U | 0.30 U | 0.26 U |
| | 16 to 20 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 1.2 | 1.5 | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | **9.2** | 6.3 | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.47 I | 0.31 I | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 3 | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 2.3 | 1.5 | 0.29 U | 0.30 U | 0.26 U |
| DPT0249 | 8 to 12 | 05/23/2013 | 0.23 U | 0.19 U | 0.63 I | 0.29 U | 0.30 U | 0.45 I |
| | 16 to 20 | | 0.23 U | 0.55 I | 3.4 | 0.29 U | 0.30 U | **23.5** |
| | 21 to 25 | | 0.23 U | 0.53 I | 2.3 | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.66 I | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0250 | 8 to 12 | 05/23/2013 | 0.23 U | 0.19 U | 0.40 I | 0.29 U | 0.30 U | 0.26 U |
| | 16 to 20 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.64 I | 0.29 U | 0.30 U | **2.3** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.47 I | 0.30 U | **23.8** |
| | 41 to 45 | | 0.23 U | 1.1 | **2,100** | 58.8 | 3.7 | **1,200** |
| | 56 to 60 | | 0.23 U | 0.19 U | 6.8 | 0.29 U | 0.30 U | **3.4** |
| DPT0251 | 8 to 12 | 05/23/2013 | 0.23 U | 0.19 U | 1 | 0.29 U | 0.30 U | 0.26 U |
| | 16 to 20 | | 0.23 U | 0.54 I | 2.4 | 0.29 U | 0.30 U | **1.9** |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.54 I | 0.29 U | 0.30 U | 1.2 |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 7.7 | 0.30 U | **97.5** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 33.9 | 0.30 U | **570** |
| | 41 to 45 | | 0.23 U | 0.19 U | 1.5 | 0.59 I | 0.30 U | **7.2** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0252 | 8 to 12 | 05/24/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 16 to 20 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.92 I | 0.29 U | 0.30 U | 0.48 I |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0253 | 16 to 20 | 06/03/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.30 I |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 3.9 | 0.30 U | **160** |
| | 36 to 40 | | **23 U** | **19 U** | **3,200** | **100** | **30 U** | **2,000** |
| | 41 to 45 | | **23 U** | **200** | **7,300** | **190** | **30 U** | **1,000** |
| | 46 to 50 | | **23 U** | **630** | **4,400** | **150** | **30 U** | **640** |
| | 56 to 60 | | 0.23 U | 0.19 U | 2.4 | 0.29 U | 0.30 U | 0.30 I |
| DPT0254 | 16 to 20 | 06/03/2013 | 0.23 U | 0.19 U | 1.1 | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 5.2 | 0.30 U | **58.2** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 12.7 | 0.30 U | **660** |
| | 46 to 50 | | 2.3 U | 2.3 I | **1,400** | 40 | 3.0 U | **1,200** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.62 I | 0.29 U | 0.30 U | **1.5** |
| DPT0255 | 16 to 20 | 06/03/2013 | 0.23 U | 0.19 U | 0.23 I | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.45 I |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.36 I | 0.29 U | 0.30 U | **16** |
| | 46 to 50 | 06/04/2013 | 0.23 U | 0.19 U | 1.5 | 0.29 U | 0.30 U | **13.5** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0256 | 16 to 20 | 06/04/2013 | 0.23 U | 0.19 U | 0.64 I | 0.29 U | 2.5 | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 1.4 | 0.29 U | 0.63 I | 0.29 I |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.43 I | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 18.1 | 0.29 U | 0.30 U | **5** |
| | 36 to 40 | | 0.23 U | 0.19 U | 12.7 | 0.29 U | 0.30 U | **3.1** |
| | 41 to 45 | | 0.23 U | 0.19 U | 14.1 | 0.29 U | 0.30 U | **13** |
| | 46 to 50 | | 0.23 U | 0.19 U | 4 | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0257 | 16 to 20 | 06/04/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 46 to 50 | | 0.23 U | 0.29 I | 7 | 0.29 U | 0.30 U | 0.88 I |
| DPT0258 | 31 to 35 | 06/04/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 2.2 | **93** | 5.7 | 0.30 U | **76.4** |
| | 41 to 45 | | **23 U** | **19 U** | **2,100** | 95 I | **30 U** | **500** |
| | 46 to 50 | | **12 U** | **66** | **900** | 68 | **15 U** | **76** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0259 | 31 to 35 | 06/04/2013 | 0.23 U | 0.19 U | 0.66 I | 0.42 I | 0.30 U | **3.4** |
| | 36 to 40 | 06/05/2013 | 0.23 U | 0.19 U | 1.4 | 6.2 | 0.30 U | **600** |
| | 41 to 45 | | 2.3 U | **31** | **690** | 29 | 3.0 U | **1,800** |
| | 46 to 50 | | 4.6 U | **160** | **1,400** | 37 | 6.0 U | **930** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.31 I | 0.29 U | 0.30 U | 0.26 U |
| DPT0260 | 16 to 20 | 06/05/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.44 I | 0.29 U | 0.30 U | **1.9** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0261 | 8 to 12 | 06/19/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 16 to 20 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 1.2 | 13.2 | 0.73 I | 0.30 U | **60.3** |
| | 36 to 40 | | **12 U** | **9.5 U** | **1,000** | 15 U | **15 U** | **4,600** |
| | 41 to 45 | | 1.2 U | 0.95 U | **180** | 2.4 I | 1.5 U | **1,400** |
| | 56 to 60 | | 0.23 U | 0.19 U | 1.6 | 0.29 U | 0.30 U | **5** |
| DPT0262 | 8 to 12 | 06/19/2013 | 0.23 U | 0.19 U | 0.70 I | 0.29 U | 0.30 U | 0.26 U |
| | 16 to 20 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **1.7** |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **11.5** |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **97.1** |
| | 31 to 35 | | 1.2 U | 0.95 U | 1.1 U | 1.5 U | 1.5 U | **120** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **2.1** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0263 | 31 to 35 | 06/19/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.43 I | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.49 I | 1.6 | 0.30 U | **5.6** |
| | 46 to 50 | | 1.2 U | 0.95 U | 53 | 4.5 I | 1.5 U | **170** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0264 | 31 to 35 | 06/20/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.48 I | 0.30 U | 0.26 U |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.25 I | 0.74 I | 0.30 U | **2.8** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0265 | 8 to 12 | 06/20/2013 | 0.23 U | 0.19 U | 0.66 I | 0.29 U | 0.30 U | **1.8** |
| | 16 to 20 | | 0.23 U | 0.19 U | 1.6 | 0.29 U | 0.30 U | **7** |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.49 I | 0.29 U | 0.30 U | **11.2** |
| | 26 to 30 | | 0.46 U | 0.38 U | 0.44 U | 0.58 U | 0.60 U | **110** |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **4.8** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **26.8** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **3.6** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0266 | 8 to 12 | 06/20/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 16 to 20 | | 0.23 U | 0.19 U | 1 | 0.29 U | 0.30 U | 1.0 |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.31 I | 0.29 U | 0.30 U | **12.2** |
| | 26 to 30 | | 1.2 U | 0.95 U | 1.1 U | 1.5 U | 1.5 U | **18** |
| | 31 to 35 | 06/21/2013 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **29.2** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **14.1** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **5.6** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0267 | 16 to 20 | 06/21/2013 | 0.23 U | 0.19 U | 8.9 | 0.29 U | 0.30 U | **140** |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0268 | 31 to 35 | 05/28/2014 | 0.23 U | 0.19 U | 0.64 I | 2.9 | 0.30 U | **68** |
| | 36 to 40 | | 0.23 U | 0.19 U | 5.4 | 19.9 | 0.30 U | **2,100** |
| | 41 to 45 | | 0.23 U | 0.19 U | 34.2 | 22.1 | 0.30 U | **1,800** |
| | 46 to 50 | | 0.23 U | 0.19 U | 20.3 | 5.5 | 0.30 U | **370** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 1.2 |
| DPT0269 | 36 to 40 | 05/28/2014 | **46 U** | 38 U | **5,700** | 190 I | **60 U** | **920** |
| | 41 to 45 | | **23 U** | **1,200** | **8,100** | **280** | **30 U** | **610** |
| | 46 to 50 | | **12 U** | **9.5 U** | **2,000** | 70 | **15 U** | **160** |
| | 56 to 60 | | 0.23 U | 0.28 I | 19.3 | 0.36 I | 0.30 U | **2.1** |
| DPT0270 | 36 to 40 | 05/28/2014 | 0.23 U | **4.1** | **860** | 24.6 | 1.4 | **450** |
| | 41 to 45 | | **23 U** | **100** | **7,100** | **180** | **30 U** | **1,100** |
| | 46 to 50 | | **23 U** | **270** | **4,300** | **140** | **30 U** | **280** |
| | 56 to 60 | | 0.23 U | 0.19 U | 2.2 | 0.29 U | 0.30 U | 0.67 I |
| DPT0271 | 36 to 40 | 05/28/2014 | 0.23 U | 0.19 U | 0.35 I | 6.4 | 0.30 U | **160** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 19.9 | 0.30 U | **4,500** |
| | 46 to 50 | | **12 U** | **9.5 U** | **2,400** | 51 | **15 U** | **2,500** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0272 | 36 to 40 | 05/28/2014 | 0.23 U | 0.19 U | 54.1 | 13.2 | 0.30 U | **1,300** |
| | 41 to 45 | | 0.23 U | 0.68 I | **690** | 22.3 | 1.3 | **1,400** |
| | 46 to 50 | | **23 U** | **340** | **4,800** | **140** | **30 U** | **1,200** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.54 I | 0.29 U | 0.30 U | 1.4 |
| DPT0273 | 36 to 40 | 05/29/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.56 I | 0.30 U | 0.26 U |
| | 46 to 50 | | 0.23 U | 0.19 U | 12 | 2.6 | 0.30 U | **67.8** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.24 I | 0.29 U | 0.30 U | 0.59 I |
| DPT0274 | 31 to 35 | 05/29/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.64 I |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 1.9 | 0.30 U | **7.8** |
| | 41 to 45 | | 0.23 U | 0.19 U | 2.1 | 5.5 | 0.30 U | **530** |
| | 46 to 50 | | 4.6 U | 3.8 U | **1,400** | 38 | 6.0 U | **870** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0275 | 36 to 40 | 05/29/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.43 I | 0.30 U | 0.26 U |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.30 I | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0276 | 31 to 35 | 05/29/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.34 I | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 2.5 | 2.8 | 0.30 U | **25.7** |
| | 46 to 50 | | 0.23 U | 0.81 I | **110** | 7.1 | 0.30 U | **100** |
| | 56 to 60 | | 0.23 U | 0.19 U | 1.1 | 0.29 U | 0.30 U | 0.75 I |
| DPT0277 | 36 to 40 | 05/30/2014 | 0.23 U | 0.19 U | 0.90 I | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.85 I | 0.29 U | 0.30 U | 0.26 U |
| | 46 to 50 | | 0.23 U | 0.19 U | 3.1 | 0.29 U | 1 | 1 |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0278 | 26 to 30 | 05/30/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **3** |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **17.3** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **1.8** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **1.7** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0279 | 26 to 30 | 05/30/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **32.4** |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **29.8** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.40 I | 1.1 | 0.30 U | **110** |
| | 41 to 45 | | 0.23 U | 0.19 U | 1.7 | 1.3 | 0.30 U | **100** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **2.6** |
| DPT0280 | 21 to 25 | 05/30/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **1.6** |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **74.9** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **31.9** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **7.4** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.93 I |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0281 | 26 to 30 | 06/02/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.35 I |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0282 | 21 to 25 | 06/02/2014 | 0.23 U | 0.19 U | 0.30 I | 0.29 U | 0.30 U | **10.7** |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **7.2** |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **49.6** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **26.5** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **16.5** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0283 | 26 to 30 | 06/02/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **6.1** |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **29.6** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **58.2** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **33.5** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **2.8** |
| DPT0284 | 26 to 30 | 06/02/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **10.2** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **75** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **35.5** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **4.1** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0285 | 31 to 35 | 06/03/2014 | 0.23 U | 0.19 U | 7 | 0.29 U | 0.30 U | **48** |
| | 36 to 40 | | 0.23 U | 0.19 U | 49.5 | 1.1 | 0.30 U | **170** |
| | 41 to 45 | | 0.23 U | 0.19 U | 5.3 | 0.74 I | 0.30 U | **100** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.93 I | 0.29 U | 0.30 U | **22.6** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0286 | 26 to 30 | 06/03/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **33.1** |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.62 I | 0.29 U | 0.30 U | **36.8** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.83 I | 0.29 U | 0.30 U | **63.2** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **5.7** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 1.2 |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0287 | 26 to 30 | 06/03/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.89 I |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.28 I | 0.29 U | 0.30 U | **9.6** |
| | 36 to 40 | | 0.23 U | 0.19 U | 2.3 | 0.29 U | 0.30 U | **65.4** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.83 I | 0.29 U | 0.30 U | **71.1** |
| DPT0288 | 26 to 30 | 06/03/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **1.7** |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **2.2** |
| | 36 to 40 | | 0.23 U | 0.19 U | 12.1 | 0.34 I | 0.30 U | **24.5** |
| | 41 to 45 | | 0.23 U | 0.19 U | **140** | 1.3 | 0.30 U | **40.6** |
| DPT0289 | 8 to 12 | 06/03/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 1.2 |
| | 16 to 20 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | 06/04/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 0.58 I | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 40.8 | 3.5 | 0.30 U | **110** |
| | 36 to 40 | | **12 U** | **9.5 U** | **2,600** | 80 | **15 U** | **550** |
| | 41 to 45 | | **23 U** | **220** | **5,600** | **180** | **30 U** | **540** |
| | 46 to 50 | | **12 U** | **190** | **2,700** | **110** | **15 U** | **320** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.28 I | 0.29 U | 0.30 U | 0.26 U |
| DPT0290 | 31 to 35 | 06/04/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.51 I | 0.34 I | 0.30 U | **4.3** |
| | 41 to 45 | | 0.23 U | 0.19 U | **120** | 3.4 | 0.30 U | **58.1** |
| | 46 to 50 | | 4.6 U | 3.8 U | **1,500** | 51 | 6.0 U | **230** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.29 I | 0.29 U | 0.30 U | 0.26 U |
| DPT0291 | 31 to 35 | 06/04/2014 | 4.6 U | 3.8 U | **1,200** | 45 | 6.0 U | **1,600** |
| | 36 to 40 | | **23 U** | **37 I** | **4,900** | **140** | **30 U** | **1,100** |
| | 41 to 45 | | **12 U** | **180** | **2,500** | 92 | **15 U** | **560** |
| | 46 to 50 | | 0.23 U | 0.77 I | **210** | 7.2 | 0.30 U | **63.3** |
| | 56 to 60 | | 0.23 U | 0.19 U | 1 | 0.29 U | 0.30 U | 0.28 I |
| DPT0292 | 31 to 35 | 06/04/2014 | 4.6 U | 3.8 U | 20 I | 23 | 6.0 U | **1,700** |
| | 36 to 40 | | 4.6 U | 3.8 U | 25 | 28 | 6.0 U | **1,400** |
| | 41 to 45 | | 4.6 U | 3.8 U | 14 I | 13 I | 6.0 U | **1,100** |
| | 46 to 50 | 06/05/2014 | 0.23 U | 0.19 U | 5.8 | 1 | 0.30 U | **25.4** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **4.3** |
| DPT0293 | 31 to 35 | 06/05/2014 | 0.23 U | 0.19 U | 0.22 U | 0.47 I | 0.30 U | 0.53 I |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 2.9 | 0.30 U | **37.6** |
| | 41 to 45 | | 2.3 U | 1.9 U | 27 | 3.6 I | 3.0 U | **260** |
| | 46 to 50 | | 2.3 U | 1.9 U | **100** | 3.4 I | 3.0 U | **100** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0294 | 16 to 20 | 06/05/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 34.8 | 0.66 I | 0.30 U | **38.6** |
| | 31 to 35 | | **46 U** | **190 I** | **8,400** | **110 I** | **60 U** | **2,200** |
| | 36 to 40 | | 0.23 U | 0.19 U | 58.6 | 0.74 I | 0.30 U | **17.5** |
| | 41 to 45 | | 0.23 U | 0.19 U | 7.7 | 0.29 U | 0.30 U | **1.8** |
| DPT0295 | 16 to 20 | 06/06/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 21 to 25 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 26 to 30 | | 0.23 U | 0.19 U | 0.22 U | 2.7 | 0.30 U | **8.3** |
| | 31 to 35 | | **46 U** | **17,000** | **20,000** | **540** | **60 U** | **4,300** |
| | 36 to 40 | | 2.3 U | 2.4 I | **370** | 7.0 I | 3.0 U | **150** |
| | 41 to 45 | | 0.23 U | **27.8** | **146** | 3 | 0.30 U | **8.7** |
| DPT0296 | 31 to 35 | 06/06/2014 | 0.23 U | 0.19 U | 0.23 I | 1.8 | 0.30 U | **21.3** |
| | 36 to 40 | | 2.3 U | 1.9 U | 31 | 10 | 3.0 U | **530** |
| | 41 to 45 | | 2.3 U | 1.9 U | **560** | 13 | 3.0 U | **150** |
| | 46 to 50 | | 4.6 U | 3.8 U | **2,000** | 63 | 6.0 U | **300** |
| | 56 to 60 | 06/09/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0297 | 31 to 35 | 06/09/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 2.4 | 3.8 | 0.30 U | **100** |
| | 41 to 45 | | 2.3 U | 1.9 U | **460** | 13 | 3.0 U | **590** |
| | 46 to 50 | | 2.3 U | 1.9 U | **180** | 8.9 I | 3.0 U | **460** |
| DPT0298 | 31 to 35 | 06/09/2014 | 2.3 U | **8.7 I** | **430** | 14 | 3.0 U | **420** |
| | 36 to 40 | | 2.3 U | **3.8 I** | **1,300** | 31 | 3.0 U | **430** |
| | 41 to 45 | | 4.6 U | 3.8 U | **2,000** | 49 | 6.0 U | **430** |
| | 46 to 50 | | 2.3 U | 1.9 U | 52 | 2.9 U | 3.0 U | **63** |
| | 56 to 60 | | 0.23 U | 0.19 U | 1.6 | 0.29 U | 0.30 U | 0.26 U |
| DPT0299 | 31 to 35 | 06/09/2014 | 0.23 U | 0.19 U | 0.22 U | 0.82 I | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 1.3 | 0.30 U | **44.3** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.33 I | 1.7 | 0.30 U | **36.2** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0300 | 36 to 40 | 06/09/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | 06/10/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0301 | 36 to 40 | 06/10/2014 | 4.6 U | **15 I** | **1,000** | 26 | 6.0 U | **670** |
| | 41 to 45 | | 4.6 U | 3.8 U | **1,200** | 26 | 6.0 U | **370** |
| | 46 to 50 | | 2.3 U | 1.9 U | **180** | 5.1 I | 3.0 U | **130** |
| | 56 to 60 | | 0.23 U | 0.19 U | 1.2 | 0.29 U | 0.30 U | 0.26 U |
| DPT0302 | 41 to 45 | 06/10/2014 | 4.6 U | 3.8 U | **1,300** | 30 | 6.0 U | **250** |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0302 | 46 to 50 | 06/10/2014 | 2.3 U | 1.9 U | **560** | 14 | 3.0 U | **200** |
| DPT0303 | 36 to 40 | 06/10/2014 | 0.23 U | 0.19 U | 2.8 | 0.29 U | 0.30 U | **21.9** |
| | 41 to 45 | | 0.23 U | 0.19 U | **80.7** | 1 | 0.30 U | **18.5** |
| | 46 to 50 | | 0.23 U | 0.19 U | 5.5 | 0.29 U | 0.30 U | **2.8** |
| DPT0304 | 31 to 35 | 06/10/2014 | 0.23 U | 0.19 U | 2.1 | 0.29 U | 0.30 U | **9.6** |
| | 36 to 40 | | 0.23 U | 0.19 U | 7.2 | 1.3 | 0.30 U | **90.7** |
| | 41 to 45 | | 0.23 U | 0.19 U | 1.6 | 1.7 | 0.30 U | **95.3** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.88 I |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0305 | 36 to 40 | 06/10/2014 | 0.23 U | 0.19 U | 13.2 | 0.29 U | 0.30 U | **19.2** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.70 I | 0.29 U | 0.30 U | **8.9** |
| DPT0306 | 31 to 35 | 06/11/2014 | 1.2 U | 0.95 U | **230** | 1.5 U | 1.5 U | **46** |
| | 36 to 40 | | 0.23 U | 0.19 U | 22.1 | 0.68 I | 0.30 U | **66.2** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.26 I | 0.29 U | 0.30 U | **2.2** |
| DPT0307 | 26 to 30 | 06/11/2014 | 0.23 U | 0.19 U | 1.1 | 0.29 U | 0.30 U | **1.6** |
| | 31 to 35 | | 0.23 U | 0.19 U | 12.6 | 0.29 U | 0.30 U | **17.7** |
| | 36 to 40 | | 0.23 U | 0.19 U | 7.1 | 0.29 U | 0.30 U | **31.6** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **28.2** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.33 I | 0.29 U | 0.30 U | **11.4** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0308 | 26 to 30 | 06/11/2014 | 0.23 U | 0.19 U | 4.8 | 0.29 U | 0.30 U | **13.8** |
| | 31 to 35 | | 0.23 U | 0.19 U | 10.3 | 0.29 U | 0.30 U | **20.3** |
| | 36 to 40 | | 0.23 U | 0.19 U | 21.7 | 0.29 U | 0.30 U | **70.9** |
| | 41 to 45 | | 0.23 U | 0.19 U | 9.4 | 0.29 U | 0.30 U | **59.9** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.36 I | 0.29 U | 0.30 U | **25** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0309 | 31 to 35 | 06/12/2014 | 0.23 U | 0.19 U | 0.22 U | 1.4 | 0.30 U | 0.53 I |
| | 36 to 40 | | 2.3 U | 1.9 U | 50 | 6.7 I | 3.0 U | **450** |
| | 41 to 45 | | 2.3 U | 1.9 U | **560** | 20 | 3.0 U | **280** |
| | 46 to 50 | | 0.23 U | 0.19 U | 5.6 | 1.2 | 0.30 U | **45.2** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0310 | 31 to 35 | 06/12/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.42 I | 0.30 U | 0.46 I |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.98 I | 0.30 U | 1.4 |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.63 I | 0.30 U | 0.86 I |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0311 | 31 to 35 | 06/12/2014 | 2.3 U | 1.9 U | **280** | 19 | 3.0 U | **770** |
| | 36 to 40 | | 4.6 U | 3.8 U | **3,300** | 87 | 6.0 U | **1,300** |
| | 41 to 45 | | **12 U** | **9.5 U** | **4,400** | **120** | **15 U** | **710** |
| | 46 to 50 | 06/13/2014 | 4.6 U | **51** | **1,900** | 71 | 6.0 U | **490** |
| | 56 to 60 | | 0.23 U | 0.24 I | 12.9 | 0.31 I | 0.30 U | **1.8** |
| DPT0312 | 31 to 35 | 06/13/2014 | 0.23 U | 0.19 U | 11.6 | 1.8 | 0.30 U | **145** |
| | 36 to 40 | | 0.23 U | 0.19 U | 26.4 | 2.2 | 0.30 U | **156** |
| | 41 to 45 | | 2.3 U | 1.9 U | 32 | 2.9 U | 3.0 U | **270** |
| | 46 to 50 | | 2.3 U | 1.9 U | 13 | 2.9 U | 3.0 U | **100** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0313 | 31 to 35 | 06/13/2014 | 0.23 U | 0.19 U | 0.83 I | 0.29 U | 0.30 U | **12.9** |
| | 36 to 40 | | 0.23 U | 0.19 U | 1.6 | 0.29 I | 0.30 U | **19.6** |
| | 41 to 45 | | 0.23 U | 0.19 U | 1.5 | 0.29 U | 0.30 U | **9.1** |
| | 46 to 50 | | 0.23 U | 0.20 I | **180** | 3.4 | 0.30 U | **27.4** |
| DPT0314 | 36 to 40 | 08/18/2014 | 0.23 U | 0.19 U | 31.2 | 3.3 | 0.30 U | **63.5** |
| | 41 to 45 | | 0.23 U | 0.19 U | 28 | 2.2 | 0.30 U | **63** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.45 I |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0315 | 36 to 40 | 08/18/2014 | 2.3 U | 1.9 U | **650** | 14 | 3.0 U | **290** |
| | 41 to 45 | | 4.6 U | 3.8 U | **1,100** | 18 I | 6.0 U | **290** |
| | 46 to 50 | | 0.23 U | 0.19 U | 20.3 | 0.29 U | 0.30 U | **3.2** |
| | 56 to 60 | | 0.23 U | 0.19 U | 34.1 | 0.37 I | 0.30 U | **6.3** |
| DPT0316 | 36 to 40 | 08/18/2014 | 0.23 U | 0.19 U | 8 | 1.1 | 0.30 U | **72.7** |
| | 41 to 45 | | 0.23 U | 0.19 U | 21.9 | 0.29 U | 0.30 U | **8.4** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0317 | 31 to 35 | 08/18/2014 | 0.23 U | 0.19 U | 30.7 | 12.9 | 0.30 U | **740** |
| | 36 to 40 | | 0.23 U | 0.19 U | 27.1 | 35.4 | 0.30 U | **1,900** |
| | 41 to 45 | 08/19/2014 | **12 U** | **10 U** | 29 I | 32 I | **15 U** | **2,800** |
| | 46 to 50 | | 0.23 U | 0.19 U | 6.4 | 1.1 | 0.30 U | **35** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.93 I |
| DPT0318 | 31 to 35 | 08/19/2014 | **12 U** | **10 U** | 11 U | 15 U | **15 U** | **1,000** |
| | 36 to 40 | | 2.3 U | 1.9 U | 20 | 20 | 3.0 U | **1,300** |
| | 41 to 45 | 08/22/2014 | 2.3 U | 1.9 U | 55 | 18.1 | 3.0 U | **1,800** |
| DPT0319 | 36 to 40 | 08/19/2014 | 0.23 U | 0.19 U | 1.2 | 0.63 I | 0.30 U | **2.5** |
| | 41 to 45 | | **12 U** | **10 U** | **2,200** | 71 | **15 U** | **630** |
| | 46 to 50 | | **23 U** | **410** | **3,700** | **120** | **30 U** | **350** |
| | 56 to 60 | | 0.23 U | 0.20 I | 5.2 | 0.29 U | 0.30 U | 0.33 I |
| DPT0320 | 36 to 40 | 08/19/2014 | 4.6 U | 3.8 U | 13 I | 5.8 U | 6.0 U | **400** |
| | 41 to 45 | | 4.6 U | 3.8 U | **460** | 17 I | 6.0 U | **980** |
| | 46 to 50 | | 4.6 U | 3.8 U | **1,000** | 29 | 6.0 U | **540** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.65 I | 0.29 U | 0.30 U | 0.30 I |
| DPT0321 | 36 to 40 | 08/19/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.49 I |
| | 41 to 45 | | 4.6 U | **7.0 I** | **1,200** | 33 | 6.0 U | **1,100** |
| | 46 to 50 | | 2.3 U | 1.9 U | **310** | 13 | 3.0 U | **380** |
| | 56 to 60 | | 0.23 U | 0.19 U | 6 | 0.29 U | 0.30 U | 1.4 |
| DPT0322 | 36 to 40 | 08/20/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 4.6 U | 3.8 U | 63 | 5.8 U | 6.0 U | **650** |
| | 46 to 50 | | **12 U** | **10 U** | **1,600** | 19 I | **15 U** | **680** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.28 I | 0.29 U | 0.30 U | 0.26 U |
| DPT0323 | 36 to 40 | 08/20/2014 | 0.23 U | 0.19 U | 0.22 U | 2.3 | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.40 I | 0.30 U | 0.26 U |
| | 46 to 50 | | 0.23 U | 0.19 U | 9.7 | 0.29 U | 0.30 U | 1.4 |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0324 | 36 to 40 | 08/20/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.46 U | 0.38 U | **110** | 6.9 | 0.60 U | **130** |
| | 46 to 50 | | **12 U** | **740** | **4,400** | **160** | **15 U** | **380** |
| | 56 to 60 | | 0.23 U | 0.19 U | 1.7 | 0.29 U | 0.30 U | 0.26 U |
| DPT0325 | 36 to 40 | 08/20/2014 | 0.23 U | 0.19 U | 1.4 | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 2.3 U | **60** | **1,200** | 34 | 3.0 U | **860** |
| | 46 to 50 | | 4.6 U | **38** | **1,500** | 29 | 6.0 U | **310** |
| DPT0326 | 36 to 40 | 08/20/2014 | 0.23 U | 0.19 U | 0.46 I | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 46 to 50 | | 2.3 U | 1.9 U | **200** | 13 | 3.0 U | **1,000** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0327 | 36 to 40 | 08/21/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | **12 U** | **26 I** | **2,700** | 69 | **15 U** | **1,600** |
| | 46 to 50 | | **12 U** | **130** | **2,900** | 90 | **15 U** | **1,100** |
| | 51 to 55 | | 1.2 U | 1.6 I | **210** | 4.6 I | 1.5 U | **70** |
| | 56 to 60 | | 0.23 U | 0.91 I | 28.6 | 0.72 I | 0.30 U | **8.7** |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0328 | 36 to 40 | 08/21/2014 | 0.46 U | 0.38 U | 2.6 | 2.5 | 0.60 U | **100** |
| | 41 to 45 | | 1.2 U | 1.0 U | 3.2 I | 3.0 I | 1.5 U | **160** |
| | 46 to 50 | | 0.23 U | 0.19 U | 42 | 5.9 | 0.30 U | **137.4** |
| | 51 to 55 | | 2.3 U | 1.9 U | **1,000** | 35 | 3.0 U | **120** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.82 I | 0.29 U | 0.30 U | 0.66 I |
| DPT0329 | 36 to 40 | 08/21/2014 | **12 U** | **10 U** | 51 | 19 I | **15 U** | **2,500** |
| | 41 to 45 | | **12 U** | **10 U** | 40 I | 18 I | **15 U** | **1,700** |
| | 46 to 50 | | 2.3 U | 1.9 U | 24 | 5.1 I | 3.0 U | **420** |
| | 51 to 55 | | 0.46 U | 0.38 U | 7.3 | 1.0 I | 0.60 U | **49** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **2.6** |
| DPT0330 | 36 to 40 | 08/21/2014 | 0.23 U | 0.19 U | 0.22 U | 2.1 | 0.30 U | 0.26 U |
| | 41 to 45 | | 2.3 U | 1.9 U | **120** | 8.2 I | 3.0 U | **520** |
| | 46 to 50 | | **12 U** | **10 U** | **270** | 15 U | **15 U** | **870** |
| | 51 to 55 | | 2.3 U | 1.9 U | **430** | 11 | 3.0 U | **380** |
| | 56 to 60 | | 0.23 U | 0.19 U | 2.5 | 0.29 U | 0.30 U | **7** |
| DPT0331 | 31 to 35 | 08/22/2014 | **12 U** | **10 U** | 56 | 16 I | **15 U** | **2,200** |
| | 36 to 40 | | **12 U** | **10 U** | 39 I | 33 I | **15 U** | **2,500** |
| | 41 to 45 | | 4.6 U | 3.8 U | 10 I | 5.8 I | 6.0 U | **600** |
| | 46 to 50 | | 0.46 U | 0.38 U | 13 | 1.3 I | 0.60 U | **47** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.28 I | 0.29 U | 0.30 U | **7.3** |
| DPT0332 | 31 to 35 | 08/22/2014 | 0.23 U | 0.19 U | 0.50 I | 0.29 U | 0.30 U | **1.9** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.35 I | 1.4 | 0.30 U | **3.4** |
| | 41 to 45 | | 0.46 U | 0.38 U | **110** | 3.1 | 0.60 U | **88** |
| | 46 to 50 | | 2.3 U | 1.9 U | **1,200** | 29 | 3.0 U | **230** |
| | 56 to 60 | | 0.23 U | 0.19 U | 10 | 0.29 U | 0.30 U | 1.2 |
| DPT0333 | 26 to 30 | 08/22/2014 | 0.23 U | 0.19 U | 18.9 | 0.29 U | 0.30 U | **3.4** |
| | 36 to 40 | | 2.3 U | 1.9 U | 57 | 2.9 U | 3.0 U | **24** |
| | 41 to 45 | | 0.23 U | 0.19 U | 22.9 | 0.29 U | 0.30 U | **19.1** |
| | 46 to 50 | | 0.23 U | 0.19 U | 1.8 | 0.29 U | 0.30 U | **21.2** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.37 I | 0.29 U | 0.30 U | 0.26 U |
| DPT0334 | 31 to 35 | 08/23/2014 | 0.23 U | 0.19 U | 3.6 | 5.7 | 0.30 U | **1,300** |
| | 36 to 40 | | 0.23 U | 0.19 U | 3.7 | 9.2 | 0.30 U | **1,500** |
| | 41 to 45 | | 2.3 U | 1.9 U | 4.9 I | 3.5 I | 3.0 U | **530** |
| | 46 to 50 | | 2.3 U | 1.9 U | 2.2 U | 2.9 U | 3.0 U | **8.8 I** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **3** |
| DPT0335 | 31 to 35 | 08/23/2014 | 2.3 U | 1.9 U | 2.2 U | 2.9 U | 3.0 U | **2.6 U** |
| | 36 to 40 | | 0.23 U | 0.19 U | 5.3 | 0.29 U | 0.30 U | **13.4** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.79 I |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0336 | 26 to 30 | 08/23/2014 | 4.6 U | 3.8 U | 6.6 I | 5.8 U | 6.0 U | **1,500** |
| | 31 to 35 | | 4.6 U | 3.8 U | 4.4 U | 13 I | 6.0 U | **2,400** |
| | 36 to 40 | | 2.3 U | 1.9 U | 2.2 U | 2.9 U | 3.0 U | **140** |
| | 41 to 45 | | 2.3 U | 1.9 U | 2.2 U | 2.9 U | 3.0 U | **2.6 U** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.53 I |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **3.4** |
| DPT0337 | 31 to 35 | 08/23/2014 | 0.23 U | 0.19 U | 3.3 | 0.29 U | 0.30 U | **17.7** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | 08/24/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0338 | 26 to 30 | 08/24/2014 | 0.23 U | 0.19 U | 0.22 U | 0.71 I | 0.30 U | 1.4 |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0339 | 26 to 30 | 08/24/2014 | 4.6 U | 3.8 U | 4.4 U | 5.8 U | 6.0 U | **210** |
| | 31 to 35 | | 4.6 U | 3.8 U | 4.4 U | 5.8 U | 6.0 U | **700** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.79 I |
| DPT0340 | 31 to 35 | 09/22/2014 | 0.23 U | 0.19 U | 0.22 U | 0.74 I | 0.30 U | 0.26 U |
| | 36 to 40 | | 4.6 U | 3.8 U | **350** | 14 I | 6.0 U | **460** |
| | 41 to 45 | | 4.6 U | 3.8 U | **320** | 13 I | 6.0 U | **450** |
| | 46 to 50 | | 1.2 U | 0.95 U | 4.5 I | 1.5 U | 1.5 U | **43.0** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.35 I | 0.29 U | 0.30 U | 0.26 U |
| DPT0341 | 31 to 35 | 09/22/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 2.8 | 4.7 | 0.30 U | **100** |
| | 41 to 45 | | **12 U** | **9.5 U** | **1,300** | 28 I | **15 U** | **560** |
| | 46 to 50 | | 2.3 U | 1.9 U | **140** | 2.9 U | 3.0 U | **36.0** |
| | 51 to 55 | | 0.23 U | 0.19 U | 4.7 | 0.33 I | 0.30 U | **7.6** |
| | 56 to 60 | 09/23/2014 | 0.23 U | 0.19 U | 22.3 | 0.44 I | 0.30 U | **8.9** |
| DPT0342 | 31 to 35 | 09/23/2014 | 0.23 U | 0.19 U | 0.22 U | 0.49 I | 0.30 U | 0.29 I |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 1.3 | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.74 I | 0.30 U | **5.2** |
| | 46 to 50 | | 0.23 U | 0.19 U | 26.2 | 2.8 | 0.30 U | **120** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.77 I |
| DPT0343 | 31 to 35 | 09/23/2014 | 0.23 U | 0.19 U | 0.22 U | 0.31 I | 0.30 U | **3.0** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.36 I | 0.32 I | 0.30 U | **21.6** |
| | 41 to 45 | | 0.23 U | 0.19 U | 9.3 | 1.4 | 0.30 U | **81.4** |
| | 46 to 50 | | 0.23 U | 0.19 U | 18.4 | 0.63 I | 0.30 U | **12.0** |
| | 51 to 55 | 09/29/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.23 I | 0.29 U | 0.30 U | 0.26 U |
| DPT0344 | 31 to 35 | 09/24/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 2.3 U | 1.9 U | **100** | 2.9 U | 3.0 U | **26.0** |
| | 41 to 45 | | 0.23 U | 0.19 U | 3.3 | 0.49 I | 0.30 U | **5.3** |
| | 46 to 50 | | 0.46 U | 0.38 U | 42.0 | 0.80 I | 0.60 U | **29.0** |
| | 51 to 55 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.78 I | 0.29 U | 0.30 U | 0.26 U |
| DPT0345 | 31 to 35 | 09/24/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 1.1 |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 51 to 55 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.40 I |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0346 | 31 to 35 | 09/24/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 5.3 | 1.5 | 0.30 U | **26.0** |
| | 41 to 45 | | 0.23 U | 0.19 U | 1.8 | 0.29 U | 0.30 U | **7.8** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 51 to 55 | | 0.23 U | 0.19 U | 0.24 I | 0.29 U | 0.30 U | 0.78 I |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0347 | 26 to 30 | 09/25/2014 | 0.23 U | 0.19 U | 1.8 | 0.29 U | 0.30 U | **9.6** |
| | 31 to 35 | | 0.23 U | 0.19 U | 1.1 | 0.29 U | 0.30 U | **3.7** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.7 I |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0348 | 31 to 35 | 09/25/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 51 to 55 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.90 I | 0.29 U | 0.30 U | 0.26 U |

**DPT Sampling Results - Chlorinated Volatile Organic Compounds**
**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Concentration (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Tetrachloroethene | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **3** | **70** | **100** | **7** | **1** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **300** | **700** | **1,000** | **70** | **100** |
| DPT0349 | 36 to 40 | 09/25/2014 | 0.23 U | 0.19 U | 8.9 | 0.45 I | 0.30 U | **6.8** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.76 I | 1.8 | 0.30 U | **21.0** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.49 I | 0.29 U | 0.30 U | **4.8** |
| | 51 to 55 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.62 I |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0350 | 31 to 35 | 09/26/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 1.6 | 0.29 U | 0.30 U | **13.0** |
| | 41 to 45 | | 2.3 U | 1.9 U | 45.0 | 2.9 U | 3.0 U | **160** |
| | 46 to 50 | | 4.6 U | 3.8 U | **100** | 5.8 U | 6.0 U | **280** |
| | 51 to 55 | | 0.23 U | 0.19 U | 13.0 | 2.1 | 0.30 U | **260** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.88 I | 0.29 U | 0.30 U | **4.5** |
| DPT0351 | 31 to 35 | 09/26/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.42 I |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **35.0** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **53.2** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **50.6** |
| | 51 to 55 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **2.8** |
| DPT0352 | 31 to 35 | 09/26/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **110** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **73.3** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **10.2** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **11.4** |
| | 51 to 55 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.98 I |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.44 I |
| DPT0353 | 26 to 30 | 09/29/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 31 to 35 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **100** |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.25 I | 0.29 U | 0.30 U | **8.4** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **2.1** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0354 | 31 to 35 | 09/29/2014 | 0.36 U | 0.43 I | 1.6 | 0.32 U | 0.35 U | **23.8** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.93 I | 0.29 U | 0.30 U | **22.4** |
| | 41 to 45 | | 1.2 U | 0.95 U | 1.8 I | 1.5 U | 1.5 U | **21.0** |
| | 46 to 50 | | 1.2 U | 0.95 U | **230** | 3.7 I | 1.5 U | **55.0** |
| | 51 to 55 | | 0.23 U | 0.19 U | 4.7 | 0.29 U | 0.30 U | **4.8** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0355 | 31 to 35 | 09/29/2014 | 0.23 U | 0.19 U | 1.9 | 0.29 U | 0.30 U | **4.3** |
| DPT0356 | 31 to 35 | 09/30/2014 | 0.36 U | 0.31 U | 0.28 U | 0.32 U | 0.35 U | 0.31 U |
| | 36 to 40 | | 0.36 U | 0.31 U | 0.28 U | 0.32 U | 0.35 U | 0.31 U |
| | 41 to 45 | | 0.36 U | 0.31 U | 1.4 | 2.0 | 0.35 U | **64.0** |
| | 46 to 50 | | 0.36 U | 0.31 U | 0.28 U | 0.32 U | 0.35 U | 0.94 I |
| | 51 to 55 | | 0.36 U | 0.31 U | 0.28 U | 0.32 U | 0.35 U | 0.31 U |
| | 56 to 60 | | 0.36 U | 0.31 U | 0.28 U | 0.32 U | 0.35 U | 0.31 U |
| DPT0357 | 31 to 35 | 09/30/2014 | 0.36 U | 0.31 U | 0.28 U | 0.32 U | 0.35 U | 0.31 U |
| | 36 to 40 | | 0.36 U | 0.31 U | 0.74 I | 0.32 U | 0.35 U | **2.5** |
| | 41 to 45 | | 0.36 U | 0.31 U | 17.6 | 1.3 | 0.35 U | **90.0** |
| | 46 to 50 | | 0.36 U | 0.31 U | 3.5 | 0.32 U | 0.35 U | **9.7** |
| | 51 to 55 | | 0.36 U | 0.31 U | 3.1 | 0.32 U | 0.35 U | **2.2** |
| | 56 to 60 | | 0.36 U | 0.31 U | 0.28 U | 0.32 U | 0.35 U | 0.31 U |
| DPT0358 | 26 to 30 | 11/10/2014 | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **210** |
| | 31 to 35 | | 0.23 U | 0.19 U | 1.5 | 0.29 U | 0.30 U | **120** |
| | 36 to 40 | | 1.2 U | 0.95 U | 1.1 U | 1.5 U | 1.5 U | 3.3 I |
| | 41 to 45 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **26** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **12.9** |
| | 51 to 55 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | **3** |
| | 56 to 60 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.26 U |
| DPT0359 | 31 to 35 | 11/10/2014 | 0.23 U | 0.19 U | 20 | 3.1 | 0.30 U | **131** |
| | 36 to 40 | | 0.23 U | 0.19 U | 0.22 U | 0.29 U | 0.30 U | 0.45 I |
| | 41 to 45 | | 0.23 U | 0.17 U | 0.16 U | 0.16 U | 0.15 U | 0.16 U |
| | 46 to 50 | | 0.23 U | 0.17 U | 0.46 I | 0.16 U | 0.15 U | 0.91 I |
| | 51 to 55 | | 0.23 U | 0.17 U | 0.16 U | 0.16 U | 0.15 U | 0.16 U |
| | 56 to 60 | 11/11/2014 | 1.2 U | 0.85 U | 0.80 U | 0.80 U | 0.75 U | 0.80 U |
| DPT0360 | 36 to 40 | 11/11/2014 | 1.2 U | 0.85 U | 3.4 I | 0.80 U | 0.75 U | 3.8 I |
| | 41 to 45 | | 1.2 U | 0.85 U | 6.5 | 0.80 U | 0.75 U | **47** |
| | 46 to 50 | | 1.2 U | 0.85 U | 2.4 I | 1.3 I | 0.75 U | **130** |
| | 51 to 55 | | 0.23 U | 0.17 U | 0.16 U | 0.16 U | 0.15 U | 0.16 U |
| | 56 to 60 | | 2.3 U | 1.7 U | 1.6 U | 1.6 U | 1.5 U | 1.6 U |
| DPT0361 | 31 to 35 | 11/11/2014 | 0.23 U | 0.17 U | 1.7 | 0.16 U | 0.15 U | 0.56 I |
| | 36 to 40 | | 0.23 U | 0.17 U | 3 | 0.16 U | 0.15 U | 0.66 I |
| | 41 to 45 | | 0.23 U | 0.17 U | 8 | 0.16 U | 0.15 U | 1.2 |
| | 46 to 50 | | 0.23 U | 0.17 U | 7.2 | 0.16 U | 0.15 U | 1.2 |
| | 51 to 55 | | 0.23 U | 0.17 U | 7.9 | 0.16 U | 0.15 U | **7.1** |
| | 56 to 60 | | 1.2 U | 0.85 U | 0.80 U | 0.80 U | 0.75 U | 0.80 U |
| DPT0362 | 31 to 35 | 11/11/2014 | 1.2 U | 0.85 U | 0.80 U | 0.80 U | 0.75 U | 0.80 U |
| | 36 to 40 | | 1.2 U | 0.85 U | 2.2 I | 0.80 U | 0.75 U | 2.0 I |
| | 41 to 45 | | 0.23 U | 3.4 | **130** | 13.5 | 0.33 I | **770** |
| | 46 to 50 | 11/12/2014 | 0.23 U | **27.1** | **1,100** | 59.6 | 2.5 | **1,500** |
| | 51 to 55 | | 0.23 U | 0.17 U | 8.7 | 0.56 I | 0.15 U | **5** |
| | 56 to 60 | | 1.2 U | 0.85 U | **300** | 12 | 0.75 U | **270** |
| DPT0363 | 31 to 35 | 11/12/2014 | 0.23 U | 0.19 U | 0.53 I | 0.29 U | 0.30 U | 0.26 U |
| | 36 to 40 | | 0.23 U | 0.19 U | 1.5 | 0.29 U | 0.30 U | 0.26 U |
| | 41 to 45 | | 0.23 U | 0.19 U | 3.4 | 0.29 U | 0.30 U | **5.2** |
| | 46 to 50 | | 0.23 U | 0.19 U | 0.30 I | 0.29 U | 0.30 U | 1.2 |
| | 51 to 55 | | 0.46 U | 0.38 U | 0.44 U | 0.58 U | 0.60 U | 0.52 U |
| | 56 to 60 | | 1.2 U | 0.95 U | 1.1 U | 1.5 U | 1.5 U | 1.3 U |

**Notes**:
1. µg/L indicates micrograms per liter.
2. ft BLS indicates feet below land surface.
3. U indicates not detected above method detection limit.
4. J indicates estimated value.
5. I indicates result is between the method detection limit and the practical quantitation limit.
6. L indicates value exceeds calibration range.
7. Dashes indicates not analyzed.
8. FDEP indicates Florida Department of Environmental Protection.
9. Bold indicates analyte detected above the FDEP Groundwater Cleanup Target Level (GCTL).
10. Shading and bold denotes greater than the FDEP Natural Attenuation Default Concentration (NADC).

# APPENDIX H

# SUMMARY OF MONITORING WELL SAMPLING RESULTS

**Monitoring Well Sampling Results - VOCs**

**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Trichloroethene | *cis* -1,2-dichloroethane | *trans* -1,2-dichloroethane | 1,1-dichloroethane | 1,1-dichloroethene | Vinyl chloride | Acetone | Benzene | Bromodichloromethane | Chlorobenzene | Chloroform | Dibromochloromethane | Dichlorodifluoromethane | Methylene Chloride | Toluene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **70** | **100** | **70** | **7** | **1** | **6,300** | **1** | **91** | **100** | **70** | **0.4** | **1,400** | **2.7** | **1,000** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **700** | **1,000** | **700** | **70** | **100** | **63,000** | **100** | **910** | **1,000** | **700** | **40** | **14,000** | **270** | **10,000** |
| CRHE-IW0014I | 30 to 40 | 03/21/2012 | 0.16 U | 0.36 U | 0.12 U | 0.13 U | 0.16 U | 0.22 U | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 4 I | 0.21 U | 3.6 |
| | | 05/6/2005 | 0.50 U | 1.3 | 0.50 U | 0.50 U | -- | 0.50 U | 5.6 U | 0.21 U | 0.17 U | 0.21 I | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| CRHE-IW0014D | 65 to 70 | 05/13/2005 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | -- | 0.50 U | 5.6 U | 0.32 I | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| CRHE-IW0014I | 35 to 45 | 05/13/2005 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | -- | **99.1** | 5.6 U | 0.48 I | 0.17 U | 1.3 | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.25 I |
| | | 10/27/2005 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | -- | **3.7** | 5.6 U | 0.25 I | 0.17 U | 0.49 I | 0.35 U | 0.19 U | 79 | 0.21 U | 0.19 U |
| | | 05/9/2006 | 0.70 U | 0.93 J | 0.50 U | 0.70 U | -- | **70.9** | 5.6 U | 0.21 U | 0.17 U | 0.98 I | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| | | 05/15/2006 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | -- | **81.3** | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.51 I | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| | | 11/7/2006 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | -- | **29** | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.7 I | 0.19 U | 0.23 U | 0.21 I | 0.19 U |
| | | 05/16/2007 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | -- | **2.2** | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| | | 11/12/2007 | 0.38 U | 0.28 U | 0.20 U | 0.23 U | -- | 0.34 U | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.41 I |
| | | 05/20/2008 | 0.32 U | 0.2 U | 0.45 U | 0.54 U | -- | **21.8** | 5.6 U | 0.21 U | 6.4 | 0.16 U | 0.41 I | 0.19 U | 0.23 U | 0.22 I | 0.36 I |
| | | 11/10/2008 | 0.32 U | 0.2 U | 0.45 U | 0.54 U | -- | 1.3 | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.22 I |
| | | 05/15/2009 | 0.32 U | 0.2 U | 0.45 U | 0.54 U | -- | **14.5** | 5.6 U | 0.59 I | 0.17 U | 0.31 I | 4.2 | 0.19 U | 0.23 U | 0.55 I | 0.19 U |
| | | 03/21/2012 | 0.16 U | 0.36 U | 0.12 U | 0.13 U | 0.16 U | 0.22 U | 5.6 U | 0.21 U | 1.4 | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| CRHE-IW0015I | 35 to 45 | 05/13/2005 | 0.50 U | 53.8 | 0.50 U | 0.50 U | -- | **20** | 5.9 I | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| | | 10/27/2005 | 0.50 U | 29.6 | 0.50 U | 0.50 U | -- | **12.3** | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| | | 05/15/2006 | 0.50 U | 26.1 | 0.50 U | 0.50 U | -- | **18.2** | 5.6 U | 0.21 U | 0.57 I | 0.62 I | 6.6 | 0.31 I | 0.23 U | 0.3 I | 0.71 I |
| | | 11/7/2006 | 0.50 U | 2.2 | 0.50 U | 0.50 U | -- | **2.7** | 9.9 I | 0.21 U | 0.17 U | 0.42 I | 0.35 U | 0.19 U | 3 I | 0.21 U | 0.19 U |
| | | 05/16/2007 | 0.50 U | 56.7 | 0.50 U | 0.50 U | -- | **26.4** | 5.6 U | 0.36 I | 0.17 U | 3.4 | 0.35 U | 0.19 U | 140 | 0.21 U | 0.19 U |
| | | 11/12/2007 | 0.38 U | 35.2 | 0.20 U | 0.23 U | -- | **20** | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.23 I |
| | | 05/20/2008 | 0.32 U | 61 | 0.45 U | 0.54 U | -- | **31.2** | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| | | 11/11/2008 | 0.32 U | 53.2 | 0.45 U | 0.54 U | -- | **34.9** | 5.6 U | 0.25 I | 0.17 U | 1.2 | 0.35 U | 0.19 U | 8 I | 0.21 U | 0.2 I |
| | | 05/15/2009 | 0.64 U | **106** | 0.9 U | 1.1 U | -- | **43.7** | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| | | 03/19/2012 | 0.16 U | **76** | 0.12 U | 2 | 0.16 U | **27** | 5.6 U | 0.21 U | 0.17 U | 0.21 I | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| CRHE-IW0016I | 35 to 45 | 05/13/2005 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | -- | 0.50 U | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 10/27/2005 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | -- | 0.50 U | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| CRHE-IW0017I | 25 to 35 | 05/6/2005 | 0.50 U | 0.64 J | 0.50 U | 0.50 U | -- | **142** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 10/27/2005 | 2.5 U | 2.5 U | 2.5 U | 2.5 U | -- | **140** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 05/9/2006 | 0.70 U | 0.70 U | 0.50 U | 0.70 U | -- | **56.4** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 05/15/2006 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | -- | **114** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 11/7/2006 | 0.50 U | 0.57 I | 0.50 U | 0.50 U | -- | **111** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 05/16/2007 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | -- | **98.4** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 11/12/2007 | 0.38 U | 0.28 U | 0.20 U | 0.23 U | -- | **122** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 05/20/2008 | 0.32 U | 0.48 I | 0.45 U | 0.54 U | -- | **83.6** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 11/10/2008 | 0.32 U | 0.49 I | 0.45 U | 0.54 U | -- | **91.8** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 05/15/2009 | 0.32 U | 0.49 I | 0.45 U | 0.54 U | -- | **76.3** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 03/20/2012 | 0.16 U | 0.52 I | 0.27 I | 0.13 U | 0.16 U | **90** | 5.6 U | 0.32 I | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| CRHE-IW0018I | 35 to 45 | 05/16/2007 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | -- | 0.50 U | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 11/12/2007 | 0.38 U | 0.28 U | 0.20 U | 0.23 U | -- | **10.3** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 05/20/2008 | 0.32 U | 0.2 U | 0.45 U | 0.54 U | -- | 0.3 U | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 11/10/2008 | 0.32 U | 0.2 U | 0.45 U | 0.54 U | -- | **6.4** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 05/15/2009 | 0.32 U | 0.2 U | 0.45 U | 0.54 U | -- | 0.3 U | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| CRHE-IW0019I | 35 to 45 | 05/16/2007 | 0.50 U | **425** | 5.8 | 1.6 | -- | **253** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 11/12/2007 | 3.8 U | **525** | 2.0 U | 2.3 U | -- | **267** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 05/20/2008 | 0.32 U | **327** | 5.1 | 1.6 | -- | **215** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 11/11/2008 | 3.2 U | **810** | 10 | 5.4 U | -- | **336** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 05/15/2009 | 3.2 U | **753** | 12.5 | 5.4 U | -- | **324** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 03/20/2012 | 0.16 U | **1,000** | 18 | 0.13 U | 4.1 | **530** | 5.6 U | 0.48 I | 0.17 U | 1.3 | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.25 I |
| CRHE-IW0020I | 40 to 50 | 05/16/2007 | 0.50 U | 12.1 | 0.50 U | 0.50 U | -- | **38.5** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 11/12/2007 | 0.38 U | 8.2 | 0.20 U | 0.23 U | -- | **26.2** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 05/20/2008 | 0.32 U | 18.6 | 0.45 U | 0.54 U | -- | **54.5** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 11/11/2008 | 0.32 U | 9.5 | 0.45 U | 0.54 U | -- | **59.7** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 05/15/2009 | 0.32 U | 17.6 | 0.45 U | 0.54 U | -- | **82.3** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 03/19/2012 | 0.16 U | 33 | 0.27 I | 0.13 U | 0.16 U | **130** | 5.6 U | 0.25 I | 0.17 U | 0.49 I | 0.35 U | 0.19 U | 79 | 0.21 U | 0.19 U |
| CRHE-IW0021I | 40 to 50 | 05/16/2007 | 0.50 U | 0.66 I | 0.50 U | 0.50 U | -- | **4.5** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 11/12/2007 | 0.38 U | 0.62 I | 0.20 U | 0.23 U | -- | 0.34 U | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 05/20/2008 | 0.32 U | 0.5 I | 0.45 U | 0.54 U | -- | **16.3** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 11/11/2008 | 0.32 U | 0.73 I | 0.45 U | 0.54 U | -- | **21.9** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 05/15/2009 | 0.32 U | 0.2 U | 0.45 U | 0.54 U | -- | **13.6** | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 03/20/2012 | 0.16 U | 0.36 U | 0.12 U | 0.13 U | 0.16 U | 0.22 U | 5.6 U | 0.21 U | 0.17 U | 0.98 I | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| CRHE-MW0022 | 60 to 70 | 03/21/2012 | 0.22 I | 1.5 | 0.12 U | 0.13 U | 0.16 U | 0.22 U | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.51 I | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| CRHE-MW0023 | 60 to 70 | 03/19/2012 | 0.16 U | 0.46 I | 0.12 U | 0.13 U | 0.16 U | 0.22 U | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.7 I | 0.19 U | 0.23 U | 0.21 I | 0.19 U |
| CRHE-MW0024 | 5 to 15 | 03/21/2012 | 0.74 I | 11 | 0.12 U | 0.13 U | 0.16 U | **13** | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |

**Monitoring Well Sampling Results - VOCs**

**Contractors Road Heavy Equipment Area SWMU 055**

| Location | Screen Interval (ft BLS) | Sample Date | Trichloroethene | *cis* -1,2-dichloroethane | *trans* -1,2-dichloroethane | 1,1-dichloroethane | 1,1-dichloroethene | Vinyl chloride | Acetone | Benzene | Bromodichloromethane | Chlorobenzene | Chloroform | Dibromochloromethane | Dichlorodifluoromethane | Methylene Chloride | Toluene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Groundwater Cleanup Target Level (µg/L)** | | | **3** | **70** | **100** | **70** | **7** | **1** | **6,300** | **1** | **91** | **100** | **70** | **0.4** | **1,400** | **2.7** | **1,000** |
| **Natural Attenuation Default Criteria (µg/L)** | | | **300** | **700** | **1,000** | **700** | **70** | **100** | **63,000** | **100** | **910** | **1,000** | **700** | **40** | **14,000** | **270** | **10,000** |
| CRHE-MW0025 | 25 to 35 | 03/21/2012 | 0.6 I | **9,700** | 75 | 2.2 | **15** | **7,600** | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.41 I |
| CRHE-MW0026 | 30 to 40 | 03/21/2012 | **1,000** | **3,600** | 34 | 3.5 | **9.1** | **2,000** | 5.6 U | 0.21 U | 6.4 | 0.16 U | 0.41 I | 0.19 U | 0.23 U | 0.22 I | 0.36 I |
| CRHE-MW0027 | 40 to 50 | 03/21/2012 | 1.3 | **790** | 14 | 0.96 I | 2.7 | **1,700** | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.22 I |
| CRHE-MW0028 | 35 to 45 | 03/20/2012 | 0.16 U | 3.5 | 4.1 | 0.13 U | 0.16 U | **180** | 5.6 U | 0.59 I | 0.17 U | 0.31 I | 4.2 | 0.19 U | 0.23 U | 0.55 I | 0.19 U |
| CRHE-MW0029 | 40 to 50 | 03/21/2012 | **140** | **420** | 13 | 0.13 U | 1.4 | **100** | 5.6 U | 0.21 U | 1.4 | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| CRHE-MW0030 | 5 to 15 | 03/19/2012 | 0.16 U | 0.36 U | 0.12 U | 0.13 U | 0.16 U | 0.22 U | 5.9 I | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| CRHE-MW0031 | 40 to 50 | 03/19/2012 | 1.5 | 59 | 6 | 0.13 U | 0.16 U | **200** | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| CRHE-MW0032 | 40 to 50 | 03/19/2012 | 0.16 U | 13 | 8.2 | 0.54 I | 0.16 U | **83** | 5.6 U | 0.21 U | 0.57 I | 0.62 I | 6.6 | 0.31 I | 0.23 U | 0.3 I | 0.71 I |
| CRHE-MW0033 | 40 to 50 | 03/20/2012 | 0.52 I | **99** | 1.4 | 0.92 I | 0.16 U | **33** | 9.9 I | 0.21 U | 0.17 U | 0.42 I | 0.35 U | 0.19 U | 3 I | 0.21 U | 0.19 U |
| CRHE-MW0034 | 30 to 40 | 03/20/2012 | 0.16 U | 12 | 0.12 U | 0.13 U | 0.16 U | **150** | 5.6 U | 0.36 I | 0.17 U | 3.4 | 0.35 U | 0.19 U | 140 | 0.21 U | 0.19 U |
| CRHE-MW0035 | 40 to 50 | 03/20/2012 | 0.16 U | 0.55 I | 0.44 I | 0.26 I | 0.16 U | **130** | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.23 I |
| CRHE-MW0036 | 5 to 15 | 03/20/2012 | 0.16 U | 0.36 U | 0.12 U | 0.13 U | 0.16 U | 0.22 U | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| CRHE-MW0037 | 25 to 35 | 03/20/2012 | 0.16 U | 0.44 I | 0.12 U | 0.13 U | 0.16 U | **19** | 5.6 U | 0.25 I | 0.17 U | 1.2 | 0.35 U | 0.19 U | 8 I | 0.21 U | 0.2 I |
| CRHE-MW0038 | 5 to 15 | 03/19/2012 | 0.16 U | 0.36 U | 0.12 U | 0.13 U | 0.16 U | 0.22 U | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.23 U | 0.21 U | 0.19 U |
| CRHE-MW0039 | 25 to 35 | 03/19/2012 | 0.16 U | 0.49 I | 0.43 I | 0.13 U | 0.16 U | **92** | 5.6 U | 0.21 U | 0.17 U | 0.16 U | 0.35 U | 0.19 U | 0.96 I | 0.21 U | 0.5 I |
| CRHE-MW0040 | 65 to 75 | 7/11/2013 | 1 U | 1 U | 1 U | 1 U | -- | 1 U | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**Notes**:
1. Results are shown in units of micrograms per liter (µg/L).
2. ft BLS indicates feet below land surface.
3. U indicates not detected above method detection limit.
4. J indicates estimated value.
5. I indicates result is between the method detection limit and the practical quantitation limit.
6. FDEP indicates Florida Department of Environmental Protection.
7. Bold indicates analyte detected above the FDEP Groundwater Cleanup Target Level (GCTL).
8. Shading and bold denotes greater than FDEP Natural Attenuation Default Concentration (NADC).
9. Dashes indicate no data available.

# APPENDIX I

# INTERIM LAND USE CONTROL IMPLEMENTATION PLAN

# INTERIM LAND USE CONTROL IMPLEMENTATION PLAN

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
## KENNEDY SPACE CENTER
## BREVARD COUNTY, FLORIDA

| | |
|---|---|
| FACILITY: | Contractors Road Heavy Equipment (CRHE) Area<br>Solid Waste Management Unit 055 |
| CONTAMINANTS: | Volatile Organic Compounds in groundwater |
| CONTROL: | Prevent contact with groundwater |

### PURPOSE OF LAND USE CONTROL IMPLEMENTATION PLAN

This Interim Land Use Control Implementation Plan (LUCIP) has been prepared to inform current and potential future users of the Kennedy Space Center (KSC) Contractors Road Heavy Equipment (CRHE) Area (SWMU 055; "the Site") of institutional controls that have been implemented at the Site[1]. Although there are no current unacceptable risks to human health or the environment associated with the CRHE Area, an interim institutional land use control (LUC) is necessary to prevent human health exposure to volatile organic compound (VOC)-affected groundwater at the Site. Controls will include periodic inspection, condition certification, and agency notification.

### WHY LAND USE CONTROLS ARE NEEDED

VOCs have been identified in groundwater at the Site above applicable Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Level (GCTL) and Natural Attenuation Default Concentration (NADC) screening criteria.

### SITE DESCRIPTION

The CRHE Area is a group of NASA-operated facilities that includes the Printed Circuit Board Shop (PCBS-SWMU No. 31) and associated Acid Dump Site (SWMU No. 15); Sewage Treatment Plant (STP) No. 15 (SWMU No. 16); a polishing pond on the eastern edge of the SWMU boundary; a fenced area at the north end of the SWMU boundary where sandblasting and painting operations took place in the past; and Heavy Equipment Area buildings and parking areas south of the PCBS (SWMU No. 055). The CRHE Area buildings and parking areas have been used for a variety of operations including heavy equipment storage and maintenance dating back to the construction of NASA's Vehicle Assembly Building (VAB), and for staging of regulated and hazardous waste. Currently, the area is used

[1] *This LUCIP summarizes institutional controls regarding the NASA CRHE. For detailed information on the Site, consult the CRHE administrative file, which is available for review by contacting the KSC Environmental Assurance Branch at telephone number (321) 867-8402.*

for heavy equipment storage and maintenance. Hazardous wastes are no longer stored on site.

The PCBS facility has been used for manufacturing printed circuit boards, silk screening, plating, and laminating road signs. Spent chemicals from the circuit board process were temporarily stored in an underground storage tank (UST) located immediately east of the PCBS. The UST ruptured during removal on August 7, 1990 and the location was identified as the Acid Dump Site in a subsequent report. In addition, printed circuit board rinsate water and equipment cooling water were discharged to a hole or drum in a wetland area immediately east of STP No. 15. Printed circuit board manufacturing operations have been discontinued; however, some "closed-loop" plating operations are ongoing. A hazardous waste staging area structure that currently is only used for non-regulated waste is located adjacent to the PCBS building K6-1996.

The STP No. 15 and Polishing Pond were used for treatment of domestic wastewater from the PCBS building and the office building north of the PCBS. Wastewater was reportedly discharged to STP No. 15 from November 1971 until July 1986 when domestic wastes that this unit would have treated were redirected to STP No. 4, which serves the VAB area. From July 1986 to October 1996, STP No. 15 served as a grease treatment plant, where grease collected from grease traps was brought for biological treatment. In October 1996 STP 15 was abandoned.

## SITE LOCATION

The CRHE Area is located at KSC on Contractors Road approximately 0.5 mile north of the intersection with Schwartz Road (Figure 1). The CRHE Area is about 1,100 by 1,350 feet.

The site is bounded on the north and east by woodlands, on the south by KSC's Roads and Grounds Facility, and on the west by Contractors Road and woods. The site is located within Section 18 of Township 22 South, Range 37 East, which is in the Orsino Quadrangle. Survey coordinates in the State Plane Coordinate System North American Datum (NAD) 1983 meters, Florida East for the corners of the groundwater use control area are shown on Figure 2.

## SITE CONTAMINATION AND CONTROL

Groundwater contaminated with VOCs at concentrations over FDEP GCTLs are currently being monitored to assure that off site migration does not occur and contaminants are naturally attenuating. LUCs are therefore required to prohibit groundwater use at the site. Potential for effects on indoor air quality shall be evaluated prior to any construction within the groundwater use control area.

## DECISION DOCUMENT

The KSCRT determined that institutional controls should be implemented at the CRHE Area. A Statement of Basis (SB) establishes institutional controls as a component of the remedy for this site. The institutional controls are temporary while long term monitoring documents the reduction of VOCs through natural processes.

## IMPLEMENTATION

Institutional controls will be implemented by the KSC Environmental Assurance Branch in accordance with their RCRA permit and a

Land Use Control Assurance Plan included in the Memorandum of Agreement (MOA)[2] between NASA and the FDEP, effective February 23, 2001. Upon approval of this Interim LUCIP, it will be incorporated into the permit by reference. Property transfer (if conducted in the future) will be conducted in accordance with Section X of the MOA.

KSC's Environmental Assurance Branch will provide KSC's Master Planning Office with survey coordinates of the LUCs. Restrictions will specify limitations on development and reuse for the area for as long as LUCs are necessary to protect human health and the environment.

**MONITORING**

Quarterly inspections to monitor that the LUCs specified herein are in place and operating will be conducted by KSC's Environmental Assurance Branch. The inspections will verify that no groundwater use is occurring.

**REPORTING**

KSC's Environmental Assurance Branch will submit annual reports to FDEP certifying retention of the LUCs.

**ENFORCEMENT**

KSC's Environmental Assurance Branch will be responsible for stopping any activities that are not compliant with this LUCIP.

**MAINTENANCE**

The Interim LUCIP shall remain in place until the scenarios managed by the LUCIP are no longer a concern.

*[2] By separate MOA effective February 23, 2001, with the FDEP and KSC, on behalf of NASA, agreed to implement Center-wide, certain periodic site inspections, condition certification, and agency notification procedures designed to ensure the maintenance by Center personnel of any site-specific LUCs deemed necessary for future protection of human health and the environment. A fundamental premise underlying execution of that agreement was that through the Center's substantial good faith compliance with the procedures called for herein, reasonable assurances would be provided to the FDEP as to the permanency of those remedies which included the use of specific LUCs.*

*Although the terms and conditions of the MOA are not specifically incorporated or made enforceable herein by reference, it is understood and agreed by NASA KSC and FDEP that the contemplated permanence of the remedy reflected herein shall be dependent upon the Center's substantial good faith compliance with the specific LUC maintenance commitments reflected herein. Should such compliance not occur or should the MOA be terminated, it is understood that the protectiveness of the remedy concurred in may be reconsidered and that additional measures may need to be taken to adequately ensure necessary future protection of human health and the environment.*

## Legend

SWMU Boundary

Notes:
CRHE - Contractors Road Heavy Equipment Area
KSC - Kennedy Space Center
LUCIP - Land Use Control Implementation Plan
NASA - National Aeronautics and Space Administration
SWMU - Solid Waste Management Unit
VAB - Vehicle Assembly Building

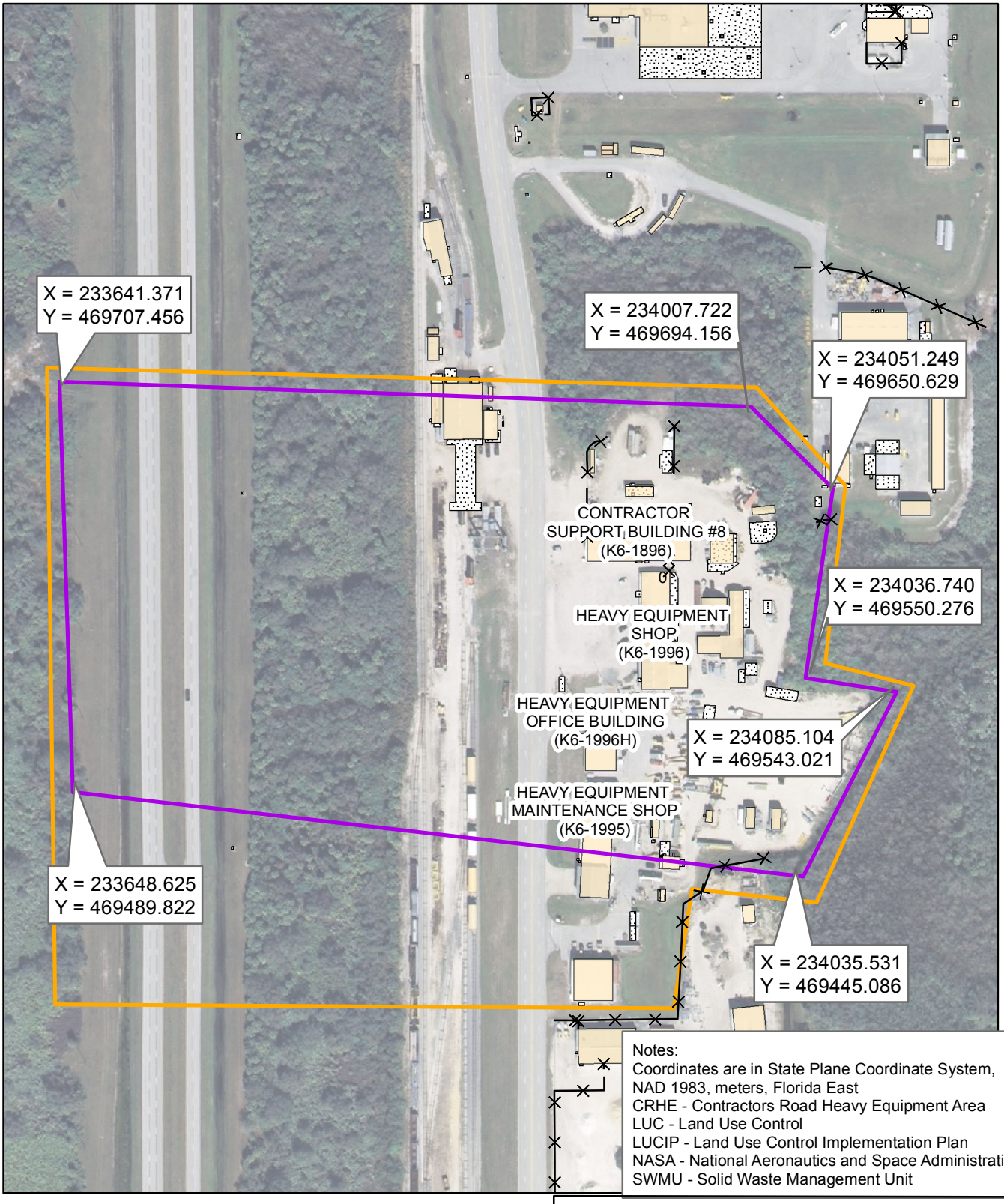
N

## Site Location Map
## Land Use Control Implementation Plan

Contractors Road Heavy Equipment Area
NASA Kennedy Space Center, Florida

Project Number: TL014021.0010

**Figure 1**
11/30/14




## Site Plan
## Land Use Control Implementation Plan

Contractors Road Heavy Equipment Area
NASA Kennedy Space Center, Florida

Project Number: TL014021.0000

**Figure 2**

# APPENDIX J

# MONITORING WELL COMPLETION REPORTS (electronic copy only)

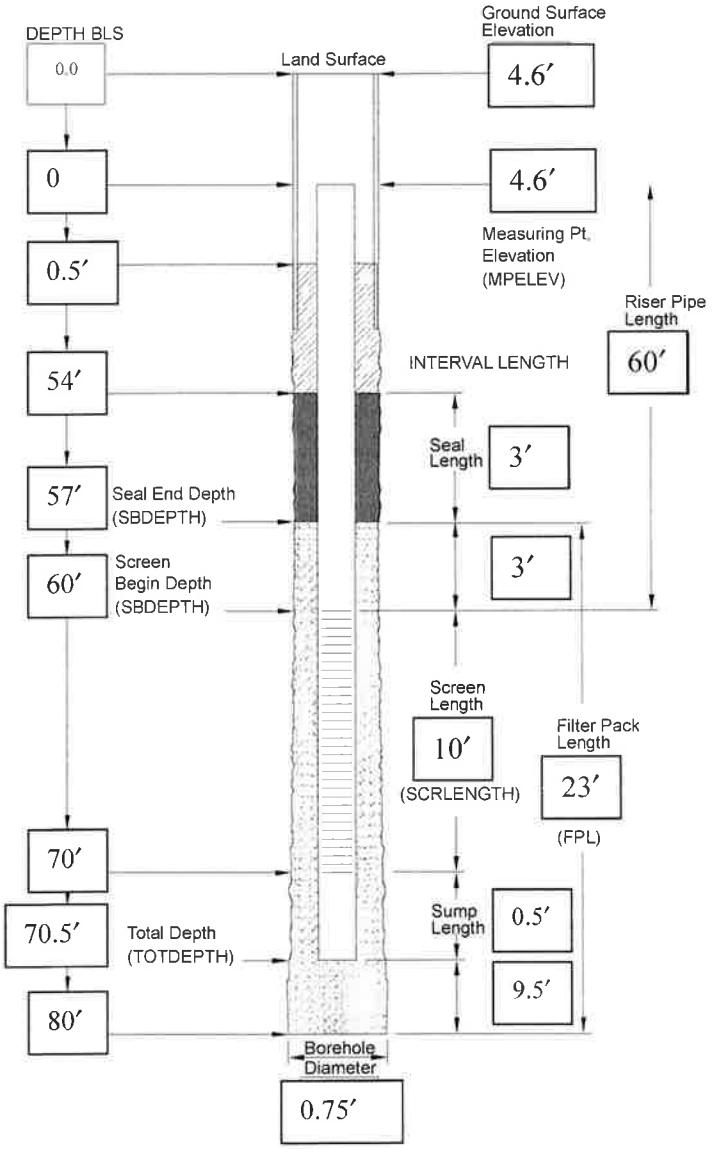
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0022
Drilling Company: Boart Longyear
Drillers: V. Scott, J. Klaver, J. Smith
Geologist/Engineer: J. McKinnon
Signature: Jill Johnson for J. McKinnon

Site: CRHE
Installation Method: Sonic
Casing Installation Date (INSDATE): 12/20/11
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Flush mount
Geologic Completion Zone (GZCODE): SAS




**Well Completion**
Guard Posts ( Y / (N) ) Date: 12/21/11
Surface Pad Size: 3 ft x 3 ft
**Protective Casing or Cover**
Diameter/Type: 8 inch manhole traffic grade cover
Depth BGS: 0 Weep Hole ( Y / (N) )
**Grout**
Composition/Proportions: Portland cement, water- 200 lbs/55 gal
Placement Method: Pressure grout

**Seal** Date: 12/20/11
Type: Bentonite
Source: Hole plug – coarse grade
Set-up/Hydration Time: 50 mins
Placement Method: Direct pour/tag
Vol. Fluid Added: -
**Filter Pack**
Type: 20/30 silica sand
Source: Standard Sand & Silica Co.
Amount Used: 250 lbs
Placement Method: Direct pour/tag
**Well Riser Pipe**
Casing Material (CMACODE): Schedule 40 PVC
Casing Inside Diameters (CASDIAM): 2 in.
**Screen**
Material: Schedule 40 PVC
Inside Diameter (SCRDIAM): 2 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): Standard
Sump or Bottom Cap ( (Y) / N )
Type/Length: 0.5' sump
**Backfill Plug** ( (Y) / N )
Material: Bentonite
Placement Method: Direct pour/tag
Set-up/Hydration Time: 30 mins
**Total Water Volume During Construction**
Introduced (Gal): ~ 400 gal
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 01/06/12

**Comments**

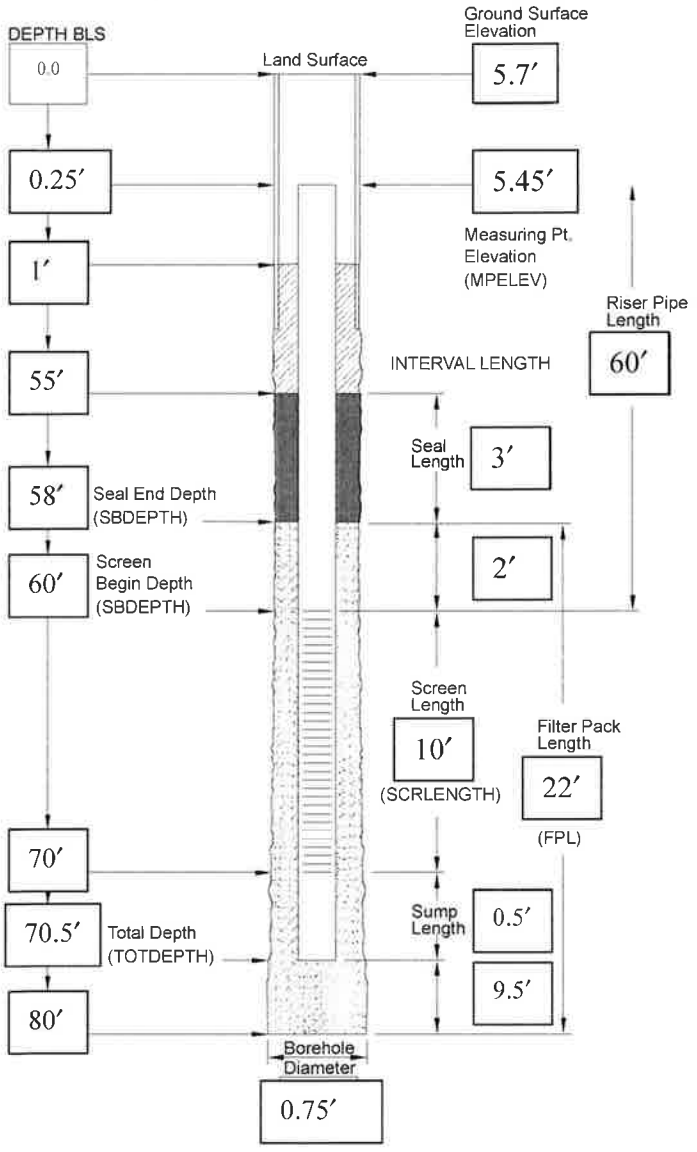
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0023
Drilling Company: Boart Longyear
Drillers: V. Scott, J. Klaver, J. Smith
Geologist/Engineer: J. McKinnon
Signature: Jill Johnson for J. McKinnon

Site: CRHE
Installation Method: Sonic
Casing Installation Date (INSDATE): 12/20/11
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Flush mount
Geologic Completion Zone (GZCODE): SAS




**Well Completion**
Guard Posts ( Y / (N)) Date: 12/21/11
Surface Pad Size: 3 ft x 3 ft
**Protective Casing or Cover**
Diameter/Type: 8 inch manhole traffic grade cover
Depth BGS: 0 Weep Hole ( Y / (N))
**Grout**
Composition/Proportions: Portland cement, water- 200 lbs/55 gal
Placement Method: Pressure grout

**Seal** Date: 12/20/11
Type: Bentonite
Source: Hole plug
Set-up/Hydration Time: 12 hrs
Placement Method: Direct pour/tag
Vol. Fluid Added: -
**Filter Pack**
Type: 20/30 silica sand
Source: Standard Sand & Silica Co.
Amount Used: 300 lbs
Placement Method: Direct pour/tag
**Well Riser Pipe**
Casing Material (CMACODE): Schedule 40 PVC
Casing Inside Diameters (CASDIAM): 2 in.
**Screen**
Material: Schedule 40 PVC
Inside Diameter (SCRDIAM): 2 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): Standard
Sump or Bottom Cap ((Y) / N )
Type/Length: 0.5' sump
**Backfill Plug** ((Y) / N )
Material: Bentonite
Placement Method: Direct pour/tag
Set-up/Hydration Time: 25 mins
**Total Water Volume During Construction**
Introduced (Gal): ~ 400 gal
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 01/06/12

**Comments**

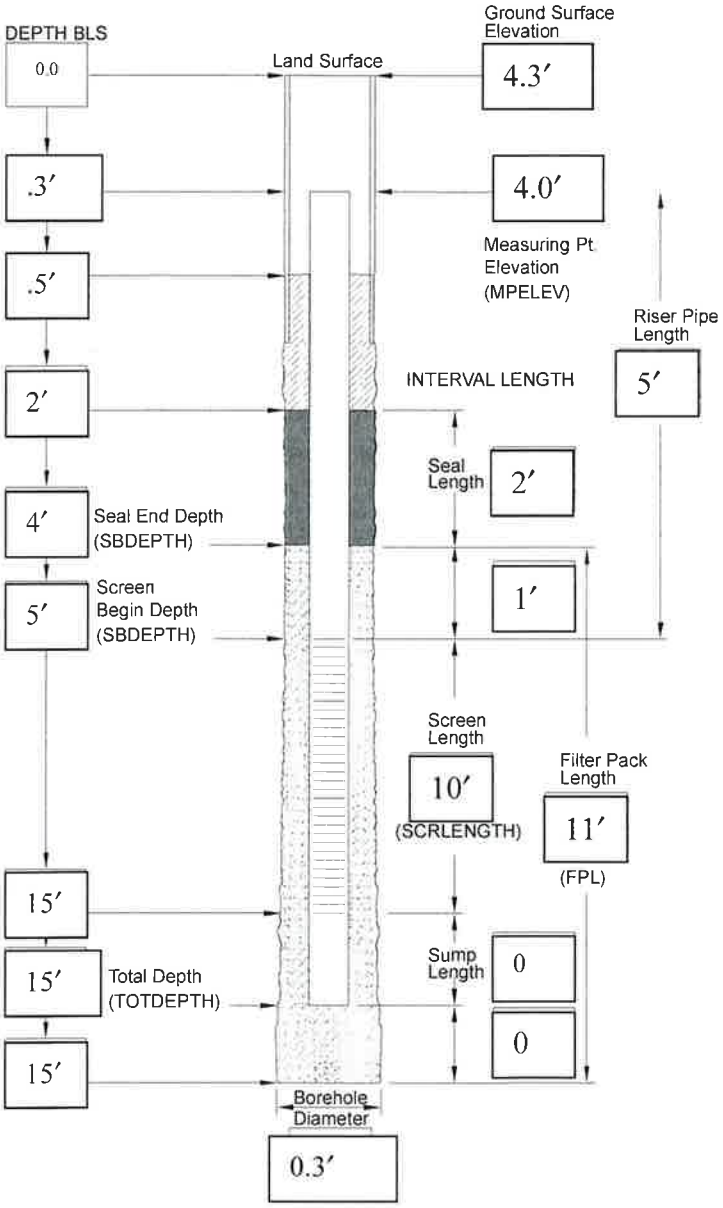
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0024
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: CCV for D. Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/13/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Well Completion**
Guard Posts ( Y / (N)) Date: 03/13/12
Surface Pad Size: 3 ft x 5 ft
**Protective Casing or Cover**
Diameter/Type: 8″
Depth BGS: 6″ Weep Hole ( Y / (N))
**Grout**
Composition/Proportions: 1:1 Portland cement to water; ~3 gal
Placement Method: Open hole

**Seal** Date: 03/13/12
Type: 30/65 fine
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Open hole
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): Standard
Sump or Bottom Cap ( Y / (N))
Type/Length: -
**Backfill Plug** ( Y (N))
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): 0
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 04/09/12

**Comments**

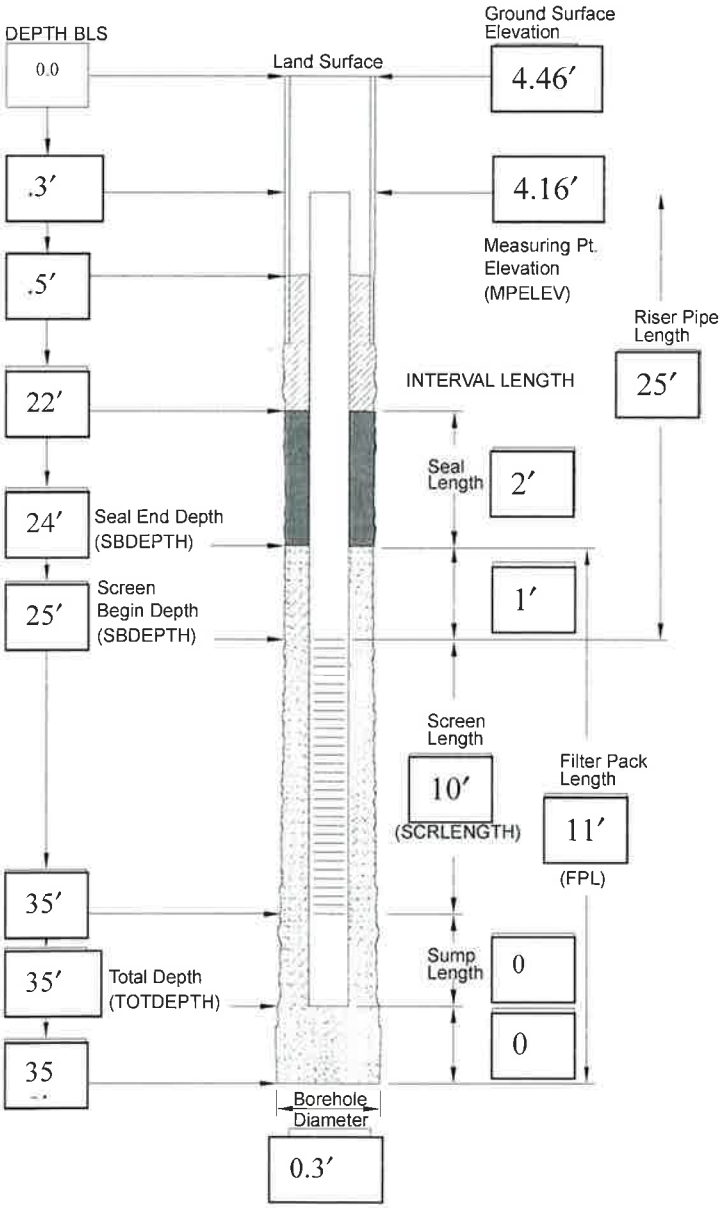
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0025
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: LCD for D. Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/13/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Well Completion**
Guard Posts ( Y / (N) ) Date: 03/13/12
Surface Pad Size: 3 ft x 5 ft
**Protective Casing or Cover**
Diameter/Type: 8″
Depth BGS: 6″ Weep Hole ( Y / (N) )
**Grout**
Composition/Proportions:
1:1 cement to water; ~5 gals
Placement Method: Through drive casing

**Seal** Date: 03/13/12
Type: 30/65 fine sand
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Through drive casing
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack 20/30
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): Standard
Sump or Bottom Cap ( Y / (N) )
Type/Length: -
**Backfill Plug** ( Y / (N) )
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): 0
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 04/09/12

**Comments**

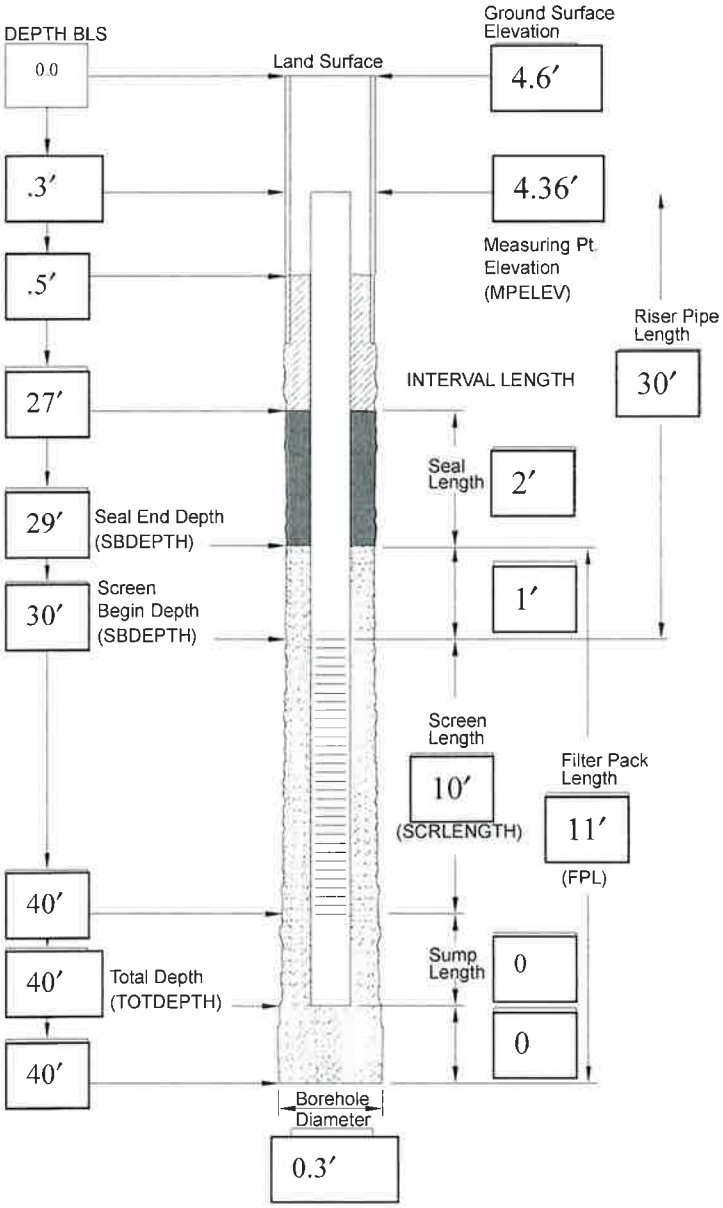
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0026
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: CCV for D. Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/13/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Comments**

_____
_____
_____
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**Well Completion**
Guard Posts ( Y / (N) ) Date: 03/13/12
Surface Pad Size: 3 ft x 3 ft
**Protective Casing or Cover**
Diameter/Type: 8″
Depth BGS: 6″ Weep Hole ( Y / (N) )
**Grout**
Composition/Proportions:
1:1 cement to water; ~5 gals
Placement Method: Through drive casing

**Seal** Date: 03/13/12
Type: 30/65 fine sand
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Through drive casing
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): -
Sump or Bottom Cap ( Y / (N) )
Type/Length: -
**Backfill Plug** ( Y / (N) )
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): 0
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 04/09/12

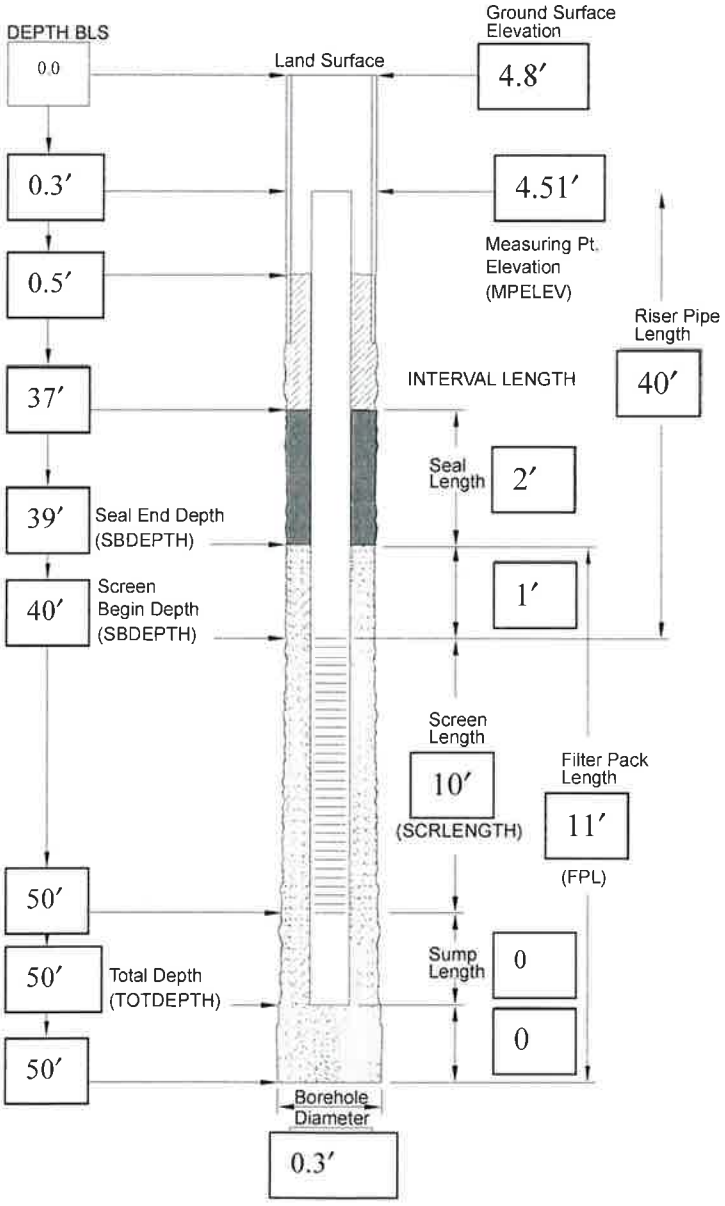
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0027
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: CCT for D. Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/15/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Comments**

_____
_____
_____
_____

**Well Completion**
Guard Posts ( Y / (N) ) Date: 03/15/12
Surface Pad Size: 3 ft x 3 ft
**Protective Casing or Cover**
Diameter/Type: 8″
Depth BGS: 6″ Weep Hole ( Y / (N) )
**Grout**
Composition/Proportions: 1:1
Placement Method: Through drive casing
**Seal** Date: 03/15/12
Type: 30/65 fine sand
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Through drive casing
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): -
Sump or Bottom Cap ( Y / (N) )
Type/Length: -
**Backfill Plug** ( Y / (N) )
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): 0
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 04/09/12

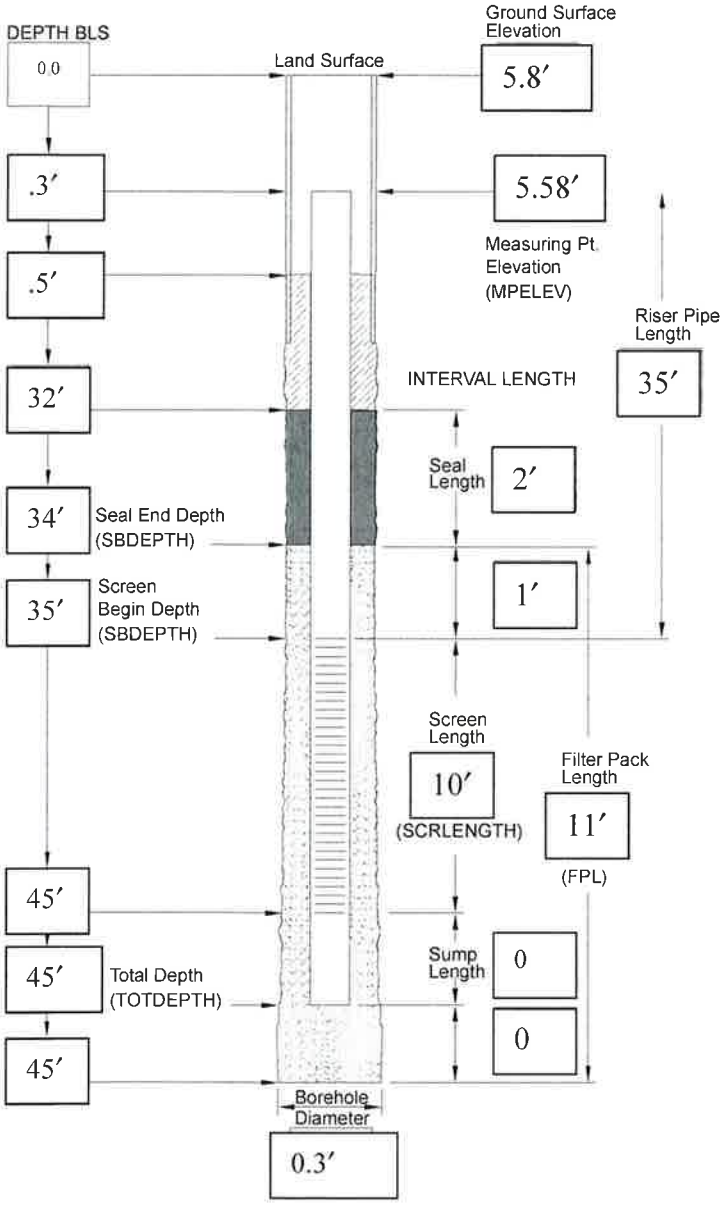
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0028
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: for D Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/14/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Well Completion**
Guard Posts ( Y / (N) ) Date: 03/14/12
Surface Pad Size: 3 ft x 3 ft
**Protective Casing or Cover**
Diameter/Type: 8″
Depth BGS: 6″ Weep Hole ( Y / (N) )
**Grout**
Composition/Proportions: 1:1 cement to water
Placement Method: Through drive casing

**Seal** Date: 03/14/12
Type: 30/65 fine sand
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Through drive casing
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): -
Sump or Bottom Cap ( Y / (N) )
Type/Length: -
**Backfill Plug** ( Y / (N) )
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): 0
Recovered (Gal): -
**Reviewed**
By: JLJohnson Date: 04/09/12

**Comments**

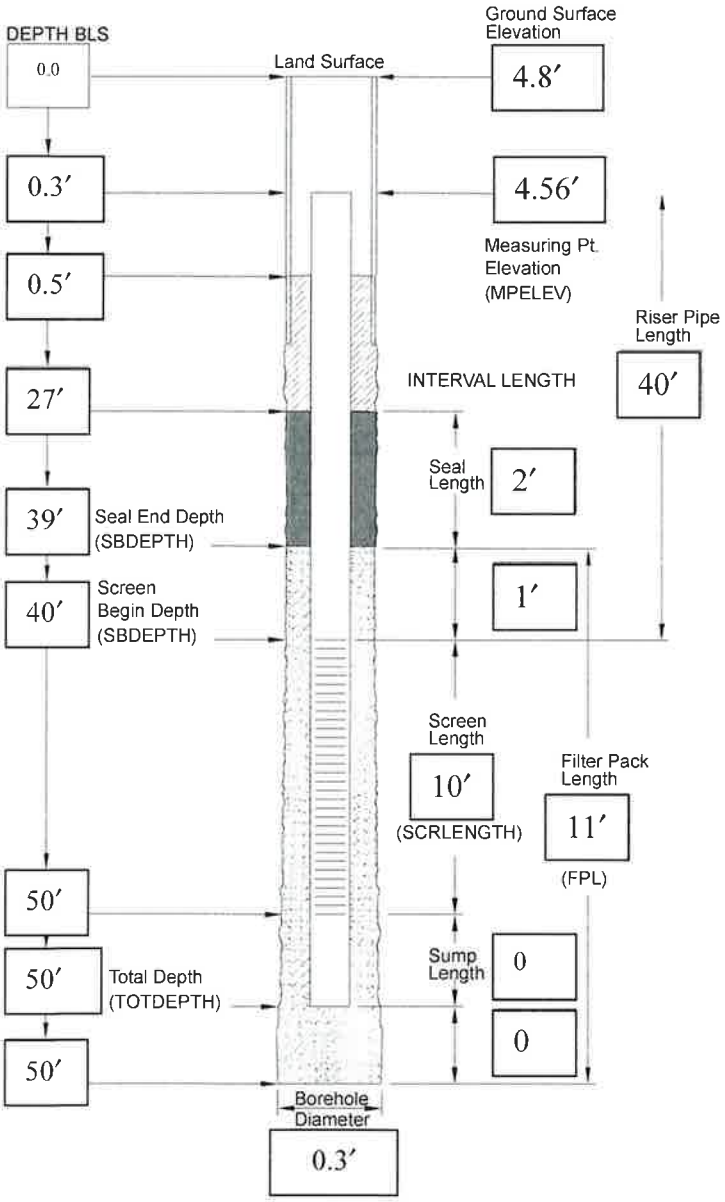
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0029
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: D. Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/14/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Well Completion**
Guard Posts ( Y / (N) ) Date: 03/14/12
Surface Pad Size: 3 ft x 3 ft
**Protective Casing or Cover**
Diameter/Type: 8″
Depth BGS: 6″ Weep Hole ( Y / (N) )
**Grout**
Composition/Proportions: 1:1 cement to water; ~10 gals
Placement Method: Through drive casing

**Seal** Date: 03/14/12
Type: 30/65 fine sand
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Through drive casing
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): -
Sump or Bottom Cap ( Y / (N) )
Type/Length: -
**Backfill Plug** ( Y / (N) )
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): 0
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 04/09/12

**Comments**

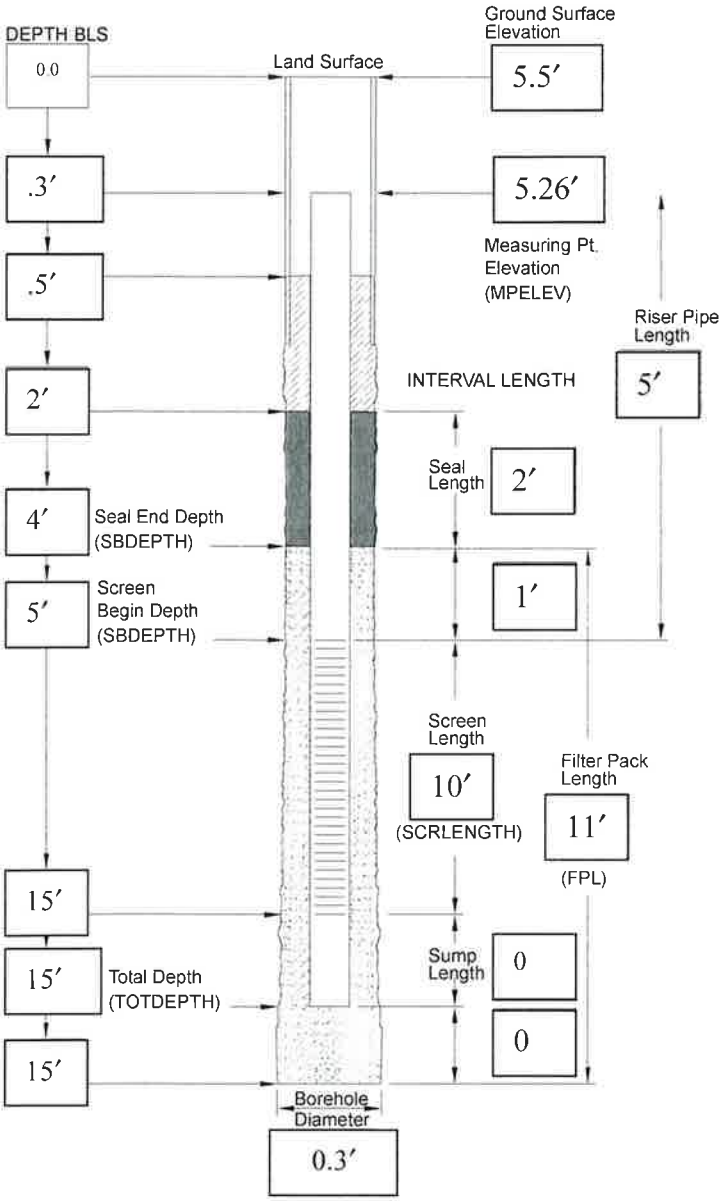
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0030
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: D Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/15/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Well Completion**
Guard Posts ( Y / (N)) Date: 03/15/12
Surface Pad Size: 3 ft x 5 ft
**Protective Casing or Cover**
Diameter/Type: 8″
Depth BGS: 6″ Weep Hole ( Y / (N))
**Grout**
Composition/Proportions: 1:1 cement to water; ~3 gals
Placement Method: Through drive casing

**Seal** Date: 03/15/12
Type: 30/65 fine sand
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Through drive casing
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): -
Sump or Bottom Cap ( Y / (N))
Type/Length: -
**Backfill Plug** ( Y / (N))
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): 0
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 04/09/12

**Comments**

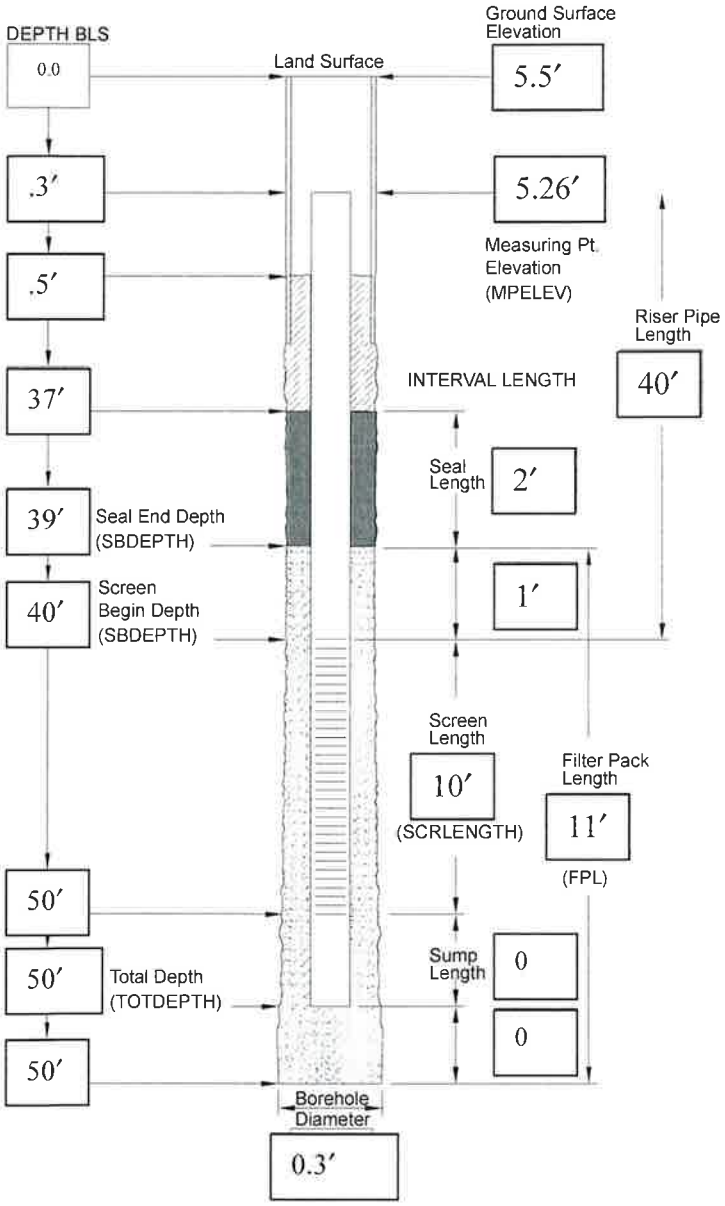
_Project # FR1681

FORM C
Fieldbook _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0031
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: UCD for D Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/14/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Well Completion**
Guard Posts ( Y / (N) ) Date: 03/14/12
Surface Pad Size: 3 ft x 5 ft
**Protective Casing or Cover**
Diameter/Type: 8″
Depth BGS: 6″ Weep Hole ( Y / (N) )
**Grout**
Composition/Proportions: 1:1 cement to water; ~10 gals
Placement Method: Through drive casing
**Seal** Date: 03/14/12
Type: 30/65 fine sand
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Through drive casing
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): -
Sump or Bottom Cap ( Y / (N) )
Type/Length: _____
**Backfill Plug** ( Y (N) )
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): 0
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 04/09/12

**Comments**

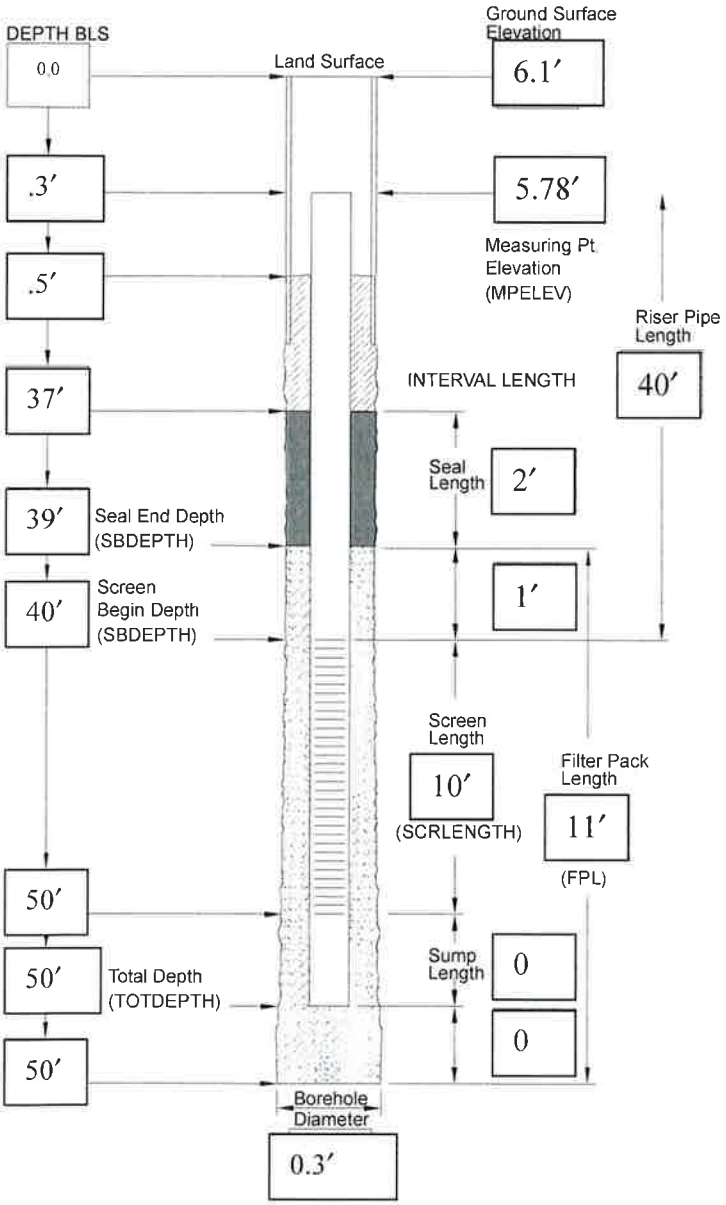
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0032
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: JCD for D. Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/14/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Well Completion**
Guard Posts ( Y / (N) ) Date: 03/14/12
Surface Pad Size: 3 ft x 3 ft
**Protective Casing or Cover**
Diameter/Type: 8″
Depth BGS: 6″ Weep Hole ( Y / (N) )
**Grout**
Composition/Proportions: 1:1 cement to water; ~10 gals
Placement Method: Through drive casing
**Seal** Date: 03/14/12
Type: 30/65 fine sand
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Through drive casing
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): -
Sump or Bottom Cap ( Y / (N) )
Type/Length: -
**Backfill Plug** ( Y / (N) )
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): 0
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 04/09/12

**Comments**

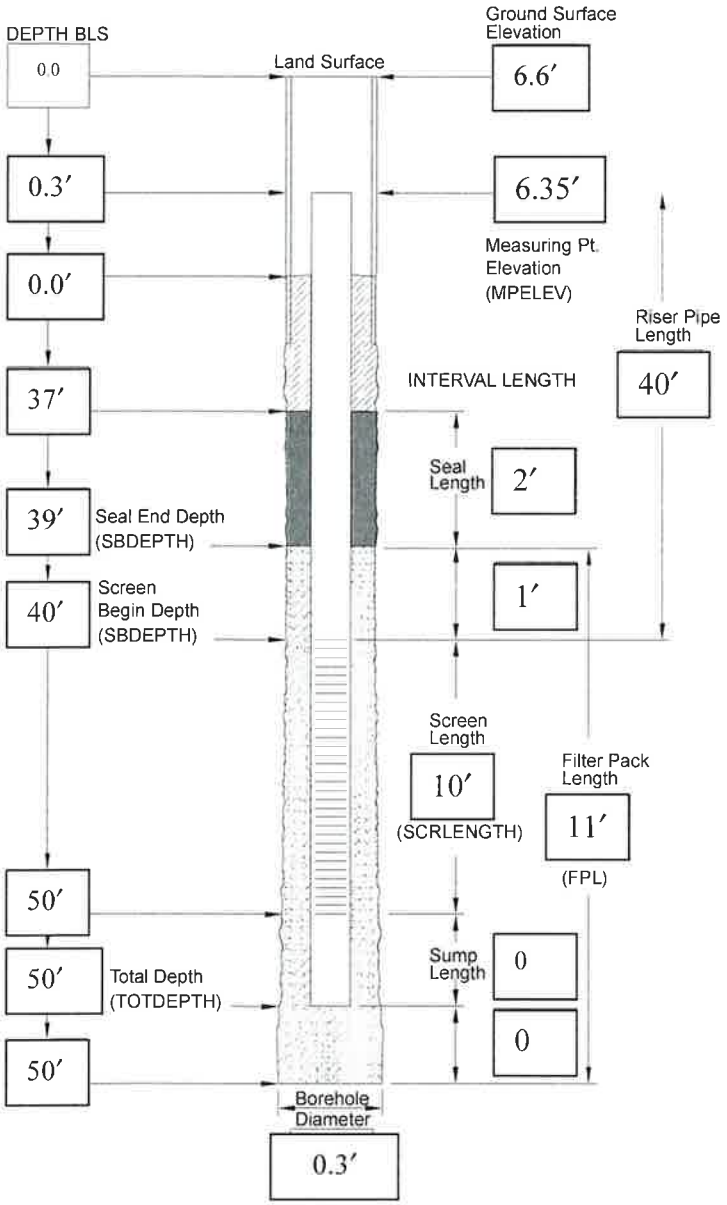
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0033
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: UCT for D Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/13/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Well Completion**
Guard Posts ( Y / (N) ) Date: 03/13/12
Surface Pad Size: 3 ft x 3 ft
**Protective Casing or Cover**
Diameter/Type: 6″
Depth BGS: 6″ Weep Hole ( Y / (N) )
**Grout**
Composition/Proportions: 1:1 cement to water; ~10 gals
Placement Method: Through drive casing
**Seal** Date: 03/13/12
Type: 30/65 fine sand
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Through drive casing
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): -
Sump or Bottom Cap ( Y / (N) )
Type/Length: -
**Backfill Plug** ( Y / (N) )
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): 0
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 04/09/12

**Comments**

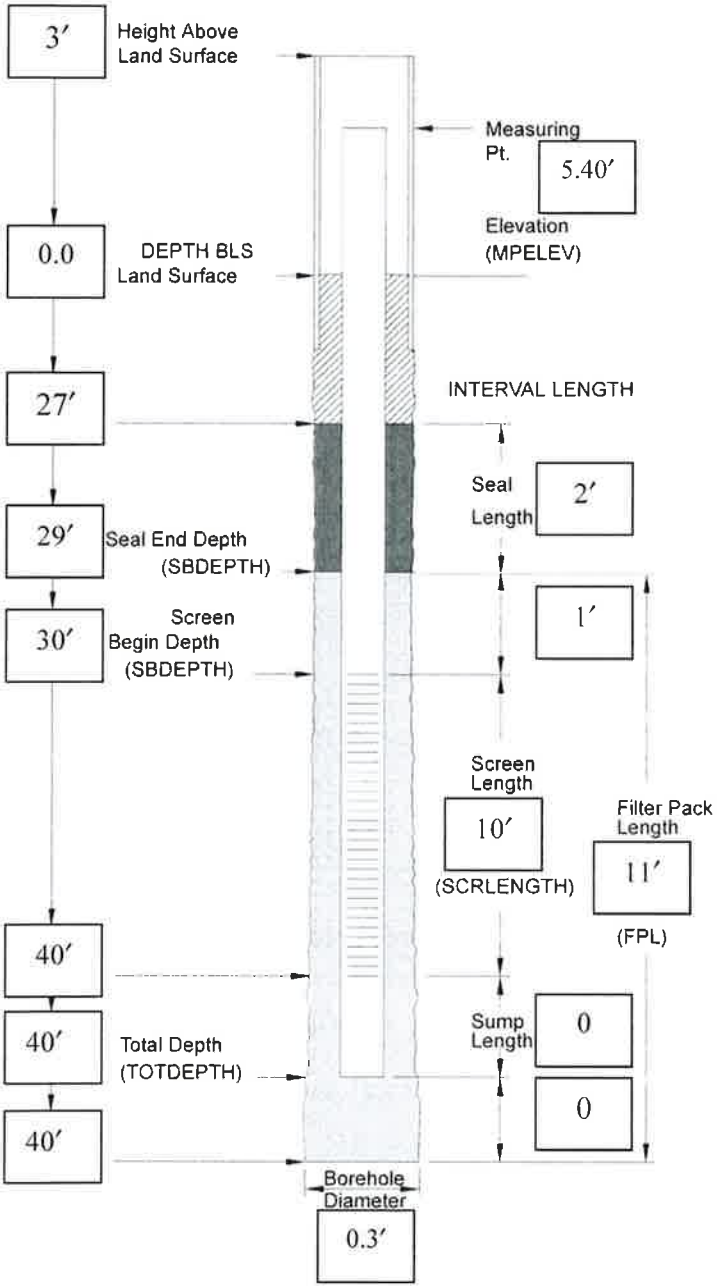
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# ABOVE GROUND COMPLETION

Well I.D. (LOCID): MW0034
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: D. Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/13/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Comments**

_____
_____
_____

**Well Completion**
Guard Posts ( Y / N ) Date: 03/13/12
Surface Pad Size: 3 ft x 3 ft
**Protective Casing or Cover**
Diameter/Type: 6″
Depth BGS: 6″ Weep Hole ( Y / (N) )
**Grout**
Composition/Proportions: 1:1 Portland cement to water; ~7 gals
Placement Method: Through drive casing

**Seal**: Date: 03/13/12
Type: 30/65 fine sand
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Through drive casing
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack 20/30
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): pre-pack -
Sump or Bottom Cap ( Y / (N) )
Type/Length: -
**Backfill Plug** ( Y / (N) )
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): _____
Recovered (Gal): _____
**Reviewed**
By: Jill Johnson Date: 04/09/12

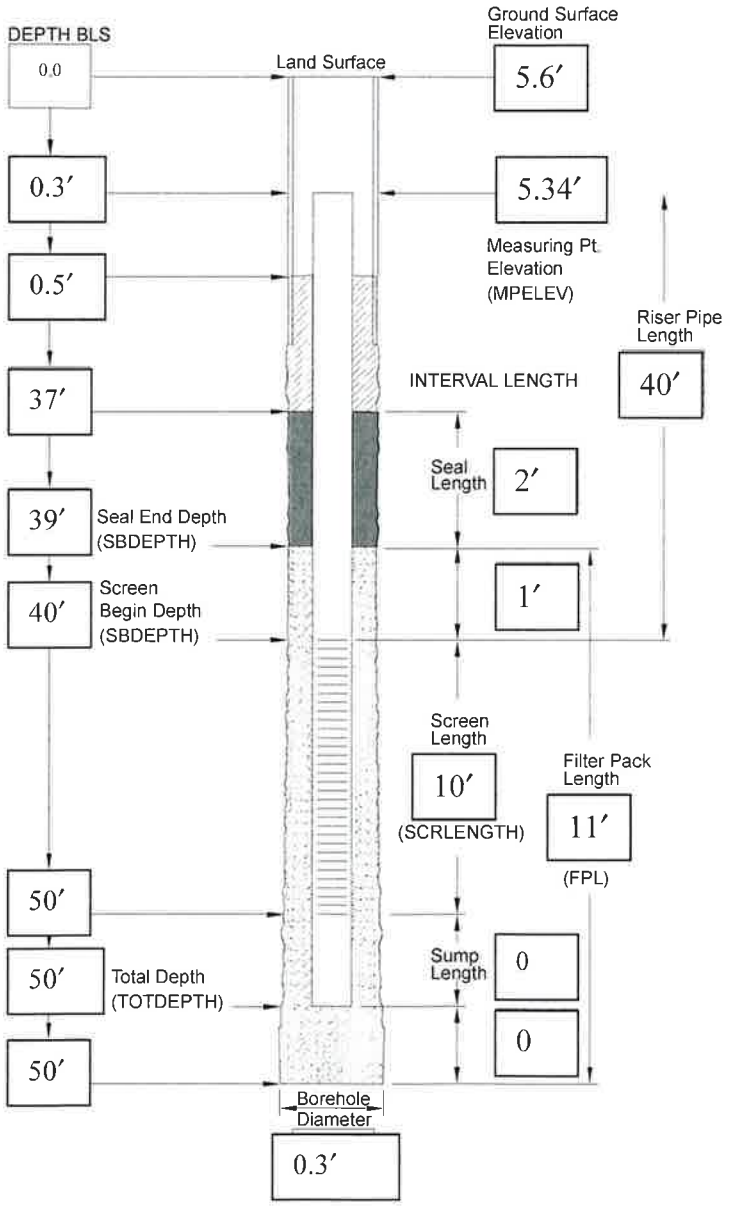
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0035
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: Used for D Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/14/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Well Completion**
Guard Posts ( Y / (N)) Date: 03/14/12
Surface Pad Size: 3 ft x 3 ft
**Protective Casing or Cover**
Diameter/Type: 8″
Depth BGS: 6″ Weep Hole ( Y / (N))
**Grout**
Composition/Proportions: 1:1 cement to water; ~5 gals
Placement Method: Through drive casing
**Seal** Date: 03/14/12
Type: 30/65 fine sand
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Through drive casing
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): -
Sump or Bottom Cap ( Y / (N))
Type/Length: -
**Backfill Plug** ( Y / (N))
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): 0
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 04/09/12

**Comments**

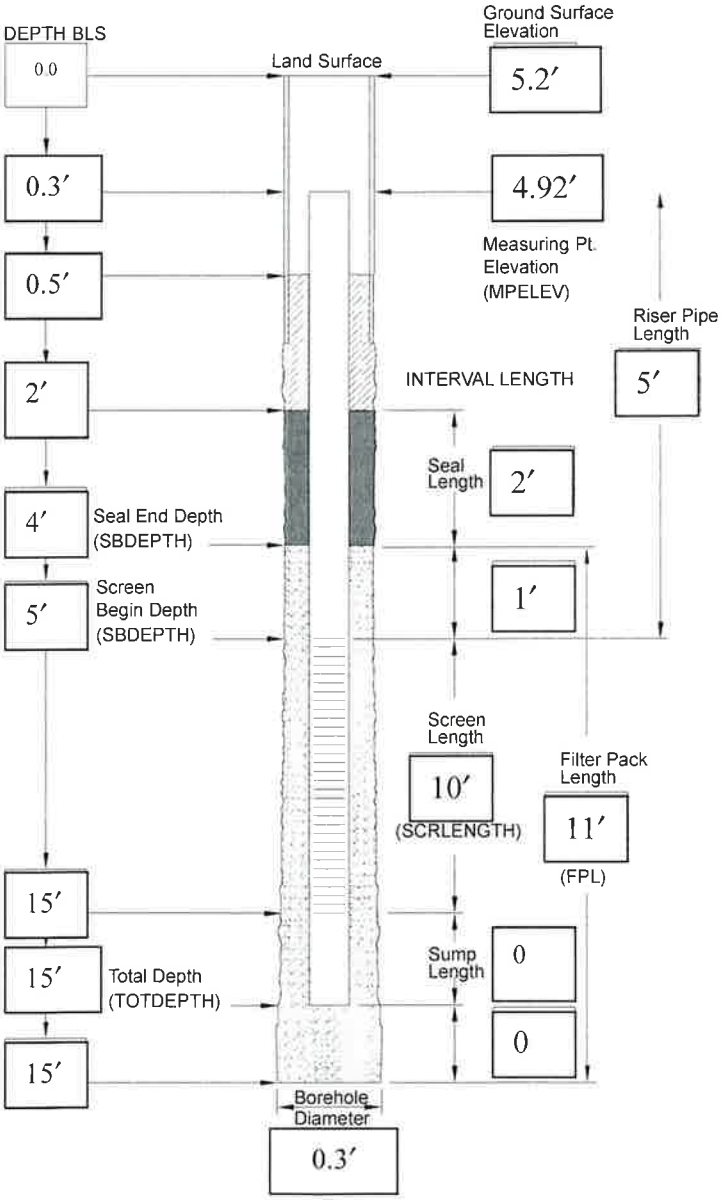
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0036
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: D Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/12/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Well Completion**
Guard Posts ( Y / (N) ) Date: 03/12/12
Surface Pad Size: 3 ft x 5 ft
**Protective Casing or Cover**
Diameter/Type: 8″
Depth BGS: 6″ Weep Hole ( Y / (N) )
**Grout**
Composition/Proportions: 1:1 Portland cement to water; ~3 gals
Placement Method: Open hole

**Seal** Date: 03/12/12
Type: 30/65 fine sand
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Open hole
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack 20/30 sand
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): -
Sump or Bottom Cap ( Y / (N) )
Type/Length: -
**Backfill Plug** ( Y / (N) )
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): 0
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 04/09/12

**Comments**

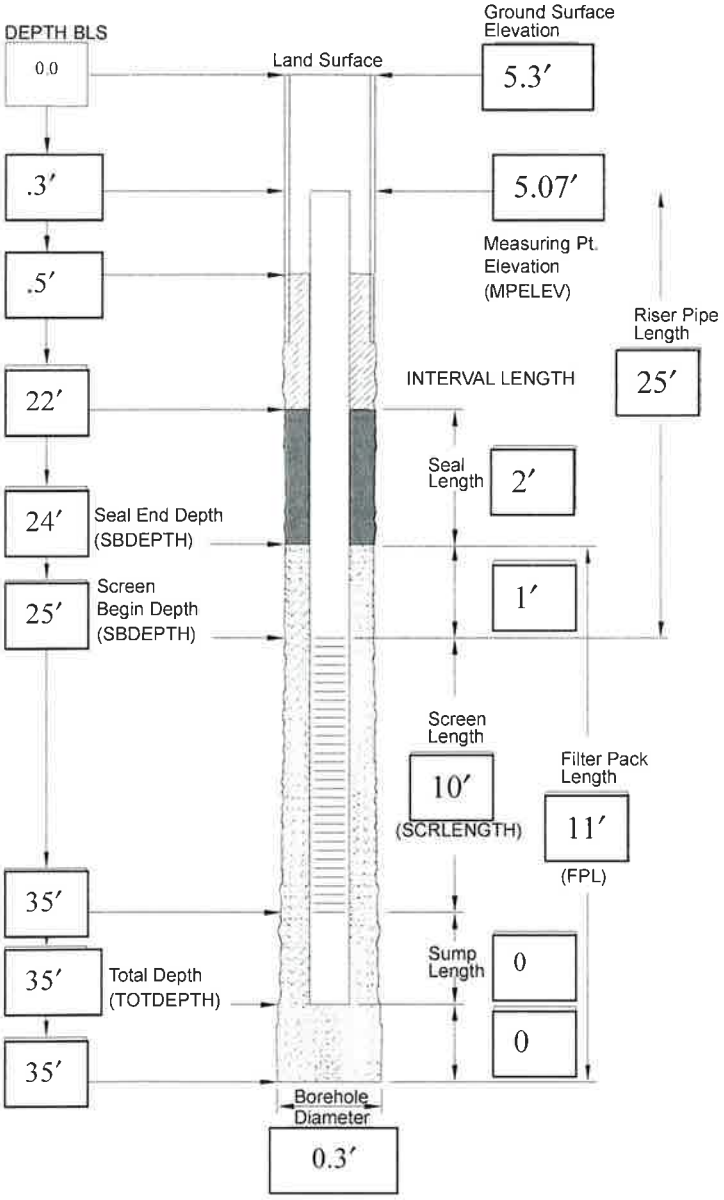
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0037
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: per D Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/12/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Comments**

_____
_____
_____
_____

**Well Completion**
Guard Posts ( Y / (N) ) Date: 03/12/12
Surface Pad Size: 3 ft x 5 ft
**Protective Casing or Cover**
Diameter/Type: 8″
Depth BGS: 6″ Weep Hole ( Y / (N) )
**Grout**
Composition/Proportions: 1:1 Portland cement to water; ~8 gals
Placement Method: Through drive casing

**Seal** Date: 03/12/12
Type: 30/65 fine sand
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Through drive casing
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack 20/30
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): -
Sump or Bottom Cap ( Y / (N) )
Type/Length: -
**Backfill Plug** ( Y / (N) )
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): 0
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 04/09/12

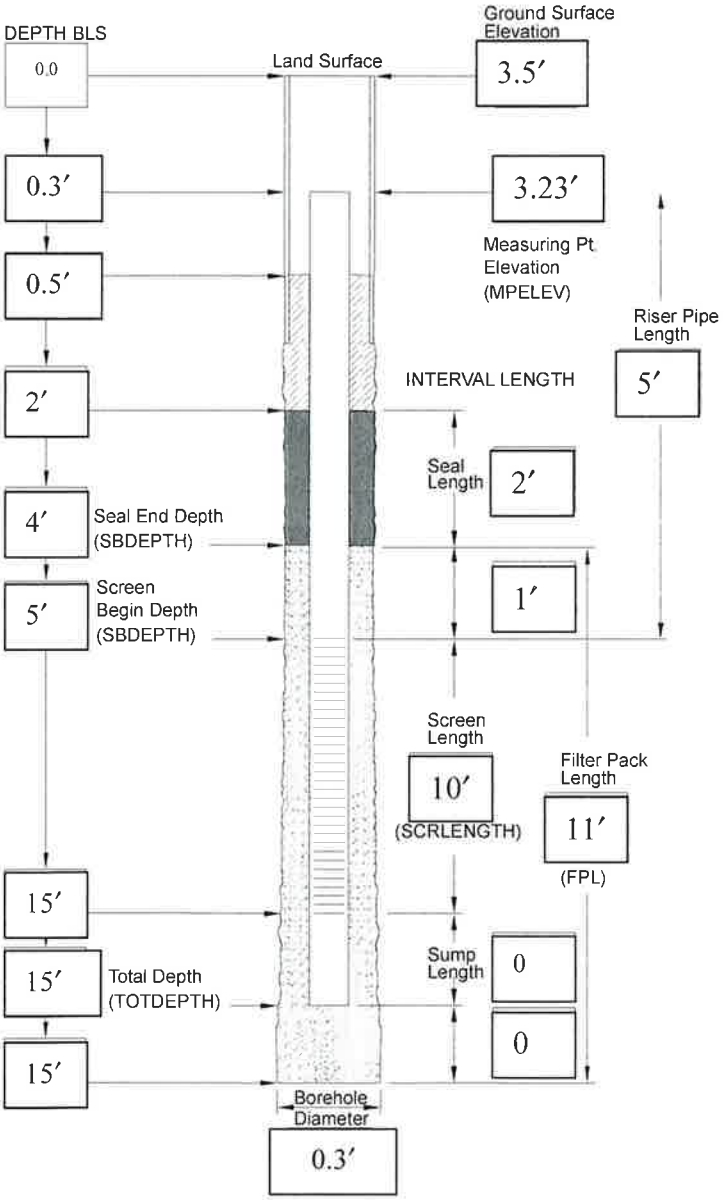
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0038
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: for D. Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/12/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Well Completion**
Guard Posts ( Y / (N) ) Date: 03/12/12
Surface Pad Size: 3 ft x 3 ft
**Protective Casing or Cover**
Diameter/Type: 8″
Depth BGS: 6″ Weep Hole ( Y / (N) )
**Grout**
Composition/Proportions: 1:1 Portland cement to water; ~5 gals
Placement Method: Through drive casing

**Seal** Date: 03/12/12
Type: 30/65 fine sand
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Through drive casing
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack 20/30
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): -
Sump or Bottom Cap ( Y / (N) )
Type/Length: -
**Backfill Plug** ( Y (N) )
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): 0
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 04/09/12

**Comments**

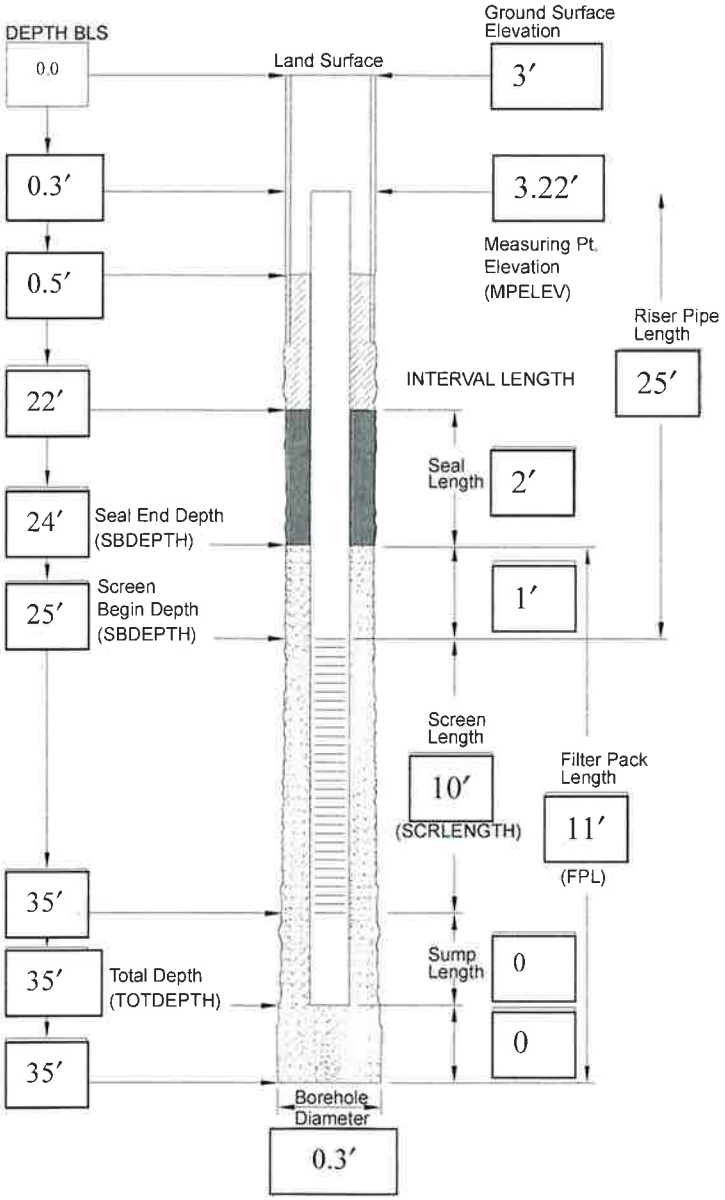
**Project #** **FR1681**

**FORM C**
**Fieldbook** _____

# WELL CONSTRUCTION LOG
# STANDARD FLUSH MOUNT

Well I.D. (LOCID): MW0039
Drilling Company: GPI
Drillers: Bryan Nazworth, Ben Yerma
Geologist/Engineer: D. Sizemore
Signature: UCD for D Sizemore

Site: CRHE
Installation Method: Geoprobe
Casing Installation Date (INSDATE): 03/12/12
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): Thru drive casing
Geologic Completion Zone (GZCODE): Surficial




**Well Completion**
Guard Posts ( Y / (N) ) Date: 03/12/12
Surface Pad Size: 3 ft x 3 ft
**Protective Casing or Cover**
Diameter/Type: 8″
Depth BGS: 6″ Weep Hole ( Y / (N) )
**Grout**
Composition/Proportions: 1:1 Portland cement to water; ~10 gals
Placement Method: Through drive casing

**Seal** Date: 03/12/12
Type: 30/65 fine sand
Source: Standard Sand & Silica
Set-up/Hydration Time: -
Placement Method: Through drive casing
Vol. Fluid Added: -
**Filter Pack**
Type: Prepack 20/30
Source: Geoinsight
Amount Used: -
Placement Method: Prepack
**Well Riser Pipe**
Casing Material (CMACODE): PVC
Casing Inside Diameters (CASDIAM): 1 in.
**Screen**
Material: PVC
Inside Diameter (SCRDIAM): 1 in.
Screen Slot Size: (SOUA): 0.010 in.
Percent Open Area (PCTOPEN): -
Sump or Bottom Cap ( Y / (N) )
Type/Length: -
**Backfill Plug** ( Y / (N) )
Material: -
Placement Method: -
Set-up/Hydration Time: -
**Total Water Volume During Construction**
Introduced (Gal): 0
Recovered (Gal): -
**Reviewed**
By: Jill Johnson Date: 04/09/12

**Comments**

# WELL COMPLETION LOG

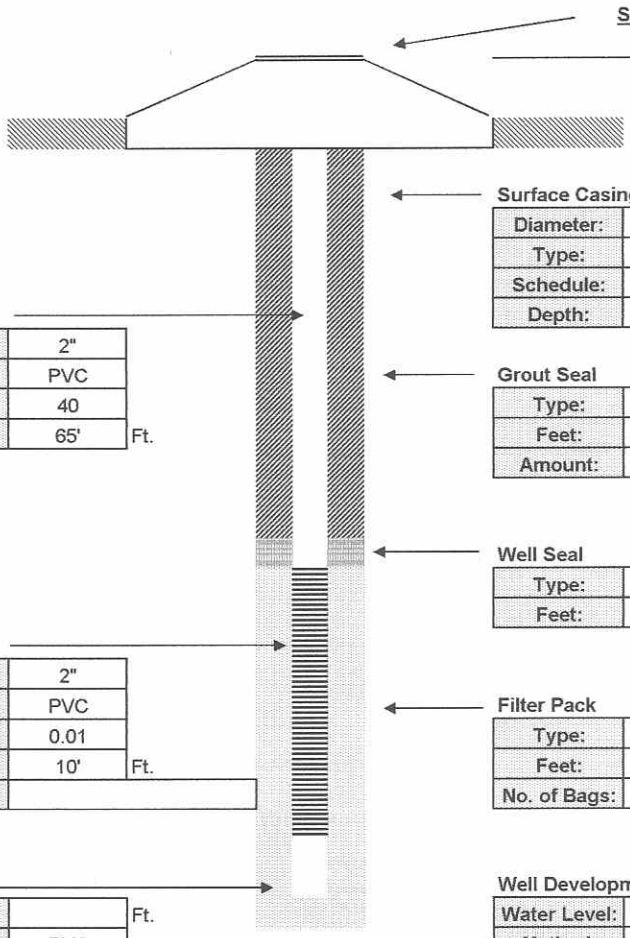
Water Mgmt. Dist.:
Permit Number:

Work Order: 713013
Type of Well: Monitor
Well Number: MW 040
Method Used: Sonic
Borehole Diaz. 6"

**Site Information:**
Name: CRHEA
Address: Contractor Rd.
C,S,Z: KSC, FL
S/T/R:

**Client / Consultant Information**
Consultant: Arcadis
Field Rep: Eric

| Well Diameter | Well Type | Well Depth | Screen Length | Casing Length | Bags Grout | Sand Bags/Weight | Filter Type | Well Seal |
|---|---|---|---|---|---|---|---|---|
| 2" | PVC | 75' | 10' | 65' | 6 | 5 / 50 lbs. | 20/30 | 30/65 |
| 40 ← | Schedule | Slot Size: → | 0.01 | | 63' | ← Feet → | 11' | 1' |




**Surface Casing**

| | |
|---|---|
| Diameter: | |
| Type: | |
| Schedule: | |
| Depth: | |

**Intermediate Casing**

| | |
|---|---|
| Diameter: | |
| Type: | |
| Schedule: | |
| Depth: | |

**Well Casing**

| | | |
|---|---|---|
| Diameter: | 2" | |
| Type: | PVC | |
| Schedule: | 40 | |
| Length: | 65' | Ft. |

**Grout Seal**

| | | |
|---|---|---|
| Type: | I PORTLAND | |
| Feet: | 63' | |
| Amount: | 6 | Bags |

**Well Seal**

| | |
|---|---|
| Type: | 30/65 |
| Feet: | 1' |

**Well Screen**

| | | |
|---|---|---|
| Diameter: | 2" | |
| Type: | PVC | |
| Slot: | 0.01 | |
| Length: | 10' | Ft. |
| Note: | | |

**Filter Pack**

| | |
|---|---|
| Type: | 20/30 |
| Feet: | 11' |
| No. of Bags: | 5 / 50 lbs. |

**Sump**

| | | |
|---|---|---|
| Length: | | Ft. |
| Type: | PVC | |

**Well Development**

| | | | |
|---|---|---|---|
| Water Level: | 5' | | |
| Method: | Whale | | |
| Start: | Cloudy | Finish: | Clear |
| Time: | .45 Mins | | |
| GPM: | 0.75 | | |

**Contractor Information**

| | |
|---|---|
| Contractor #: | 9311 |
| Completion: | 7/2/2013 |
| Driller: | Dave Longino |
| Lead Hand: | Thomas Watson |
| 3rd Man: | Jeff Zeigler |
| Drill Rig: | SR 3 |


| | |
|---|---|
| Company: | Drillpro LLC d/b/a Groundwater Protection |
| Address: | 2300 Silver Star Road |
| C,S,Z: | Orlando, Florida 32804-3310 |
| Phone/FAX: | (407) 426-7885 / (407) 426-7586 |

# Well Development/Purge Log

Project Name: CRMR  Project No.: FR1681

Facility:  Location:

PID/FID Readings:  (Ambient)  (Well Mouth)

Initial Levels:  (Product)  (Water)

Sampling Depth: ft bgs

Pump ☐ Bail ☐  Avg. Rate: GPM  Total Gal. Extracted:

Water Column Length: ft  Well Volumes Extracted:

Disposition of Discharge Water:

Specific Capacity:  (gpm/ft. drawdown) After  Hrs.

**Well Information**

Number:
Location: See Bleeder
Datum:
Elev. Datum Point:
Top Of Casing Elev.: ft msl
Well Diameter:
Well Depth: ft
Well Material:

**Equipment Information**

Bailer No.:
Pump No.: Geopump
Interface Probe No.:
Sounder No.:
pH Meter No.: See cal form
Conductivity Meter No.:
Thermometer No.:
D.O. Meter No.:
Turbidity Meter No.:
ORP Meter No.:

| | Time (24 hr.) | Water Removed (gal) | Cumulative Volume (gal) | Water Level (feet) | Flow rate (GPM) | Water Temp (°C) | pH (std. Units) | Cond. ms/cm | Dissolved Oxygen (mg/l) | Turbidity NTU | ORP (mV) +/- | Remarks (e.g. water clarity / sampled) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW39 | 1702 | 1.5 | 1.5 | | .07 | 24.30 | 7.16 | 1.963 | 1.60 | 605 | -155.6 | 3/13/12 |
| MW39 | 1709 | ~~2.0~~ 0.5 | 2.0 | | .07 | 24.09 | 7.14 | 1.974 | 1.30 | 235 | -173.9 | |
| MW39 | 1716 | .5 | 2.5 | | .07 | 24.18 | 7.12 | 1.972 | 1.14 | 105 | -195.3 | |
| MW38 | 1703 | 1.0 | 1.0 | | .07 | 22.48 | 7.28 | 0.846 | .97 | 712 | -216.7 | |
| MW38 | 1710 | .5 | 1.5 | | .07 | 22.52 | 7.26 | 0.846 | .86 | 475 | -214.7 | |
| MW38 | 1717 | .5 | 2.0 | | .07 | 22.49 | 7.26 | 0.846 | .97 | 295 | -215.8 | |
| Decon 1/20 | 0950 | — | — | | — | 21.98 | 12.07 | 3.741 | ~~1.28~~ | — | -85.2 | DO = 1.28 |
| MW34 | 1320 | 1.0 | 1.0 | | .07 | 21.96 | 7.24 | 2.213 | 1.54 | 753 | -160.1 | 3/14/12 |
| MW34 | 1330 | 1.0 | 2.0 | | .07 | 22.30 | 7.35 | 2.198 | 0.92 | 297 | -160.9 | |
| MW34 | 1340 | 1.0 | 3.0 | | .07 | 22.35 | 7.35 | 2.199 | 0.98 | 159 | -170.2 | |
| MW34 | 1350 | 1.0 | 4.0 | | .07 | 22.37 | 7.36 | 2.199 | 0.95 | 97 | -171.3 | |
| MW25 | 1422 | 1.0 | 1.0 | | .07 | 21.99 | 7.39 | 2.793 | .65 | 471 | -193.4 | 3/14/12 |
| MW25 | 1435 | .7 | 1.7 | | .07 | 21.98 | 7.45 | 2.800 | .66 | 201 | -179.8 | |
| MW25 | 1456 | 2 | 3.7 | | .07 | 21.89 | 7.46 | 2.801 | .72 | 95 | -180.1 | |
| MW24 | 1524 | 1.0 | 1.0 | | .07 | 23.24 | 7.13 | 0.298 | 1.93 | 693 | -139.7 | 3/14/12 |
| MW24 | 1545 | 2.0 | 3.0 | | .07 | 23.54 | 7.09 | 0.569 | 1.02 | 241 | -140.3 | |
| MW24 | 1606 | 2.0 | 2.0 | | .07 | 23.49 | 7.10 | 0.613 | .55 | 89 | -150.2 | |
| MW26 | 1624 | ~~2.0~~ .5 | .5 | | .07 | 23.45 | 7.19 | 1.239 | .69 | 589 | -169.5 | 3/14/12 |
| MW26 | 1635 | 2.0 | 2.5 | | .07 | 23.44 | 7.20 | 1.25 | .59 | 212 | -170.1 | |
| MW26 | 1650 | 1.5 | 4.0 | | .07 | 23.45 | 7.20 | 1.252 | .60 | 105 | -169.5 | |

Recorded By _____ Date _____

Checked By _____ Date _____

CRHR well Development

3/16/12

| Loc | Time | Com Vol | Temp | pH | Cond mS/cm | DO mg/L | Turb | ORP mV |
|---|---|---|---|---|---|---|---|---|
| mw31 | 1135 1100m | 2 | 24.93 | 7.74 | 1.819 | 1.07 | 478 | -116.6 |
| mw31 | 1149 | 3 | 24.95 | 7.51 | 1.820 | 1.00 | 163 | -118.4 |
| mw31 | 1206 | 4 | 25.00 | 7.52 | 1.82 | .91 | 34.2 | -119.0 |
| mw30 | 1226 | 2 | 25.46 | 7.93 | 0.834 | 1.99 | 745 | -121.0 |
| mw30 | 1240 | 3 | 24.97 | 8.01 | .845 | 1.29 | 345 | -104.3 |
| mw30 | 1254 | 4 | 24.97 | 1pm 7.95 | .846 | 1.05 | 187 | -100.9 |
| mw35 | 1335 | 3 | 24.95 | 7.51 | 1.912 | 1.29 | >1,000 | -175.9 |
| mw35 | 1349 | 4 | 25.12 | 7.79 | 1.915 | 1.27 | 650 | -180.2 |
| DUP ~~mw35~~ mw36 | 1412 | 2 | 25.11 | 7.89 | 1.003 | .93 | 344 | -100.2 |
| mw36 | 1434 | 4 | 25.12 | 7.64 | 0.885 | 1.02 | 123 | -100.0 |
| mw37 | 1459 | 2 | 25.12 | 7.89 | 1.113 | .85 | 296 | -109.7 |
| mw37 | 1518 | 4 | 25.10 | 7.90 | 1.115 | .76 | 304 | -110.3 |
| mw33 | 1545 | 2 | 2509 | 7.88 | 1.679 | .95 | >1001 | -199.8 |
| mw33 | 1621 | 4 | 25.10 | 7.90 | 1.686 | .69 | 234 | -205.9 |
| mw32 | 1649 | 2 | 26.14 | 7.49 | 1.435 | .70 | >1000 | -215.9 |
| mw32 | 1729 | 4 | 26.10 | 7.51 | 1.440 | .65 | 279 | -219.3 |

CANE well development.

3/19/12

| Loc | Time | Cum Vol | Temp | pH | Cond | DO | Turb | orp mV |
|---|---|---|---|---|---|---|---|---|
| mw29 | ~~1505~~ 1448 | 1.0 | 26.24 | 7.75 | 1.593 | .90 | 98 | -195.8 |
| mw29 | 1510 | 4.0 | 26.23 | 7.81 | 1.624 | .79 | 48 | -202.4 |
| mw27 | 1523 | START | | | | | | |
| MW27 | 1540 | 1.0 | 26.99 | 7.92 | 1.23 | .79 | 69 | -214.9 |
| mw27 | 1615 | 4.5 | 26.19 | 7.89 | 1.74 | .21 | 6.9 | -215.9 |
| mw28 | 1620 | 1.5 | 26.25 | 7.91 | 6.89 | .63 | 36 | -295.8 |
| mw28 | 1629 | 4.0 | 26.26 | 7.72 | 1.91 | .60 | 29.1 | -275.4 |

Geosyntec consultants

# WELL DEVELOPMENT DATA FORM

Site Name: CRITE
Well Name: MW0022

Depth To Bottom:
(Initial) 70
(Final) 70

Static Water Level:
*- development conducted prior to well completion below grade.
(Initial) -*
(Final) -*

Field Cleaning of Equip: Yes
Measuring Point: TOC*
Casing I.D.: Schedule 40 PVC

Project Number: FR1681
Date Installed: 12-20-11
Date Developed: 12.21.11

Pump Type: Centrifugal
(Capacity) -

Well Volume: -

Geosyntec Representative: J. McKinnon
Drilling Firm Representative: Boart Longyear
Purge Water Containment: 55 gal drum

| Time | Volume Removed (gal) | pH (SU) | Temp (°C) | Conductance (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | Comments |
|---|---|---|---|---|---|---|---|---|
| 1325 | 0 | - | - | - | - | - | - | start |
| 1416 | 43 | - | - | - | 663 | - | - | light gray |
| 1426 | 48 | - | - | - | 522 | - | - | light gray |
| 1430 | 51 | - | - | - | 471 | - | - | end |
| | | | | | | | | ** unable to |
| | | | | | | | | collect parameters |
| | | | | | | | | with YSI 556 MPS |
| | | | | | | | | due to centrifugal |
| | | | | | | | | pump. |
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Geosyntec consultants

# WELL DEVELOPMENT DATA FORM

Site Name: CRHE
Well Name: MW0023

Depth To Bottom:
(Initial) 70
(Final) 70

Static Water Level:
*-development conducted prior to well completion below grade.
(Initial) - *
(Final) - *

Field Cleaning of Equip: Yes
Measuring Point: TOC*
Casing I.D.: Schedule 40 PVC

Project Number: FR1681
Date Installed: 12.20.11
Date Developed: 12.21.11

Pump Type: Centrifugal
(Capacity) -

Well Volume: -

Geosyntec Representative: J. McKinnon
Drilling Firm Representative: Boart Longyear
Purge Water Containment: 55 gal drum

| Time | Volume Removed (gal) | pH (SU) | Temp (°C) | Conductance (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | Comments |
|---|---|---|---|---|---|---|---|---|
| 0758 | 0 | - | - | - | - | - | - | Start |
| 0810 | 40 | - | - | - | 475 | - | - | light gray |
| 0820 | 50 | - | - | - | 405 | - | - | light gray |
| 0837 | 60 | - | - | - | > 1000 | - | - | light gray |
| 0853 | 70 | - | - | - | > 1000 | - | - | light gray |
| 0927 | 95 | - | - | - | 450 | - | - | light gray |
| 0940 | 102 | - | - | - | 401 | - | - | end |
| | | | | | | | | ** unable to collect parameters with YSI 556 MPS due to centrifugal pump. |
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# Well Development/Purge Log

Project Name: CRMR  Project No.: FR1681

Facility:  Location:

PID/FID Readings:  (Ambient)  (Well Mouth)

Initial Levels:  (Product)  (Water)

Sampling Depth: ft bgs

Pump ☐ Bail ☐  Avg. Rate: GPM  Total Gal. Extracted:

Water Column Length: ft  Well Volumes Extracted:

Disposition of Discharge Water:

Specific Capacity:  (gpm/ft. drawdown) After  Hrs.

**Well Information**

Number:
Location: See Bleeder
Datum:
Elev. Datum Point:
Top Of Casing Elev.: ft msl
Well Diameter:
Well Depth: ft
Well Material:

**Equipment Information**

Bailer No.:
Pump No.: Geopump
Interface Probe No.:
Sounder No.:
pH Meter No.: See cal form
Conductivity Meter No.:
Thermometer No.:
D.O. Meter No.:
Turbidity Meter No.:
ORP Meter No.:

| | Time (24 hr.) | Water Removed (gal) | Cumulative Volume (gal) | Water Level (feet) | Flow rate (GPM) | Water Temp (°C) | pH (std. Units) | Cond. ms/cm | Dissolved Oxygen (mg/l) | Turbidity NTU | ORP (mV) +/- | Remarks (e.g. water clarity / sampled) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW39 | 1702 | 1.5 | 1.5 | | .07 | 24.30 | 7.16 | 1.963 | 1.60 | 605 | -155.6 | 3/13/12 |
| MW39 | 1709 | ~~2.0~~ 0.5 | 2.0 | | .07 | 24.09 | 7.14 | 1.974 | 1.30 | 235 | -173.9 | |
| MW39 | 1716 | .5 | 2.5 | | .07 | 24.18 | 7.12 | 1.972 | 1.14 | 105 | -195.3 | |
| MW38 | 1703 | 1.0 | 1.0 | | .07 | 22.48 | 7.28 | 0.846 | .97 | 712 | -216.7 | |
| MW38 | 1710 | .5 | 1.5 | | .07 | 22.52 | 7.26 | 0.846 | .86 | 475 | -214.7 | |
| MW38 | 1717 | .5 | 2.0 | | .07 | 22.49 | 7.26 | 0.846 | .97 | 295 | -215.8 | |
| Decon 1/20 | 0950 | — | — | | — | 21.98 | 12.07 | 3.741 | ~~1.28~~ | — | -85.2 | DO = 1.28 |
| MW34 | 1320 | 1.0 | 1.0 | | .07 | 21.96 | 7.24 | 2.213 | 1.54 | 753 | -160.1 | 3/14/12 |
| MW34 | 1330 | 1.0 | 2.0 | | .07 | 22.30 | 7.35 | 2.198 | 0.92 | 297 | -160.9 | |
| MW34 | 1340 | 1.0 | 3.0 | | .07 | 22.35 | 7.35 | 2.199 | 0.98 | 159 | -170.2 | |
| MW34 | 1350 | 1.0 | 4.0 | | .07 | 22.37 | 7.36 | 2.199 | 0.95 | 97 | -171.3 | |
| MW25 | 1422 | 1.0 | 1.0 | | .07 | 21.99 | 7.39 | 2.793 | .65 | 471 | -193.4 | 3/14/12 |
| MW25 | 1435 | .7 | 1.7 | | .07 | 21.98 | 7.45 | 2.800 | .66 | 201 | -179.8 | |
| MW25 | 1456 | 2 | 3.7 | | .07 | 21.89 | 7.46 | 2.801 | .72 | 95 | -180.1 | |
| MW24 | 1524 | 1.0 | 1.0 | | .07 | 23.24 | 7.13 | 0.298 | 1.93 | 693 | -139.7 | 3/14/12 |
| MW24 | 1545 | 2.0 | 3.0 | | .07 | 23.54 | 7.09 | 0.569 | 1.02 | 241 | -140.3 | |
| MW24 | 1606 | 2.0 | 2.0 | | .07 | 23.49 | 7.10 | 0.613 | .55 | 89 | -150.2 | |
| MW26 | 1624 | ~~2.0~~ .5 | .5 | | .07 | 23.45 | 7.19 | 1.239 | .69 | 589 | -169.5 | 3/14/12 |
| MW26 | 1635 | 2.0 | 2.5 | | .07 | 23.44 | 7.20 | 1.25 | .59 | 212 | -170.1 | |
| MW26 | 1650 | 1.5 | 4.0 | | .07 | 23.45 | 7.20 | 1.252 | .60 | 105 | -169.5 | |

Recorded By _____ Date _____

Checked By _____ Date _____

CRHR well Development

3/16/12

| Loc | Time | Com Vol | Temp | pH | Cond mS/cm | DO mg/L | Turb | ORP mV |
|---|---|---|---|---|---|---|---|---|
| mw31 | 1135 1100m | 2 | 24.93 | 7.74 | 1.819 | 1.07 | 478 | -116.6 |
| mw31 | 1149 | 3 | 24.95 | 7.51 | 1.820 | 1.00 | 163 | -118.4 |
| mw31 | 1206 | 4 | 25.00 | 7.52 | 1.82 | .91 | 34.2 | -119.0 |
| mw30 | 1226 | 2 | 25.46 | 7.93 | 0.834 | 1.99 | 745 | -121.0 |
| mw30 | 1240 | 3 | 24.97 | 8.01 | .845 | 1.29 | 345 | -104.3 |
| mw30 | 1254 | 4 | 24.97 | 1pm 7.95 | .846 | 1.05 | 187 | -100.9 |
| mw35 | 1335 | 3 | 24.95 | 7.51 | 1.912 | 1.29 | >1,000 | -175.9 |
| mw35 | 1349 | 4 | 25.12 | 7.79 | 1.915 | 1.27 | 650 | -180.2 |
| DUP ~~mw35~~ mw36 | 1412 | 2 | 25.11 | 7.89 | 1.003 | .93 | 344 | -100.2 |
| mw36 | 1434 | 4 | 25.12 | 7.64 | 0.885 | 1.02 | 123 | -100.0 |
| mw37 | 1459 | 2 | 25.12 | 7.89 | 1.113 | .85 | 296 | -109.7 |
| mw37 | 1518 | 4 | 25.10 | 7.90 | 1.115 | .76 | 304 | -110.3 |
| mw33 | 1545 | 2 | 2509 | 7.88 | 1.679 | .95 | >1001 | -199.8 |
| mw33 | 1621 | 4 | 25.10 | 7.90 | 1.686 | .69 | 234 | -205.9 |
| mw32 | 1649 | 2 | 26.14 | 7.49 | 1.435 | .70 | >1000 | -215.9 |
| mw32 | 1729 | 4 | 26.10 | 7.51 | 1.440 | .65 | 279 | -219.3 |

CANE well development.

3/19/12

| Loc | Time | Cum Vol | Temp | pH | Cond | DO | Turb | orp mV |
|---|---|---|---|---|---|---|---|---|
| mw29 | ~~1505~~ 1448 | 1.0 | 26.24 | 7.75 | 1.593 | .90 | 98 | -195.8 |
| mw29 | 1510 | 4.0 | 26.23 | 7.81 | 1.624 | .79 | 48 | -202.4 |
| mw27 | 1523 | START | | | | | | |
| MW27 | 1540 | 1.0 | 26.99 | 7.92 | 1.23 | .79 | 69 | -214.9 |
| mw27 | 1615 | 4.5 | 26.19 | 7.89 | 1.74 | .21 | 6.9 | -215.9 |
| mw28 | 1620 | 1.5 | 26.25 | 7.91 | 6.89 | .63 | 36 | -295.8 |
| mw28 | 1629 | 4.0 | 26.26 | 7.72 | 1.91 | .60 | 29.1 | -275.4 |

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# WELL DEVELOPMENT DATA FORM

Site Name: CRITE
Well Name: MW0022

Depth To Bottom:
(Initial) 70
(Final) 70

Static Water Level:
*- development conducted prior to well completion below grade.
(Initial) -*
(Final) -*

Field Cleaning of Equip: Yes
Measuring Point: TOC*
Casing I.D.: Schedule 40 PVC

Project Number: FR1681
Date Installed: 12-20-11
Date Developed: 12.21.11

Pump Type: Centrifugal
(Capacity) -

Well Volume: -

Geosyntec Representative: J. McKinnon
Drilling Firm Representative: Boart Longyear
Purge Water Containment: 55 gal drum

| Time | Volume Removed (gal) | pH (SU) | Temp (°C) | Conductance (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | Comments |
|---|---|---|---|---|---|---|---|---|
| 1325 | 0 | - | - | - | - | - | - | start |
| 1416 | 43 | - | - | - | 663 | - | - | light gray |
| 1426 | 48 | - | - | - | 522 | - | - | light gray |
| 1430 | 51 | - | - | - | 471 | - | - | end |
| | | | | | | | | ** unable to |
| | | | | | | | | collect parameters |
| | | | | | | | | with YSI 556 MPS |
| | | | | | | | | due to centrifugal |
| | | | | | | | | pump. |
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# WELL DEVELOPMENT DATA FORM

Site Name: CRHE
Well Name: MW0023

Depth To Bottom:
(Initial) 70
(Final) 70

Static Water Level:
*-development conducted prior to well completion below grade.
(Initial) - *
(Final) - *

Field Cleaning of Equip: Yes
Measuring Point: TOC*
Casing I.D.: Schedule 40 PVC

Project Number: FR1681
Date Installed: 12.20.11
Date Developed: 12.21.11

Pump Type: Centrifugal
(Capacity) -

Well Volume: -

Geosyntec Representative: J. McKinnon
Drilling Firm Representative: Boart Longyear
Purge Water Containment: 55 gal drum

| Time | Volume Removed (gal) | pH (SU) | Temp (°C) | Conductance (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | Comments |
|---|---|---|---|---|---|---|---|---|
| 0758 | 0 | - | - | - | - | - | - | Start |
| 0810 | 40 | - | - | - | 475 | - | - | light gray |
| 0820 | 50 | - | - | - | 405 | - | - | light gray |
| 0837 | 60 | - | - | - | > 1000 | - | - | light gray |
| 0853 | 70 | - | - | - | > 1000 | - | - | light gray |
| 0927 | 95 | - | - | - | 450 | - | - | light gray |
| 0940 | 102 | - | - | - | 401 | - | - | end |
| | | | | | | | | ** unable to collect parameters with YSI 556 MPS due to centrifugal pump. |
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# APPENDIX K

# FIELD FORMS
# (electronic copy only)

# DAILY LOGS

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**DAILY FIELD REPORT**



Project: FR1681 CRHEA
Project No.: FR1681
Date: 6/22/09
Task No.:
Contractors: EDS- Chris Phelps & Keith Olson; KB Labs - Herb Kelley

**Work Performed**

Well Installation:
Soil Borings:
DPT: X
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

Call Duty office ok to dig. Calibrate and load equipment.
0630 Arrive at office.
0800 Meet EDS & KB Labs at badging station.
0830 On site, Call Security, Utility locate is being completed.
0845 Hand auger Location A (DPT0017) To 5'. Sample at 8-12', 16-20', 26-30', & 36-40'.
1000 Leave site to get spill pallet for decon ing.
1030 Back on site, Decon rods & continue sampling DPT0017 at 41-45', 46-50' and 61-65'
1145 Lunch Break
1230 On site. Decon rods. Hand auger Location B (DPT0018) and Sample at 8-12', 16-20', 26-30', 36-40', 41-45', 46-50' and 61-65'.
1445 Decon Rods.
1500 Take air conditioning break due to slight heat stress.
1515 Trimmy grout DPT0017.
1545 Hand auger location C (DPT0019) To 5'. Sample at 10', 18', 28' 38' 43' 48' and 63'. Trimmy grout.
1800 Load equipment. Dispose of IDW at CCF.
1830 Leave site.

**~~Plans/Future Activities~~ NO**

Janet Barfus 6/22/09
Signature/Date

Geosyntec consultants

engineers | scientists | innovators

## DAILY FIELD REPORT

PROJECT: NASA CRHF

LOCATION: CAPE CANAVERAL, FL PROJECT NO.: FR1681 TASK NO: 3.0

DESCRIPTION: DPT GW SAMPLING DATE: 6/23/09

CONTRACTOR: EOS → CHRIS, KEITH; RB LABS - TUAN

WEATHER: OVERCAST, ~80°F, WIND FROM WEST < 5MPH

| | |
|---|---|
| 645 | ARRIVE TO OFFICE, ALEX RIVERA, CHECK IN W/SAM BARFUS / BEGIN CALIBRATION OF GW EQUIPMENT / LOAD EQUIPMENT INTO VEHICLE |
| 715 | ARRIVE AT BADGING STATION TO OBTAIN BADGE |
| 730 | MOBILIZE TO RSC, FL → CONTRACTOR'S ROAD, CRHF FACILITY |
| 800 | EOS AND MOBILAB ONSITE → EOS BEGINS TRIMM GROUTING OF DPT-18 / DISCUSS PLAN - CONTACTS W/ J.B. |
| 830 | COMPLETE GROUTING OF DPT-18 → MOBILIZE TO DPT-20 / HAND AUGER TO 5 FT BLS |
| 850 | DPT-20 - PURGE INTERVAL 8-12' BLS @ LOW FLOW TO AVOID RECHARGE |
| 914 | COMPLETE PURGE - SAMPLE DPT-20 (8-12') / PURGED ~0.50 GAL |
| 920 | BEGIN DPT TO 20 FT BLS |
| 926 | PURGE DPT-20 (16-20') / PURGE ~0.50 GAL PRIOR TO SAMPLING |
| 938 | SAMPLE DPT-20 (16-20') / BEGIN DPT TO 30 FBLS |
| 945 | BEGIN PURGE OF DPT 26-30 FT BLS |
| 957 | SAMPLE DPT-20 (26-30) / PURGED ~0.50 GAL PRIOR TO SAMPLING |
| 1007 | REACH DPT-20 (36-40) / BEGIN PURGE |
| 1018 | SAMPLE DPT-20 (36-40) / PURGED ~0.75 GAL PRIOR TO SAMPLING |
| 1020 | DRILLERS MOBILIZE TO DECON STATION TO DECON SCREENS |
| 1030 | CONTINUE DPT TO 45 FT BLS |
| 1040 | BEGIN PURGE OF DPT20 (41-45) |
| 1053 | SAMPLE DPT 20 (41-45) / PARGE ~0.75 GAL. PRIOR TO SAMPLING |
| 1105 | REACH DPT-20 (46-50) / BEGIN PURGE |
| 1119 | SAMPLE DPT-20 (46-50) / PURGED ~0.75 GAL PRIOR TO SAMPLING |
| 1134 | REACH DPT-20 (61-65') / BEGIN INITIAL PURGE |

COPY TO: _____ PER: ALEX RIVERA

Geosyntec consultants

engineers | scientists | innovators

FR1681 – 3
NASA CRHE
6/23/09

| | |
|---|---|
| 1145 | SAMPLE DPT-20 (61-65) / PURGED ~0.50 GAL PRIOR TO SAMPLING |
| 1200 | COMPLETE SAMPLING — MOBILIZE TO LUNCH |
| 1245 | DRILLERS BEGIN TREMMY GROUT OF DPT-19 / CONTACT REBECCA DEPRATO REGARDING THE COMPLETION OF DATA FOR ALL INTERVALS OF DPT-20 — LAB TECH TUAN STATES HE WILL EMAIL RESULTS — R.D. STATES SHE WILL REVIEW RESULTS TO DETERMINE NEXT LOCATION (DPT-22) |
| 1315 | COMPLETE GROUT OF DPT-19 / MOBILIZE TO PROPOSED LOCATION OF DPT-21 / BEGIN HAND AUGER OF DPT-21 TO 5 FT BLS |
| 1330 | BEGIN DPT OF DPT-21 (8-12) |
| 1328 | BEGIN INITIAL PURGE OF DPT-21 (8-12) |
| 1338 | COMPLETE PURGE (~0.50 GAL) — BEGIN SAMPLING |
| 1345 | CONTINUE DPT-21 TO 20 FT BLS |
| 1354 | BEGIN INITIAL PURGE OF DPT-21 (16-20) |
| 1412 | REACH DPT-21 (26-30) / BEGIN INITIAL PURGE |
| 1421 | COMPLETE PURGE (~1.0 GAL) - BEGIN SAMPLING |
| 1425 | COMPLETE SAMPLING — DRILLERS TO DECON SCREENS |
| 1435 | DRILLERS RESUME DRILLING AT DPT-21 (36-40) |
| 1443 | DPT-21 (36-40) INITIAL PURGE |
| 1453 | COMPLETE PURGE (~0.75 GAL) - BEGIN SAMPLING |
| 1458 | COMPLETE SAMPLING — CONTINUE DPT TO 45 FT |
| 1506 | BEGIN INITIAL PURGE OF DPT-21 (41-45) |
| 1517 | COMPLETE PURGE (~0.75 GAL) BEGIN SAMPLING |
| 1522 | COMPLETE SAMPLING — CONTINUE DPT TO 50 FT |
| 1533 | BEGIN INITIAL PURGE OF DPT-21 (46-50) |
| 1545 | COMPLETE PURGE (~1.0 GAL) BEGIN SAMPLING |
| 1550 | COMPLETE SAMPLING — CONTINUE DPT TO 65 FT |
| 1602 | BEGIN INITIAL PURGE OF DPT-21 (61-65) |
| 1614 | COMPLETE PURGE (~1.0 GAL). BEGIN SAMPLING |
| 1620 | COMPLETE SAMPLING - MOBILIZE TO DPT-22 (8-12) / BEGIN HAND AUGER TO 5 FT BLS / DRILLERS BEGIN DECON OF SCREENS |

COPY TO: _____ PER: ALEX RIVERA

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FR1681-3
NASA CRHE
6/23/09

1642 - BEGIN INITIAL PURGE OF DPT-22 (8-12)
1654 - COMPLETE PURGE OF DPT-22 (8-12) / BEGIN SAMPLING / ~0.5 GAL PURGED
1655 - COMPLETE SAMPLING AND CONTINUE DPT TO 20 FT BLS
1700 - BEGIN INITIAL PURGE OF DPT-22 (16-20')
1708 - COMPLETE PURGE OF DPT-22 (16-20) / BEGIN SAMPLING / ~0.5 GAL PURGED
1712 - COMPLETE SAMPLING AND CONTNUE DPT TO 30 FT BLS
1715 - BEGIN INITIAL PURGE OF DPT-22 (26-30')
1724 - COMPLETE PURGE OF DPT-22 (26-30) (~0.5 GAL) / BEGIN SAMPLING
1728 - COMPLETE SAMPLING OF DPT-22 (26-30) / ADVANCE TO 40' BLS
1739 - BEGIN INITIAL PURGE OF DPT-22 (36-40)
1745 - COMPLETE PURGE (~0.5 GAL) / BEGIN SAMPLING OF DPT-22 (36-40)
1750 - COMPLETE SAMPLING OF DPT-22 (36-40) / DRILLERS BREAK DOWN EQUIPMENT AND CONE OFF DPT-22 LOCATION FOR COMPLETION ON 6/24/09 / CONTACT R.D. REGARDING PROGRESS OF GW INVESTIGATION AND PLANNED LOCATION FOR 6/24/09
1815 - LEAVE SITE / DRILLERS LEAVE SITE

COPY TO: _____ PER: ALEX RIVERA

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## DAILY FIELD REPORT

PROJECT: NASA CRHE

LOCATION: KSC, FL PROJECT NO.: FR1651 TASK NO: 3

DESCRIPTION: DPT GW SAMPLING DATE: 6/24/09

CONTRACTOR: EPS → CHRIS, KEITH ; RBLABS → TUAN

WEATHER: SUNNY, NO WIND, ~80°F

0645 - ARRIVE AT OFFICE / ALEX RIVERA - CALIBRATE GW EQUIPMENT (SEE CAL. FORM / OBTAIN CLEARANCE FROM NASA SUIT OFFICE FOR SITE WORK

0715 - MOBILIZE TO KSC, FL

0745 - ARRIVE ON SITE / DRILLERS HAVE ADVANCED TO 45' AT DPT-22

0748 - BEGIN PURGE OF DPT-22 (41-45) / SAFETY TAILGATE (SEE HASP)

0759 - COMPLETE PURGE OF DPT-22 (41-45) / BEGIN SAMPLING / TUAN ARRIVES ON-SITE

0805 - COMPLETE SAMPLING OF DPT-22 (41-45) (~.5 GAL) / CONTINUE DPT TO 50'

0812 - BEGIN INITIAL PURGE OF DPT-22 (46-50)

0822 - COMPLETE PURGE OF DPT-22 (46-50) ~0.5 GAL PURGED / BEGIN SAMPLING

0827 - COMPLETE SAMPLING OF DPT-22 (46-50) / CONTINUE DPT TO 65'

0837 - COMPLETE DPT-22 (61-65) / BEGIN INITIAL PURGE

0851 - COMPLETE PURGE OF DPT-22 (61-65) ~1.0 GAL PURGED / BEGIN SAMPLING

0858 - COMPLETE SAMPLING OF DPT-22 (61-65) / DRILLERS MOBILIZE TO DEON AREA FOR DEON OF SCREENS.

0915 - MOBILIZE TO IDW AREA FOR DISPOSAL OF IDW / HAND AUGER DPT-23 TO 5'

0935 - BEGIN DPT TO 12' AT DPT-23 LOCATION

0948 - REACH DPT-23 (8-12) / BEGIN INITIAL PURGE

0958 - COMPLETE PURGE - BEGIN SAMPLING DPT-23 (8-12) / ~0.50 GAL PURGED

1002 - COMPLETE SAMPLING - ADVANCE TO 20' AT DPT-23

1003 - BEGIN INITIAL PURGE OF DPT-23 (16-20)

1011 - COMPLETE PURGE (~0.5 GAL) / BEGIN SAMPLING DPT-23 (16-20)

1018 - BEGIN INITIAL PURGE OF DPT-23 (26-30)

1026 - COMPLETE PURGE (~0.5 GAL) / BEGIN SAMPLING DPT-23 (26-30')

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|---|---|
| 1029 | COMPLETE SAMPLING OF DPT-23 (26-30) / CONTINUE ADVANCE TO 40' |
| 1036 | REACH DEPTH OF 40' — BEGIN INITIAL PURGE OF DPT-23 (36-40) |
| 1045 | COMPLETE PURGE (~0.50 GAL) OF DPT-23 (36-40) / BEGIN SAMPLING |
| 1050 | COMPLETE SAMPLING OF DPT-23 (36-40) / DRILLERS TO DECON SCREENS / SPEAK WITH R.D. REGARDING DPT-24 LOCATION (~25' EAST OF DPT-20) |
| 1105 | DRILLERS, A.R. LEAVE FOR LUNCH |
| 1140 | RESUME DRILLING AT DPT-23 TO 45' BLS |
| 1147 | BEGIN INITIAL PURGE OF DPT-23 (41-45) |
| 1156 | COMPLETE PURGE (~0.50 GAL) / BEGIN SAMPLING DPT-23 (41-45) |
| 1159 | COMPLETE SAMPLING OF DPT-23 (41-45) / CONTINUE TO 50' BLS |
| 1210 | BEGIN INITIAL PURGE OF DPT-23 (46-50) |
| 1221 | COMPLETE PURGE → BEGIN SAMPLING OF DPT-23 (46-50) / ~0.50 GAL PURGED |
| 1224 | COMPLETE SAMPLING OF DPT-23 (46-50) / CONTINUE TO 65' BLS |
| 1237 | OBTAIN DEPTH OF 65' → BEGIN INITIAL PURGE OF DPT-23 (61-65) |
| 1249 | COMPLETE PURGE (~1.0 GAL PURGED) / BEGIN SAMPLING DPT-23 (61-65) |
| 1253 | COMPLETE SAMPLING / DRILLERS MOB TO DECON SCREENS |
| 1311 | BEGIN HAND AUGER OF DPT-24 LOCATION TO 5' FOR UTILITY CLEARANCE |
| 1315 | BEGIN DPT TO 12 FT BLS / CHRIS (EPS) LEAVES SITE TO RETRIEVE APPT'L RODS FOR DEEP INTERVAL AT DPT-20 |
| 1321 | BEGIN INITIAL PURGE OF DPT-24 (8-12') |
| 1331 | COMPLETE PURGE (~0.50 GAL) / BEGIN SAMPLING DPT-24 (8-12) |
| 1345 | COMPLETE SAMPLING OF DPT-24 (8-12) / ADVANCE TO 20' |
| 1345 | BEGIN INITIAL PURGE OF DPT-24 (16-20) |
| 1345 | UNABLE TO PURGE DUE TO PARTIALLY OPEN SCREEN, WILL REDRILL TO DEPTH USING NEW RODS |
| 1352 | DEPTH REACHED, BEGIN NEW PURGE FOR DPT-24 (16-20) |
| 1401 | COMPLETE PURGE (~0.50 GAL) / BEGIN SAMPLING DPT-24 (16-20) |
| 1404 | COMPLETE SAMPLING OF DPT-24 (16-20) / ADVANCE TO 30' |

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|---|---|
| 1411 | BEGIN INITIAL PURGE OF DPT-24 (26-30') |
| 1418 | CHRIS (EDS) RETURNS TO SITE W/ ADDT'L RODS |
| 1422 | PURGING COMPLETE - BEGIN SAMPLING DPT-24 (26-30) (PURGED ~0.50 GAL) |
| 1425 | COMPLETE SAMPLING DPT-24 (26-30) / DRILLERS BEGIN DECON. OF SCREENS IN DECON AREA |
| 1435 | CONTINUE ADVANCE. TO 40' BLS |
| 1440 | BEGIN INITIAL PURGE OF DPT-24 (36-40) |
| 1449 | COMPLETE PURGE OF DPT-24 (36-40) / BEGIN SAMPLING / (PURGED ~0.50 GAL) |
| 1452 | COMPLETE SAMPLING OF DPT-24 (36-40) / ADVANCE TO 45' |
| 1501 | BEGIN INITIAL PURGE OF DPT-24 (41-45) |
| 1511 | COMPLETE PURGE (~0.50 GAL) / BEGIN SAMPLING DPT-24 (41-45) |
| 1514 | COMPLETE SAMPLING OF DPT-24 (41-45) / ADVANCE TO 50' |
| 1524 | BEGIN INITIAL PURGE OF DPT-24 (46-50) |
| 1534 | COMPLETE PURGE (~0.50 GAL) / BEGIN SAMPLING DPT-24 (46-50) |
| 1538 | COMPLETE SAMPLING OF DPT-24 (46-50) / ADVANCE TO 65' |
| 1553 | BEGIN INITAL PURGE OF DPT-24 (61-65) |
| 1602 | COMPLETE PURGE (~0.50 GAL) / BEGIN SAMPLING DPT-24 (61-65) |
| 1605 | COMPLETE SAMPLING OF DPT-24 (61-65) / MOBILIZE TO DPT-20 TO ADVANCE TO 75' PER R.D. REQUEST / DRILLERS BEGIN DECON OF SCREENS IN DECON AREA. |
| 1631 | BEGIN DPT ADVANCE TO 75FT BLS |
| 1643 | BEGIN INITIAL PURGE OF DPT-20 (71-75) |
| 1653 | COMPLETE PURGE (~1.0 GAL) / BEGIN SAMPLING DPT-20 (71-75) |
| 1656 | COMPLETE SAMPLING DPT-20 (71-75) / MOBILIZE TO DPT-22 |
| 1703 | BEGIN DPT ADVANCE TO 75FT BLS AT DPT-22 |
| 1718 | BEGIN INITIAL PURGE OF DPT-22 (71-75) |
| 1729 | COMPLETE PURGE / BEGIN SAMPLING / DRILLERS SURFACE GROUT DPT-21 AND DPT-23 |
| 1800 | COMPLETE ALL SAMPLES / DRILLERS AND AR. LEAVE SITE / CONTACT JIM JOHNSON REGARDING STATUS UPDATE |

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## DAILY FIELD REPORT

PROJECT: NASA CRHE

LOCATION: KSC, FL PROJECT NO.: FR1681 TASK NO: 3

DESCRIPTION: DPT GW INVESTIGATION DATE: 6/25/08

CONTRACTOR: EDS → CHRIS, KEITH ; KB LABS → TUAN

WEATHER: SUNNY, ~80°F, NO WIND

| | |
|---|---|
| 645 | ARRIVE AT OFFICE, ALEX RIVERA / BEGIN CALIBRATION OF GW SAMPLING EQUIPMENT |
| 700 | CONTACT NASA DUTY OFFICE FOR CLEARANCE AT CRHE AREA - APPROVED |
| 705 | MOBILIZE TO KSC, FL |
| 730 | ARRIVE ON SITE - DRILLERS HAND AUGERING DPT-25 TO 5' |
| 735 | MOBILIZE TO IDW DISPOSAL AREA |
| 800 | RETURN TO SITE / DRILLERS ADVANCE TO 12' BLS @ DPT-25 LOCATION |
| 811 | BEGIN INITIAL PURGE OF DPT-25 (5-12) / UTILITY LOCATE ARRIVES / RELAY PLAN FOR DPT LOCATIONS (~12.5' STEPOUTS AROUND MW-19.) - PER REBECCA DEPRATO / SAFETY TAILGATE MEETING |
| 817 | COMPLETE PURGE OF DPT-25 (5-12) / ~0.50 GAL. / BEGIN SAMPLING |
| 820 | COMPLETE SAMPLING DPT-25 (5-12) / DRILLERS ADVANCE TO 20' |
| 825 | DEPTH REACHED - BEGIN INITIAL PURGE OF DPT-25 (16-20) |
| 831 | COMPLETE PURGE (~0.50 GAL) / BEGIN SAMPLING |
| 833 | COMPLETE SAMPLING OF DPT-25 (16-20) / ADVANCE TO 30' |
| 835 | DRILLERS MOB TO DECON SCREENS |
| 845 | OBTAIN DEPTH / INITIAL PURGE OF DPT-25 (26-30) |
| 855 | COMPLETE PURGE (~0.50 GAL) / BEGIN SAMPLING |
| 858 | COMPLETE SAMPLING OF DPT-25 (26-30) / ADVANCE TO 40' BLS |
| 905 | BEGIN INITIAL PURGE OF DPT-25 (36-40) |
| 916 | COMPLETE PURGE (~0.50 GAL) / BEGIN SAMPLING DPT-25 (36-40) |
| 919 | COMPLETE SAMPLING OF DPT-25 (36-40) / ADVANCE TO 45' BLS |
| 932 | BEGIN INITIAL PURGE OF DPT-25 (41-45) |

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|---|---|
| 941 | COMPLETE PURGE / BEGIN SAMPLING DPT-25 (41-45) |
| 945 | COMPLETE SAMPLING FOR DPT-25 (41-45) / DRILLERS ADVANCE TO 50' BGS |
| 953 | BEGIN INITIAL PURGE OF DPT-25 (46-50) |
| 1003 | COMPLETE PURGE / BEGIN SAMPLING DPT-25 (46-50) |
| 1006 | COMPLETE SAMPLING DPT-25 (46-50) / DRILLERS TO DECON SCREENS |
| 1017 | DRILLERS RESUME DPT ADVANCE TO 65' BLS @ DPT-25 |
| 1027 | BEGIN INITIAL PURGE OF DPT-25 (61-65) / SPEAK WITH R.D. REGARDING LOCATION OF DPT-26 (~25' WEST OF DPT-25) |
| 1036 | COMPLETE PURGE OF DPT-25 (61-65) / BEGIN SAMPLING (~1.0 GAL PURGED) |
| 1039 | COMPLETE SAMPLING DPT-25 (61-65) / MOBILIZE TO DPT-26 |
| 1042 | BEGIN HAND AUGER OF DPT-26 TO 5' BLS |
| 1056 | BEGIN DPT @ DPT-26 TO 12' BLS |
| 1059 | BEGIN INITIAL PURGE OF DPT-26 (8-12) |
| 1110 | COMPLETE PURGE OF DPT-26 (8-12) / BEGIN SAMPLING / ~0.50 GAL |
| 1115 | COMPLETE SAMPLING OF DPT-26 (8-12) / LEAVE FOR LUNCH |
| 1145 | RETURN TO SITE / DRILLERS RESUME DPT ADVANCE TO 20' BLS |
| 1201 | BEGIN INITIAL PURGE OF DPT-26 (16-20) |
| 1210 | COMPLETE PURGE / BEGIN SAMPLING DPT-26 (16-20) / PURGE ~ 1.0 GAL |
| 1213 | COMPLETE SAMPLING OF DPT-26 (16-20) / ADVANCE DPT TO 30' BLS |
| 1219 | BEGIN INITIAL PURGE OF DPT-26 (26-30') |
| 1229 | COMPLETE PURGE (~0.75 GAL) / BEGIN SAMPLING OF DPT-26 (26-30) |
| 1232 | COMPLETE SAMPLING / DRILLERS TO DECON SCREENS. |
| 1239 | DRILLERS CONTINUE TO ADVANCE DPT-26 TO 40' BLS |
| 1247 | ~~BEGIN~~ BEGIN INITIAL PURGE OF DPT-26 (36-40) |
| 1257 | COMPLETE PURGE (~0.75 GAL) / BEGIN SAMPLING OF DPT-26 (36-40) |
| 1300 | COMPLETE SAMPLING / DRILLERS ADVANCE TO 45' BLS |
| 1311 | BEGIN INITIAL PURGE OF DPT-26 (41-45) |
| 1321 | COMPLETE PURGE (~0.75 GAL) / BEGIN SAMPLING OF DPT-26 (41-45) |
| 1324 | COMPLETE SAMPLING / DRILLERS ADVANCE TO 50' BLS |

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| 1333 | BEGIN INITIAL PURGE OF DPT-26 (46-50) |
| 1343 | COMPLETE PURGE (~1.75 GAL) / BEGIN SAMPLING DPT-26 (46-50) |
| 1346 | COMPLETE SAMPLING OF DPT-26 (46-50) / ADVANCE TO 65 FT BLS |
| 1359 | BEGIN PURGE OF DPT-26 (61-65) |
| 1409 | COMPLETE PURGE (~1.0 GAL) / BEGIN SAMPLING DPT-26 (61-65) |
| 1412 | COMPLETE SAMPLING OF DPT-26 (61-65) / DECON OF SCREENS BY DRILLERS / SET UP @ DPT-27 LOCATION |
| 1425 | BEGIN HAND AUGER OF DPT-27 TO 5' BLS |
| 1435 | BEGIN DPT ADVANCE TO 12' BLS |
| 1438 | BEGIN PURGE OF DPT-27 (8-12) |
| 1452 | COMPLETE PURGE OF DPT-27 (8-12) / ~0.5 GAL / BEGIN SAMPLING |
| 1455 | COMPLETE SAMPLING DPT-27 (8-12) / ADVANCE TO 20' BLS |
| 1458 | BEGIN PURGE OF DPT-27 (16-20) |
| 1508 | COMPLETE PURGE OF DPT-27 (16-20) / ~0.5 GAL / BEGIN SAMPLING |
| 1511 | COMPLETE SAMPLING OF DPT-27 (16-20) / ADVANCE TO 30' BLS |
| 1516 | BEGIN PURGE OF DPT-27 (26-30) / CONTACT NASA WEATHER OFFICE DUE TO APPROACH OF STORM CLOUDS FROM NW — TOLD IN PHASE I UNTIL 20:00 |
| 1527 | COMPLETE PURGE (~0.5 GAL) / BEGIN SAMPLING OF DPT-27 (26-30) |
| 1530 | COMPLETE SAMPLING OF DPT-27 (26-30) / ADVANCE TO DEPTH 40' BLS |
| 1537 | BEGIN PURGE OF DPT-27 (36-40) |
| 1547 | COMPLETE PURGE OF DPT-27 (36-40) ~0.50 GAL / BEGIN SAMPLING |
| 1550 | COMPLETE SAMPLING OF DPT-27 (36-40) / DRILLERS TO DECON SCREENS |
| 1557 | DRILLERS CONTINUE DPT ADVANCE TO 45' BLS @ DPT-27 / SECOND DRILLER BEGINS GROUTING PROCESS FOR DPT 20, 22, 24, 25 |
| 1607 | BEGIN PURGE OF DPT-27 (41-45) |
| 1618 | COMPLETE PURGE (~1.0 GAL) / BEGIN SAMPLING DPT-27 (41-45) |
| 1621 | COMPLETE SAMPLING OF DPT-27 (41-45) / COMPLETE GROUTING OF DPT 20, 22, 24, 25 / ADVANCE TO 50' BLS |

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1631 - BEGIN PURGE OF DPT-27(46-50)
1642 - COMPLETE PURGE (~0.75 GAL) / BEGIN SAMPLING DPT-27(46-50)
1645 - COMPLETE SAMPLING OF DPT-27(46-50) / ADVANCE DPT TO 65' BGS
1656 - BEGIN PURGE OF DPT-27(61-65)
1704 - COMPLETE PURGE (~0.50 GAL) / BEGIN SAMPLING DPT-27(61-65)
1710 - COMPLETE SAMPLING / DRILLERS TO DECON AREA TO DECON SCREENS
1720 - MOBILIZE TO IDW AREA TO DISPOSE OF IDW
1745 - RETURN TO SITE / MOBILIZE GEOPROBE TO DPT-28 LOCATION
1755 - GEOPROBE UNABLE TO SETUP AT PROPOSED MARKED AREA / CONTACT R.D. REGARDING PROPOSED LOCATION
1810 - LEAVE SITE / DRILLERS AND GEO

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## DAILY FIELD REPORT

PROJECT: NASA CRHE

LOCATION: KSC, FL PROJECT NO.: FRC681 TASK NO: 3

DESCRIPTION: DPT GW INVESTIGATION DATE: 6/26/07

CONTRACTOR: EDS → CARLS, KEITH ; KB LABS → TUAN

WEATHER: SUNNY, ~78° F, NO WIND

630 ARRIVE AT OFFICE / BEGIN EQUIPMENT EVALUATION / CALIBRATION

650 COMPLETE CALIBRATION / MOBILIZE TO KSC, FL / CONTACT NASA DUTY OFFICE — ALL CLEAR

705 ALEX RIVERA ARRIVE ON SITE / DRILLERS HAVE BEGUN H.A. OF DPT-28 (PER REBECCA DEPRATO CONVERSATION ON 6/25/07) / ADVANCE DPT TO 12' BLS / SAFETY OVERVIEW W/ DRILLERS

710 BEGIN INITIAL PURGE OF DPT-28 (8-12)

724 COMPLETE PURGE (~0.50 GAL) / BEGIN SAMPLING DPT-28 ~~(16-20)~~ (8-12)

727 COMPLETE SAMPLING DPT-28 ~~(16-20)~~ (8-12) / DRILLERS ADVANCE TO 20' BLS

731 BEGIN INITIAL PURGE OF DPT-28 (16-20)

739 COMPLETE PURGE (~0.50 GAL) / BEGIN SAMPLING DPT-28 (16-20)

742 COMPLETE SAMPLING DPT-28 (16-20) / DRILLERS ADVANCE TO 30' BLS

748 BEGIN INITIAL PURGE OF DPT-28 (26-30) / TUAN (KB) ARRIVES

757 COMPLETE PURGE (~0.75 GAL) / BEGIN SAMPLING DPT-28 (26-30)

800 COMPLETE SAMPLING DPT-28 (26-30) / ADVANCE TO 40' BLS

802 BEGIN INITIAL PURGE OF DPT-28 (26-30)

817 COMPLETE PURGE (~0.50 GAL) / BEGIN SAMPLING DPT-28 (36-40)

820 COMPLETE SAMPLING DPT-28 (36-40) / DRILLERS TO DECON / HEALTH AND SAFETY OVERVIEW / TUAN

830 CONTINUE ADVANCE TO 45' BLS

837 BEGIN INITIAL PURGE (~0.50 GAL) /

844 COMPLETE PURGE / BEGIN SAMPLING DPT-28 (41-45)

847 COMPLETE SAMPLING DPT-28 (41-45) / ADVANCE TO 50' BLS

856 BEGIN INITIAL PURGE OF DPT-28 ~~(41-45)~~ (45-50)

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906 - COMPLETE PURGE / ~0.50 GAL / BEGIN SAMPLING OF DPT-28 (46-50)
910 - COMPLETE SAMPLING OF DPT-28 (46-50) / ADVANCE TO 65' BLS
921 - BEGIN INITIAL PURGE OF DPT-28 (61-65)
931 - COMPLETE PURGE (~1.0 GAL) / BEGIN SAMPLING OF DPT-28 (61-65)
934 - COMPLETE SAMPLING DPT-28 (61-65) / DRILLERS TO DECON SCREENS
944 - DRILLERS BEGIN HAND AUGER OF DPT-29 TO 5' BLS
952 - BEGIN ADVANCE OF DPT-29 (8-12)
955 - SCREEN OPENED PARTIALLY / REDRILL TO 12' BLS
958 - BEGIN PURGE OF DPT-29 (8-12)
1009 - COMPLETE PURGE (~0.50 GAL) / BEGIN SAMPLING DPT-29 (8-12)
1012 - COMPLETE SAMPLING DPT-29 (8-12) / ADVANCE TO 20' BLS
1014 - BEGIN PURGE OF DPT-29 (16-20)
1023 - COMPLETE PURGE (~0.75 GAL) / BEGIN SAMPLING DPT-29 (16-20)
1025 - COMPLETE SAMPLING DPT-29 (16-20) / ADVANCE TO 30' BLS
1032 - BEGIN PURGE OF DPT-29 (26-30)
1041 - COMPLETE PURGE (~0.75 GAL) / BEGIN SAMPLING DPT-29 (26-30)
1043 - COMPLETE SAMPLING DPT-29 (26-30) / ADVANCE TO 40' BLS
1051 - BEGIN PURGE OF DPT-29 (36-40)
1101 - COMPLETE PURGE OF DPT-29 (36-40) / BEGIN SAMPLING / (~0.5 GAL)
1104 - COMPLETE SAMPLING DPT-29 (36-40) / DRILLERS TO DECON SCREENS
1115 - LEAVE FOR LUNCH / ENTER PHASE I (PER NASA)
1145 - RETURN TO SITE / SPEAK W/ R.D. REGARDING DATA FROM MORNING LOCATIONS - RELAY INFO TO TUAN - WHO WILL FORWARD DATA TO R.D.
1156 - CONTINUE DPT ADVANCE TO 45' BLS @ DPT-29
1204 - BEGIN PURGE OF DPT-29 (41-45)
1214 - COMPLETE PURGE (~0.75 GAL) / BEGIN SAMPLING DPT-29 (41-45)
1216 - COMPLETE SAMPLING OF PPT-29 (41-45) ADVANCE TO 50' BLS
1227 - BEGIN PURGE OF DPT-29 (46-50)
1239 - COMPLETE PURGE (0.75 GAL) / BEGIN SAMPLING DPT-29 (46-50)

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1242 - COMPLETE SAMPLING DPT-29 (46-50) / ADVANCE TO 65' BLS
1254 - BEG IN PURGE OF DPT-29 (61-65)
1305 - COMPLETE PURGE (~1.0 GAL) / BEG IN SAMPLING OF DPT-29 (61-65)
1307 - COMPLETE SAMPLING DPT-29 (61-65) / DRILLERS TO DECON SCREENS / TELEPHONE CONJO W/ R.O. RE: DPT-30 LOCATION → 50' E of DPT-23
1323 - EDS BEGINS HAND AUGER OF DPT-30 TO 5' BLS
1335 - HEAVY STORM CLOUDS IN DISTANCE → CONTACT NASA WEATHER → TOLD VAB AREA CURRENTLY IN PHASE 2. → STOP WORK → RELAY INFO TO REBECCA. B.
1426 - NASA TO PHASE 1 → EDS ADVANCE TO 12' @ DPT-30
1429 - BEG IN PURGE OF DPT-30 (8-12') / DRILLERS BEG IN GROUT OF ALL LOCATIONS
1440 - COMPLETE PURGE (~0.50 GAL) / BEG IN SAMPLING DPT-30 (8-12)
1443 - COMPLETE SAMPLING DPT-30 (8-12) / ADVANCE TO 20' BLS
1447 - BEG IN PURGE OF DPT-30 (16-20)
1457 - COMPLETE PURGE (~0.50 GAL) / BEG IN SAMPLING DPT-30 (16-20)
1500 - COMPLETE SAMPLING DPT-30 (16-20) / ADVANCE TO 30' BLS
1506 - BEG IN PURGE OF DPT-30 (26-30)
1516 - COMPLETE PURGE OF DPT-30 (26-30) ~0.50 GAL / BEG IN SAMPLING / DRILLERS COMPLETE SURFACE GROUT OF ALL DPT LOCATIONS EXCEPT CURRENT LOCATION
1519 - COMPLETE SAMPLING OF DPT-30 (26-30) / ADVANCE TO 40' BLS
1524 - BEG IN PURGE OF DPT-30 (36-40)
1534 - COMPLETE PURGE (~0.50 GAL) / BEG IN SAMPLING DPT-30 (36-40)
1536 - COMPLETE SAMPLING OF DPT-30 (36-40) / DRILLERS TO DECON SCREENS.
1546 - RESUME DPT TO 45' BLS @ DPT-30
1552 - BEG IN PURGE OF DPT-30 (41-45)
1601 - COMPLETE PURGE (~1.0 GAL) / BEG IN SAMPLING DPT-30 (41-45)
1604 - COMPLETE SAMPLING DPT-30 (41-45) / ADVANCE TO 50' BLS
1612 - BEG IN PURGE OF DPT-30 (46-50)
1621 - COMPLETE PURGE (~0.75 GAL) / BEG IN SAMPLING DPT-30 (46-50)

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|---|---|
| 1624 | COMPLETE SAMPLING DPT-30(46-50) / ADVANCE TO 65' BLS |
| 1633 | BEGIN PURGE OF DPT-30(61-65) |
| 1643 | COMPLETE PURGE (~1.0 GAL) / BEGIN SAMPLING DPT-30(61-65) |
| 1645 | COMPLETE SAMPLING OF DPT-30(61-65) / DRILLERS BEGIN TO GROUT ANY REMAINING OPEN DPT-LOCATIONS |
| 1700 | DRILLERS BEGIN TO BREAKDOWN EQUIPMENT AND DECON |
| 1715 | MOBILIZE TO IDW AREA TO DISPOSE OF IDW |
| 1730 | DRILLERS COMPLETE WORK - LEAVE SITE / AE CONTACTS R.V. REGARDING FINAL UPDATE |
| 1745 | COLLECT COCs FROM TUAN AND HE STATES THAT HE WILL STAY ON-SITE UNTIL ALL LAB RESULT ANALYSIS ARE COMPLETE |
| 1800 | LEAVE SITE FOR TITUSVILLE OFFICE |
| 1415 | DECON ALL GW EQUIPMENT / UNPACK VEHICLE |
| 1850 | LEAVE FOR BOCA RATON |
| 2045 | ARRIVE IN BOCA - LEAVE FOR HOME |

COPY TO: _____ PER: ALEX RIVERA

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHF Area
Project No.: FRI681
Date: 7/16/09
Task No.:
Contractors: EDS - Chris Phelps & Keith Olson; KB Labs - Herb Kelly

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | X | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

0700 Arrive at office. Call Duty Office and get OK to dig, calibrate and load equipment.
0800 meet EDS at badging station. Travel to Site.
0815 Conduct Tailgate meeting. call Michael Palmer (facility manager) to discuss drilling inside building.
0830 Hand auger DPT0031 (Location A) to 5'. Sample at 10ft, 18ft, 28ft, 38ft, 43ft, 48ft and 63ft. Surface grout. Utility locate completed at 1015 (Additional Locations)
1130 Lunch
1230 KB Labs on site, Hand auger DPT0032 (Location C - inside warehouse) to 5' after cutting through concrete. Sample at 10ft, 18ft, 28ft, 38ft, 43ft, 48ft and 63ft.
1445 Hand auger DPT0033 (Location B) to 5'. Sample at 10' and 18'. Surface grout DPT0032.
1515 Work suspended due to Phase II lightening warning.

**Plans/Future Activities**

Janet Barlow 7/16/09
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHF Area
Project No.: FR1681
Contractors: Same as P.1

Date: 7/16/09
Task No.:

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | X | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

1605 Resume work. Sample DPT0033 at 28 ft, 38 ft, 43 ft, 48 ft, and 63 ft. Surface Grout.
1800 Dispose of IDW at CCF.
1830 Leave site.

**Plans/Future Activities**

170382 Tank Bar Code
000025 NASA ID#

Janet Barfuss 7/16/09
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CHHE
Project No.: F Alert
Contractors: EDS - CHUCK PHELPS, KEITH OLSON, MOLAND - HERB MELLY

Date: 7/17/09
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: X
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0630 - @ office calibrate eq - load car
0720 - onsite - call duty office ok to dig
0745 - Hand auger - DPT0034 - Lookout "D" on map
Sample at 10', 18', 28', 38', 43', 48' and 63', Surface grout.
1015 - Location E on map, DPT0035 - cut through concrete and hand auger to 5'; Sample at 10', 18', and 28'.
1115 - Lunch break
1200 - Sample DPT0035 at 38', 43', 48' and 63', Surface Grout.
1345 - Hand auger DPT0036 (Location G - end of Building) to 5' and sample at 10', 18', 28', 38', 43', 48' and 63', Surface Grout Cement holes inside building.
1600 - Dispose of IDW and leave site.

**Plans/Future Activities**

- Sample intervals 8-12, 16-20, 26-30, 36-40, 41-45, 46-50, 61-65

Janet Barfus 7/17/09
Signature/Date

Geosyntec consultants

# DAILY FIELD REPORT



PROJECT NAME: NASA CRHE DATE: 8/4/09

LOCATION: KSC - CAPE CANAVERAL PROJECT NO: FR1681 PHASE NO:

DESCRIPTION: DPT INVESTIGATION (GW)

SUBCONTRACTOR(S): EOS - CHRIS, KEITH ; KB LABS - HERB KELLY

WEATHER: SUNNY, 90°F, NO WIND

GEOSYNTEC PERSONNEL: ALEX RIVERA

630 ARRIVE IN TITUSVILLE OFFICE / PICK UP SUPPLIES ETC.

700 - CONTACT NASA DUTY OFFICE - OPERATOR INFORMS AR THAT TODAY NASA IS IN CRITICAL STATUS / CONTACT REBECCA PERRATO - LEAVE VM REGARDING CRITICAL STATUS

730 MEET EOS DRILLERS AT BOGING STATION - CONTACT KB LAB TO NOTIFY OF STATUS - HERB E. ONSITE - STAND BY

800 RECEIVE ALL CLEAR FROM R.D. - MOBILIZE TO CONTRACTORS ROAD

815 ARRIVE ON SITE - MOBILIZE TO DPT-037 (A ON MAP)

830 EOS HAND AUGER TO 5' BLS FOR CLEARANCE

835 SAFETY OVERVIEW W/EOS - KB LABS - BEGIN DRILLING TO 12' BLS / BEGIN CALIBRATION OF EQUIPMENT (SEE CAL. FORM)

850 12 FT BLS REACHED / BEGIN PURGE OF 8-12' INTERVAL

900 SAMPLE DPT-037 8-12 / PROCEED TO 20' BLS

905 BEGIN PURGE OF DPT-037 16-20' BLS

915 SAMPLE DPT-037 16-20 / PROCEED TO 30' BLS

923 BEGIN PURGE OF DPT-037 26-30' BLS

932 SAMPLE DPT-037 26-30 / PROCEED TO 40' BLS

943 BEGIN PURGE OF DPT-037 36-40' BLS

952 SAMPLE DPT-037 36-40 FT BLS

956 MOBILIZE TO IOW STORAGE AREA TO PICK UP DECON TUBS / DECON RODS @ DECON AREA

1045 CONTINUE DPT DRILLING TO 45' BLS

1022 BEGIN PURGE OF DPT-037 41-45' BLS

1036 SAMPLE DPT-037 41-45' / PROCEED TO 50' BLS

1090 BEGIN PURGE OF DPT-037 46-50' BLS

1058 SAMPLE DPT-037 46-50' / PROCEED TO 65' BLS

1114 BEGIN PURGE OF DPT-037 61-65' BLS

1123 SAMPLE DPT-037 61-65' / EE

FR1681

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# DAILY FIELD REPORT
(continued)

NASA - CRWE
8/4/09

1130 VM FROM R.D. RECEIVED STATING TODAY IS DESIGNATED A CRITICAL DAY AND DRILLING OPERATIONS NEED TO BE HALTED. / WILL CONTACT R.D. TO VERIFY V.M.

1143 SPEAK W/R.D. REGARDING NASA CRITICAL STATUS - PER LOIS RUSSELL @ NASA DUTY OFFICE DPT MAY PROCEED AS SCHEDULED

1150 MOBILIZE TO LUNCH

1220 RETURN FROM LUNCH / EDS MOBILIZES TO DPT-038 (LOCATION D ON MAP) TO BEGIN DPT / DRILLERS DECON SCREENS

1240 BEGIN H.A. @ DPT-038 TO 5' BLS FOR UTILITY CLEARANCE

1252 BEGIN DPT DRILLING @ DPT-038 TO 12' BLS

1256 BEGIN PURGE OF DPT-038 (8-12)

1305 SAMPLE DPT-038 (8-12) / PROCEED TO 20' BLS

1310 BEGIN PURGE OF DPT-038 (16-20)

1318 ~~BEGIN~~ SAMPLE OF DPT-038 (16-20) / PROCEED TO 30' BLS - ENTER PHASE I NASA STATUS

1326 BEGIN PURGE OF DPT-038 (26-30)

1335 - SAMPLE DPT-038 (26-30) / PROCEED TO 40' BLS

1346 - BEGIN PURGE OF DPT-038 (36-40)

1354 - SAMPLE DPT-038 (36-40) / DRILLERS TO DECON SCREENS

1415 - CONTACT R.D. RE: LOCATION "C" (DPT-038) LOCATION IS IN CLOSE PROXIMITY TO STRUCTURE AND EDS FEELS THAT THERE IS NOT SUFFICIENT CLEARANCE FOR RIG - R.D. W/ASSISTANCE FROM JAN BARFUS CLEAR LOC "C" ~5 FT WEST OF PROPOSED LOCATIONS - UTILITIES HAVE BEEN MARKED - WILL H.A. FOR SAFE CLEARANCE

1418 - CONTINUE DPT @ DPT-038 TO 45' BLS

1426 - BEGIN PURGE OF DPT-038 (41-45)

1434 - SAMPLE DPT-038 (41-45) / PROCEED TO 50' BLS

1448 - BEGIN PURGE OF DPT-038 (46-50)

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FR1681

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# DAILY FIELD REPORT
(continued)

NASA – CRHE
8/4/09

1456 - BEGIN SAMPLE OF DPT-038 (46-50) / PROCEED TO 65' BLS
1512 - BEGIN PURGE OF DPT-038 (61-65)
1525 - SAMPLE DPT-038 (61-65)
1534 - MOBILIZE TO DPT-039 (MARKED "C" ON MAP) — PROPOSED LOCATION HAS BEEN MOVED 3 FT WEST OF ORIGINAL MARK / DECON SCREENS
1552 - BEGIN H.A. OF DPT-039 TO 5' BLS FOR SAFETY CLEARANCE
1559 - H.A. COMPLETE - ADVANCE DPT-039 TO 12' BLS
1604 - BEGIN PURGE OF DPT-039 (8-12)
1613 - SAMPLE DPT-039 (8-12)
1615 - NASA PHASE 2 ANNOUNCED — AE CONTACT NASA WEATHER TO CONFIRM - PHASE 2 CONFIRMED UNTIL FURTHER NOTICE (WEATHER APPROACHING FROM WEST)
1630 - CONTACT R.D. TO UPDATE OF STATUS - AR WILL CONTACT WEATHER OFFICE @ ~17:00 FOR UPDATE
1700 - CONTACT NASA WEATHER - NO RESPONSE
1715 - CONTACT NASA WEATHER - NO RESPONSE
1730 - SPEAK W/ R.D. REGARDING PHASE 2 STATUS - DIRECTED TO END DAY - SEND SUBS HOME
1735 - LEAVE NASA-CRHE SITE

COPY TO: _____ PER: _____

716

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# DAILY FIELD REPORT



PROJECT NAME: NASA - CRHE DATE: 8/5/09

LOCATION: KSC, CAPE CANAVERAL PROJECT NO: FR1681 PHASE NO: ____

DESCRIPTION: DPT - GW INVESTIGATION (GW)

SUBCONTRACTOR(S): EDS - CHRIS, KEITH

WEATHER: SUNNY, 89°F, NO WIND

GEOSYNTEC PERSONNEL: ALEX RIVERA

630 - ALEX RIVERA MOBILIZES TO KSC - CAPE CAN., FL

700 - ARRIVE ON-SITE - EDS ONSITE - MOBILIZE TO DPT-039 LOCATION / BRIEF SAFETY OVERVIEW TO ADDRESS ANY SAFETY CONCERNS / ALL CLEAR FROM NASA DUTY OFF.

705 - BEGIN CALIBRATION OF EQUIPMENT (SEE CAL. FORM) / DRILLERS CONTINUE ADVANCE @ DPT-039 (16-20)

716 - BEGIN PURGE OF DPT-039 (16-20)

724 - SAMPLE DPT-039 (16-20) / PROCEED TO 30' BLS

734 - BEGIN PURGE OF DPT-039 (26-30)

742 - SAMPLE DPT-039 (26-30) / PROCEED TO 40' BLS

754 - BEGIN PURGE OF DPT-039 (36-40)

802 - SAMPLE DPT-039 (36-40) / ~~PROCEED TO 45' BLS~~ DRILLERS TO DECON SCREENS

818 - CONTINUE DPT ADVANCE TO 45' BLS

826 - BEGIN PURGE OF DPT-039 (41-45)

834 - SAMPLE DPT-039 (41-43) / PROCEED TO 50' BLS

847 - BEGIN PURGE OF DPT-039 (46-50)

855 - SAMPLE DPT-039 (46-50) / PROCEED TO 65' BLS

900 - AR. CALLS REBECCA DERRATO TO UPDATE ON DAY'S PROGRESS AND PLAN FOR REMAINDER OF DAY - WILL CONTINUE TO FOLLOW DPT LOCATIONS ON FIGURE

912 - BEGIN PURGE OF DPT-039 (61-65)

920 - SAMPLE DPT-039 (61-65) / DRILLERS MOBILIZE TO DPT-040 (DESIGNATED "D" ON PROPOSED DPT-LOCATION FIGURE)

925 - DRILLERS TO DECON SCREENS / BEGIN H.A. OF DPT-040 TO 5' BLS FOR UTILITY CLEARANCE

943 - BEGIN DPT ADVANCE OF DPT-040 (8-12)

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# DAILY FIELD REPORT
(continued)

NAIA - CRHE
8/5/09

0940 - BEGIN PURGE OF DPT-040 (8-12)
0955 - SAMPLE DPT-040 (8-12) / ADVANCE TO 20' BLS
1000 - BEGIN PURGE OF DPT-040 (16-20)
1008 - SAMPLE DPT-040 (16-20) / ADVANCE TO 30' BLS
1015 - BEGIN PURGE OF DPT-040 (26-30)
1024 - SAMPLE DPT-040 (26-30) / ADVANCE TO 40' BLS
1035 - BEGIN PURGE OF DPT-040 (36-40)
1044 - SAMPLE DPT-040 (36-40) / DRILLERS TO DECON SCREENS AND DISPOSE OF IDW / IDW DISPOSED INTO TANK # 0000 25
1115 - MOBILIZE TO LUNCH
1145 - LARGE STORM APPROACHING FROM SOUTH — CONTACT NASA WEATHER FOR PHASE UPDATE — WORK AREA IS CURRENTLY UNDER PHASE 2 STATUS UNTIL FURTHER NOTICE
1245 - CONTACT WEATHER OFFICE — CONTINUED PHASE 2 STATUS / CONTACT R.D. TO NOTIFY OF PHASE 2 STATUS
1325 - RECEIVE PHASE I CONFIRMATION THROUGH NASA DUTY OFFICE — CONTINUE ADVANCE OF DPT-040 TO 45 FT BLS
1334 - PURGE OF DPT-040 (41-45)
1342 - SAMPLE DPT-040 (41-45) / ADVANCE DPT TO 50' BLS
1356 - BEGIN PURGE OF DPT-040 (46-50)
1404 - SAMPLE DPT-040 (46-50) / ADVANCE DPT TO 65' BLS
1421 - BEGIN PURGE OF DPT-040 (61-65)
1429 - SAMPLE DPT-040 (61-65) / DRILLERS TO DECON SCREENS AND MOBILIZE TO LOCATION "E" ON MAP (DPT-041)
1450 - BEGIN H.A. OF DPT-041 FOR UTILITY CLEARANCE
1500 - BEGIN DRILLING TO 12' BLS @ DPT-041
1503 - BEGIN PURGE OF DPT-041 (8-12)
1512 - SAMPLE DPT-041 (8-12) / ADVANCE TO 20' BLS
1517 - BEGIN PURGE OF DPT-041 (16-20)
1525 - SAMPLE DPT-041 (16-20) / ADVANCE TO 30' BLS

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FR1681
NASA - CRUE
8/5/09

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# DAILY FIELD REPORT
(continued)

1534 - BEGIN PURGE OF DPT-041 (26-30)
1542 - SAMPLE DPT-041 (26-30) / ADVANCE TO 40' BGS
1553 - BEGIN PURGE OF DPT-041 (36-40)
1601 - SAMPLE DPT-041 (36-40)
→ PHASE 2 ANNOUNCED - DRILLERS AND REMAINING PERSONNEL STAND-BY UNTIL FURTHER NOTICE
→ SPEAK WITH HERB KELLY TO DETERMINE ETA OF MOBIL LAB - WILL ARRIVE BETWEEN 16:45-1700
1700 → CONTACT NASA DUTY OFFICE REGARDING WEATHER STATUS BARBARA @ DUTY OFFICE STATES PHASE 2 CONTINUES UNTIL FURTHER NOTICE. / KB LABS ARRIVES ON SITE
1725 → CONTACT NASA DUTY OFFICE RE: WEATHER STATUS → KSC STILL UNDER PHASE 2
→ CONTACT JILL JOHNSON REGARDING DAY'S PROGRESS - JJ. DETERMINES PHASE 2 HAS CONCLUDED WORK DAY -
→ PER J.J., KB LAB'S HERB KELLY STATES CRUE SAMPLES HAVE PRIORITY FOR ANALYSIS AND DATA WILL BE AVAILABLE BY MORNING
1740 - LEAVE SITE - MOBILIZE TO OFFICE
- DRILLERS LEAVE SITE
1800 - ARRIVE IN TITUSVILLE - OFFICE

COPY TO: _____ PER: ALEX RIVERA

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**DAILY FIELD REPORT**



Project: CRAE Area
Project No.: FR1681
Date: 8/6/09
Task No.:
Contractors: EDS- Chris Phelps + Keith Olson; KB Labs- Herb Kelly

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | X | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

0615 Arrive at office. Calibrate and load equipment. Call Duty office – no restrictions. Travel to site.
0700 Arrive on site. Conduct Tailgate meeting.
0720 Continue Sampling DPT0041 (Location E on map). Sample at 43', 48' and 63'. Surface grout.
0830 Hand auger DPT0042 (Location F on map) to 5'. Sample at 10', 18', 28', 38', 43', 48' and 63'. Surface grout. Pressure wash screens.
1100 Lunch break.
1145 Hammer through concrete and hand auger DPT0043 (step out 25' east of DPT0039) to 5'. Sample at 10', 18', 28', 38', 43' and 48'.
1330 Stop work due to Phase II lightening status.
1445 Out of Phase II, work resumed. Sample DPT0043 at 63'. Surface grout. Pressure wash screens.

**Plans/Future Activities**

Janet Barfuss 8/6/09
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE Area
Project No.: FR1681
Contractors: Same as p1

Date: 8/6/09
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: X
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1545 Hand auger DPT0044 (Location G on map) to 5'. Sample at 33', 38', 43' and 48'. Surface grout.
1700 Load equipment and dispose of IDW at CCE.
1730 Leave site.

**Plans/Future Activities**

NASA Tag # 000025
Drum # 170382
~ 100 Gal.

Janet Barfus 8/6/09
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of

Project: CRHE
Project No.: ~~ERI688~~ ERI681
Contractors: Boart Longyear (Neil Ray AS & Fred)
Date: 1-21-10
Task No.: 7.6

**Work Performed**

Well Installation:
Soil Borings: SB0001, SB0002, SB0003
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0700 Pack equipment, print paperwork
0730 At badging station - H&S Paperwork
0750 Boart arrives at badging station
Call Security - Environmental drilling at CRHE area.
0925 Hand augered to 5' BLS. Photographed 1ft intervals collected on plastic, drummed soil. will Lay out ~20ft rows of soil L-R/~~1~~ ~~2~~ ~~3~~ ~~4~~ ~~5~~ ~~6~~ ~~7~~ ~~8~~ ~~9~~ ~~10~~ ~~11~~ ~~12~~ ~~13~~ ~~14~~ ~~15~~ ~~16~~ ~~17~~ ~~18~~ ~~19~~ ~~20~~ ~~21~~ ~~22~~ ~~23~~ ~~24~~ ~~25~~ ~~26~~ etc. Photos of 2.5' sections Setup plastic under the truck. Drums to 60% - will check on # after 1st hole. Need 3 or ~~more~~ pallets.
12-1230 Lunch ~~with~~ Anne a message - need to drum soil to calc # of drums.
SB0002 and SB0002A had many utilities around. used SB0023 location for "SB0002". Hand augered to 5' BLS. Setup ~~?~~ Complete
6 offsite, RTN to office get addt'l equipment Post hole dig
645 Leave office
~~Tue~~ 11-1230 SB0001 & 2 boring logs in CAD

**Plans/Future Activities**

- Where do we store the drums? / Set up decon?
Just inside fence to North of Bldg 1 / use pan - steam while removing rods.

~ 230 Anne & Bob came by. ~~Confirmed~~ soil Please Leave soil. SB0001 was already drummed.

1-21-10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: FR1651
Project No.: CRHE Area
Contractors: Boart Longyear (Soil Crew)

Date: 1-22-10
Task No.:

**Work Performed**

Well Installation:
Soil Borings: SB0003 pull tooling/SB0004
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0715 Travel to site
0745 onsite - Call Security - Tornado Warning over at 8AM
0800 tailgate meeting. Remove tooling > move to SB0004A (west of NW corner of KE-1996 ~ 1/2 way btw road & railroad)
Checked in w/ Railroad office - not inside barrier just for courtesy.
Work out drum labels
11-1145 drillers lunch - Anne & Mike came by to look at soil cores.
1145 Begin drumming soil & take IDW liquid to CCF.
Go to get drum pallets.

**Plans/Future Activities**

Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR11681
Contractors:

Date: 1/25/10
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: ✓
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0615 office (Titusville)
0715 badging starts (get badges)
0800 started drilling
1140 lunch
1220 drilling
1600 finished drilling
1630 disposed of liquid
1645 off-site

**Plans/Future Activities**

① CHRE-DPT____-____.2-201001__
0044 depth date
② time

depth = middle ft

1/25/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR116081
Contractors:

Date: 1/26/10
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: X
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

7:30 onsite
8:00 started sampling
11:20 lunch
12:00 started sampling/drilling
stopped sampling/drilling
3:45 off-site

**Plans/Future Activities**

W - G - K
T - L - P (start)
R - P - T

through R

group SB03 → walk around, 6" deep, 8" wide

1/26/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Contractors:

Date: 1/27/10
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: ✓
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0700 calibrated YSI
0730 on site, met w/ drillers
0740 started drilling/sampling
I → 0452
H → 0453
1140 lunch
1215 started drilling/sampling
5:00 finished sampling
5:30 off-site

**Plans/Future Activities**

tomorrow P, L, M, N

1/27/10
Signature/Date

j:\admnshare\rem-form\DAILY.XLS

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**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Contractors:

Date: 1/28/10
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: ✓
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

6:45 calibrated YSI
7:30 on-site
7:50 started drilling/sampling
11:30 lunch
12:15 started drilling/sampling
16:50 ended drilling/sampling
17:10 off-site

**Plans/Future Activities**

core off 10-15' South of A (0445)

1/28/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: ~~SSR~~ CRHE
Project No.: FR1681
Contractors:

Date: 1/29/10
Task No.:

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | ✓ | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

0700 calibrated YSI
0715 onsite
0730 started drilling / sampling
1215 lunch
1330 Jan arrives on site.
Completed Sampling DPT0463 (RJ) - depths 26-30, 36-40, 41-45, 46-50 & 56-60,
1430 EDS leaves site. GPS locations DPT0445-DPT0463 & SB01-SB04.
1515 Leave site

**Plans/Future Activities**

parking lot 8-12, 16-20, 5 others
R -> 5

IDW NASA Tag 000025 Tank Bar Code 177777

Jan Barfus 1/29/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Date: 2/11/10
Task No.:
Contractors: EDS: Chris Phelps + Keith Olson; KB Labs - Glenn Jackson

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | X | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

0630 meet Neil at office, Calibrate and Load equipment. Travel to site.
0730 meet EDS + KB labs on site, Conduct Tailgate meeting, Check in at site office to let them know we are working next to the railroad tracks.
0745 Hand auger DPT0064 to 5'. Sample at 28', 38', 43', 48', 58', and 63'. (Location AI on map). Decon screens
Hand auger DPT0065 to 5' (Location AH on map). Sample at
1000 28', 38', 43', 48', 58' and 63'. Decon screens.
1200 Lunch break
1230 Hand auger DPT0066 to 5' (Location AG on map). Sample at 28', 38', 43, 48' and 58'. Decon screens.
1430 Hand auger DPT0067 to 5' (Location just north of building). Sample at 10', 18', 28', 38', 43', 48' and 58'. Decon screens.
1700 Dispose of FDW at CCF and leave site.

**Plans/Future Activities**

0800 meet with Pete + Jeff for utility locate. Locate 10 points.
0900 meet Anne on site to mark paths to be cleared.

Jen Barfus 2/11/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Date: 2/2/10
Task No.:
Contractors: EDS: Chris Phelps & Keith Olson; KB Labs: Glenn Jackson

**Work Performed**

Well Installation:
Soil Borings:
DPT: X
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0630 Arrive at office. Calibrate and load equipment. Travel to site.
0730 Meet EDS and KB Labs on site. Hand auger DPT0068 (Location T on map) to 5'. Sample at 28', 38', 43', 48' and 58'.
0915 Hand auger DPT0069 (location next to road-east) to 5'. Sample at 10'. Decon screens. Sample at 18' and 28'.
1015 Stopped work due to Phase II lightening warning.
1230 Resumed work. Sampled DPT0069 at 38', 43', 48', and 58'. Decon screens.
1350 Hand auger DPT0070 (Location AC on map) to 5'. Sample at 28', 38', 43', 48' and 58'.
1515 Hand auger DPT0071 (Location ? on map) to 5'. Sample at 28'. Decon Screens. Sample at 38', 48' and 58'.
1700 Dispose of IDW at CCF and leave site.

**Plans/Future Activities**

Jan Barfus 2/2/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Date: 2/3/10
Task No.:
Contractors: EDS - Chris Phelps & Keith Olson; KB Labs - Glenn Jackson

**Work Performed**

Well Installation:
Soil Borings:
DPT: X
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0630 Arrive at office, Calibrate and load equipment. Travel to site.
0720 meet EDS & KB Labs on site. Hand auger DPT0072 (Location AA on map) to 5'. Sample at 28', 38', 43', 48', 58' and 63'. Decon Screens. Replace decon water & rag.
0920 Hand auger DPT0073 (Location AF on map) to 5'. Sample at 28', 38', 43', 48' & 58'. Replace decon water & rag.
1100 Hand auger DPT0074 (Location Y on map) to 5'. Sample at 28'. Decon Screens. Sample at 38' and 43'. Replace decon water and rag. Sample at 48', 58' and 63'. Hand auger new hole to 5' and sample at 10' and 18' (DPT0074). Replace decon water.
1400 Hand auger DPT0073 to 5' and sample at 10' and 18'. Replace decon water.
1420 Hand auger DPT0072 to 5' and sample at 10' and 18'. Grout and GPS locations.
1530 Dispose of IDW at CCF and leave site.

**Plans/Future Activities**

0930 Pete on site to locate points Z & Y.

Jen Barfuss 2/3/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR11681
Date: 2-23-10
Task No.: 7.9 (ULR) using MW3 for all units
Contractors: KB Labs (MIP & Mobile Lab VOCs) Brad / Glenn onsite
EDS (Chris & Keith - MIP) JAEE (Chris & Carl)

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater (Neil & JAEE)
Well Inventory:
Other: Membrane Interface Probe (MIP)

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0710 Smiley & Neil meet at office / Neil is calibrating. Tel to meet
0730 Meet JAEE/EDS/KBS (Brad)
Brad gets finger printed
Have tailgate meeting. Discuss decon, PPE, sample, load
Travel to SHE Chris & Keith require escort (25)
Get Brad setup on MIP0001.
Chris & Keith have to mobe back into woods, get rig, haul trailer back w/rig to truck, load up, move to yard, unload, set up on MIP0001
0900 Begin MIP0001. Push 1 foot, wait - didn't read depth
Trouble shooting w/ geoprobe (pins in back of computer were bad)
Anne stopped by. Told her I would call when they were running & showed her the probe & GC.
0930 - 11 Made calls back & forth, moved to location F west of woods & MIP is back up ... moved back to MIP01
~~Took~~ Utility locate w/Pete A-I & X

**Plans/Future Activities**

1145-12 Get lunch for Neil & I. Chris & Keith brought lunch. Ate by Glenn's Lab.
12 Calibrate MIP
1210 Begin pushing MIP01. Small ECD hits ~20' BGS 10^6 scale (can go up to 10^7)
~36' BGS ECD maxed, PID & FID spiked to ~39'
to 39. then came down ~45. 54' got easier to push.

2/23/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Date: 2-23-10
Task No.: 7.4 ULR (MW install)
Contractors: EDS (Chris & Keith) JAEE (Carl & Chris) KB MIP (Brad) Mobile Lab (Glenn)

**Work Performed**

Well Installation:
Soil Borings:
DPT: * Groundwater (Neil & JAEE)
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

* EDS & Emily

**Observations/Issues of Concern**

very difficult to hand auger MIP002, Tried twice in utility locate circle & at spot for location A (DPT). ~2' BLS Rubble. There was some at MIP001, but 2nd try was good.
1412 Begin MIP002 at 52' BLS no response, but MIP (GC) caught fine. Breed will Assess.
Chris & Keith will move to AD(I) DPT0081 and groundwater sample 26-30, 36-40, 41-45 ~~and~~ 46-50 and 56-60.
Collected DPT0081 (26-30) at 1535 color = gray
(36-40) at 1550 = gray cleared some
(41-45) at 1605 = gray cleared fast
(46-50) at 1620 = gray cleared fast
(56-60) at 1640 = gray
Took IDW waste to CCF storage area.
EDS Added ~30 gallons to 000025 17777 Barcode
started at just over 300 gal → final 350 gal.
JAEE Added ~15 gallons

**Plans/Future Activities**

2/23/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE - Contractors Rd
Project No.: FR1681
Contractors: EDS + KB Labs

Date: 2/22/10
Task No.: 07*3

**Work Performed**

Well Installation:
Soil Borings:
DPT: 75 Through 77 + 3 intervals at 78
Well Inventory:
Other: Mobile Lab

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0615 Arrive @ office + calibrate equipment
0700 Pack up vehicle + drive to NASA badging station to meet Lab + drill crew
0745 Everyone badged. Move to DPT location. Must escort EDS crew.
0815 Conduct tailgate safety meeting before starting work
0830 DPT 75 started Hand augering first 5' for this and all other locations
1015 DPT 75 finished. EDS decons + moves to next DPT location
1015 DPT 76 started
1305 DPT 76 finished. Decon + move to next location
1330 DPT 77 started.
1510 DPT 77 finished Decon + move to next location across the wooded area
1545 EDS truck gets stuck multiple time trying to get to next location
1625 DPT 78 started
1655 EDS finished after 3 intervals. Take decon water to LCC then leave site. Glenn at KB Labs remains on site.
1735 Arrive back at Titusville office. CCV at YSI.

**Plans/Future Activities**

805 End of the day
More DPT w/ Emily Guyer assisting with MIP

2/22/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRME - Contracting Rd
Project No.: FR1681
Contractors: EDS, JAEE, + KB Labs x2

Date: 2/23/10
Task No.: 07#3

**Work Performed**

Well Installation:
Soil Borings:
DPT: 78 through 80, 81 by Emily/Bryan
Well Inventory:
Other: MIP + Mobile Labs

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0645 Arrive at Titusville office to cal. brake YSI + pack equipment
0715 Meet JAEE, EDS + Brad at KB Labs @ loading station w/ Emily.
0745 I take JAEE to DPT 78 while Emily takes EDS + Brad to do MIP work
0805 JAEE deploys on DPT 78
0950 DPT 78 finished. JAEE must decon after 4 intervals
1030 DPT 79 started.
1100 One of the JAEE workers leaves to pick up ewt + lunch.
1215 JAEE must decon the screens.
1325 DPT 79 finished. Both JAEE workers back on site.
1345 DPT 80 started.
1480 JAEE must decon screens. EDS begin DPT 81 the MIP sensor beam ruined
1615 DPT 80 finished. MIP down for good so JAEE sent back home while EDS stays
1700 JAEE Packs up. I escort them to the LCC to get rid of their IDW, they leave Plug
1715 Meet w/ Emily to assess where to begin tomorrow. DPT 80 finished.
1745 Arrive back @ Titusville office. LCV for YSI.

1800 End of the day

**Plans/Future Activities**

More DPT

2/23/10
Signature/Date

Geosyntec ▷
consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR11681
Date: 2-23-10
Task No.: 7.9 (ULR) using previous field units
Contractors: KB Labs (MIP & Mobile Lab VOCs) Brad / Glenn onsite
EDS (Chris & Keith - MIP) JAEE (Chris & Carl)

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater (Neil & JAEE)
Well Inventory:
Other: Membrane Interface Probe (MIP)

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0710 Carley & Neil meet at office / Neil is calibrating. Tu to meet
0730 Meet) JAEE/EDS/KB(Brad)
Brad gets finger printed
Have tailgate meeting. Discuss decon, PPE, sample load
Travel to SHE Chris & Keith require escort (25)
Get Brad setup on MIP0001.
Chris & Keith have to move back into woods, get rig, haul trailer back w/rig to truck, load up, move to yard, unload, set up on MIP0001
0900 Begin MIP0001. Push 1 foot, wait - didn't read depth
Trouble shooting w/ geoprobe (pins in back of computer were bad)
Anne stopped by. Told her I would call when they were running & showed her the probe & GC.
0930 - 11 Made calls back & forth, moved to location F west of woods & MIP is back up... moved back to MIP01
~~Took~~ Utility locate w/Pete A-I & X

**Plans/Future Activities**

1145-12 Get lunch for Neil & I. Chris & Keith brought lunch. Ate by Glenn's Lab.
12 Calibrate MIP
1210 Begin pushing MIP01. Small ECD hits ~20' BLS $10^6$ scale (cont up to 107)
~36' BLS ECD maxed, PID & FID spiked to ~39'
to 39. then came down ~45. 54' got easier to push.

2/23/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Date: 2-23-10
Task No.: 7.4 ULR (MW install)
Contractors: EDS (Chris & Keith) JAEE (Carl & Chris) KB MIP (Brad) Mobile Lab (Glenn)

**Work Performed**

Well Installation:
Soil Borings:
DPT: * Groundwater (Neil & JAEE)
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

* EDS & Emily

**Observations/Issues of Concern**

very difficult to hand auger MIP002, Tried twice in utility locate circle & at spot for location # (DPT). ~2' BLS Rubble. There was some at MIP001, but 2nd try was good.
1412 Begun MIP002 at 50' BLS no response, but MIP (GC) caught fine. Bread will Assess.
Chris & Keith will move to AD(I) DPT0081 and groundwater sample 26-30, 36-40, 41-45 ~~and~~ 46-50 and 56-60.
Collected DPT0081 (26-30) at 1535 color = gray
(36-40) at 1550 = gray cleared some
(41-45) at 1605 = gray cleared fast
(46-50) at 1620 = gray cleared fast
(56-60) at 1640 = gray
Took IDW waste to CCF storage area.
EDS Added ~20 gallons to 000025 17777 Barcode
started at just over 300 gal → final 350 gal.
JAEE Added ~15 gallons

**Plans/Future Activities**

2/23/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: LRHE
Project No.: FR1681
Contractors: EDS, KB Labs

Date: 2/24/10
Task No.: 0743

## Work Performed

Well Installation:
Soil Borings:
DPT: 82 through 84
Well Inventory:
Other: Mobile Lab

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

## Observations/Issues of Concern

0645 Arrive @ Titusville office to collect work YSI & park equipment.
0720 Meet EDS to escort them to the CRHE site.
0755 EDS moves equipment to DPT 82 and begin drilling
0930 Begins to rain a bit. EDS must decon screens.
0955 DPT 82 finished just as a Phase II called is called; work must stop for now.
1100 while still in Phase II, EDS takes their lunch.
1120 Phase II over. EDS moves rig to DPT location 83
1140 DPT 83 starts.
1245 EDS must decon screens
1330 DPT 83 finished. Move to DPT 84
1400 DPT 84 started
1455 EDS must decon screens
1600 DPT 84 finished. EDS moves to DPT location 85 + performs some equipment maintenance.
1630 weather looking bad so the drivers called early. IDW taken to the LCC. Then EDS is escorted to me off base. Glenn remains behind on site

## Plans/Future Activities

1715 Arrive @ Titusville office and perform YSI CCV
1730 End of the day

More DPT work + Utility locate

2/24/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRMF - contractors Rd
Project No.: FR1681
Contractors: EDS of KB Labs

Date: 8/25/10
Task No.: 07 #3

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT 85-87 + 1 interval of 88
Well Inventory:
Other: Mobile Lab

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0645 Arrive @ Titusville office to calibrate YSI & pack necessary equipment.
0715 Meet EDS crew to escort them to the site
0745 conduct tailgate safety meeting
0810 DPT 85 started. I expect the utility locate crew @ ~0930 so I locate DPT locations in my down time
0850 EDS must decon their screens
0915 Utility locate arrives, I must split my time between DPT & locating DPT
1010 DPT 85 finished as well as the locate guys. EDS moves to DPT location 86
1030 DPT 86 started
1055 EDS must decon screens. Break for lunch after decon is finished
1305 DPT 86 finished. Move to DPT 87 then perform equipment maintenance
1400 After one interval of DPT 87, EDS must decon screens.
1610 DPT 87 finished move to DPT location 88 after decoming screens.
1635 DPT 87 started.
1655 EDS begins collecting IDW after 1 interval is sampled.
1715 IDW dumped at the LCC. EDS escorted off site.

**Plans/Future Activities**

0745 Arrive @ Titusville office for YSI CCV
1810 end of the day

Angel Martin to replace me tomorrow for DPT.

8/25/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: FR1681 CRTE
Project No.: FR1681
Contractors: EDS + KB Labs

Date: 2-26-210
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: 88 through 90 + additional 86
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0630 at office to calibrate & load equipment
0715 Meet Chris + Keith from EDS at badging station and escort to contractors (KB labs already onsite)
0725 onsite conduct health & safety tailgate meeting
0730 start second interval of DPT088 location "J"
0900 stop to decon 6 screens
0945 setup on DPT089 Location "O"
1115 break for lunch, then decon back at 1155
1245 move across the street to DPT090 Location "Z"
1400 decon
1520 setup on DPT086
1530 Neil onsite to GPS
1605 Go to LCC w/ EDS to dump purge water + decon water 8 buckets (5 gal) so approx 40gals
1710 Angel + Neil offsite, KB Labs still onsite
1730 back to office to check calibration

**Plans/Future Activities**

2/26/2010
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE Contractors Rd
Project No.: FR1681
Contractors: EDS KB Labs

Date: 3/1/10
Task No.: 07#3

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT 91 - 93 + 3 intervals of 94
Well Inventory:
Other: Mobile Lab, Utility Locate

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0645 Arrive @ Titusville Office to calibrate YSI & pack equipment
0715 Meet EDS @ badging station & escort them to the CRHE site
0745 Tailgate safety meeting
0800 DPT 91 started. Utility Locate expected @ 1000. Locate while there is time between sampling
0845 Utility locate arrives early. Drillers wait while locate is being conducted.
0945 The final locate at this project phase is complete. ~~DPT~~ DPT resumes
1000 EDS must decon the screens.
1030 DPT 91 finished. Move to DPT 92
1040 DPT 92 started
1125 EDS must decon their screens. Take lunch after
1310 DPT 92 finished. move to DPT 93
1325 DPT 93 started.
1525 DPT 93 finished. Decon their screens before moving to DPT 94. Rebecca would like as many samples today due to bad weather expected tomorrow
1545 DPT 94 started

**Plans/Future Activities**

1635 3 screened intervals finished
EDS collects the IDW + I escort them to the CCC
1705 EDS is escorted off site. Glenn of KB Labs remains on site
1730 Arrive back @ Titusville office to perform CCV of the YSI
1755 End of the day
DPT tomorrow

3/1/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE - Contractors Rd
Project No.: FR1681
Contractors: EDS & KB Labs

Date: 3/2/10
Task No.: 07+3

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT 94 - 96
Well Inventory:
Other: Mobile Lab

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0645 Arrive @ Titusville office to calibrate YSI & pack equipment
0705 Meet EDS @ loading station & escort them to the job site
0735 conduct daily tail/gate safety meeting
0745 Phase II weather advisory is called as 33' depth is stabilizing. I take pH sample early then get into my vehicle. As does EDS
0830 Phase II over. Resume work on DPT 94
0930 DPT 94 finished. Move to DPT location 95 while deconing the screens
1000 Geopump not working. EDS disassembles it to find out why.
1019 The wire to the battery went bad. They find a replacement & hook it into the pump
1130 ~~1030~~ Decon the screens & take lunch
1230 DPT 95 finished move to DPT 96
1258 DPT 96 started
1440 DPT 96 finished. EDS crew decons equipment before packing up.
1535 Escort EDS to the LCC to dump the IDW.
1535 Escort EDS to their next DPT site @ NASA (CM&S) so they can leave their rig & trailer for tomorrow.

**Plans/Future Activities**

1600 Escort EDS off site & return to Titusville office
1630 Perform YSI CCV
1645 End of the day

3/2/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS - David Seaforss + Glen Pennington

Date: 6/14/10
Task No.: 12.7

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | X | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

0630 Arrive at office. Calibrate and load equipment.
0730 Meet EDS at badging station. Pick up spill pallet at POL. Travel to site.
0815 On site. Conduct tailgate meeting. Unload equipment.
0845 Hand auger DPT0097 to 5' (Location B on map). Sample at 8-12', 12-16', 16-20', 21-25', 26-30', 31-35', 36-40'. Replace decon water. Sample at 41-45' & 46-50'.
1200 Lunch break
1230 Pressure grout ~~DPT~~ RD DPT0097. Pressure wash rods & screens.
1330 Hand auger DPT0098 (Location A on map) to 5'. Sample at 8-12', 12-16', 18-20', 21-25', 26-30', 31-35', 36-40'. Replace decon water. Sample at 41-45' & 46-50'. Attempt to pressure grout but cannot get grouter started. Trimmey grout hole.
1745 ~~1800~~ JRD Attempt to hand auger location C. Hit what appears

**Plans/Future Activities**

Spill Pallet Bar Code 170407
Drum Bar Code 170408 (DPT0097 - DPT0101)
IDW Disposal - drums on site

Janet Barthus 6/14/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: Same as p.1

Date: 6/14/10
Task No.: 12.2

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | X | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

To be solid concrete at ~2'. Obstruction is below water table so we cannot determine what it is. Discontinue hand augering at this location.

1800 Hand auger DPT0099 (Location D on map) to 5'. Sample at 8-12' & 12-16'.

1845 Drop samples off at KB labs at MLP VAB area.

1900 Leave site.

**Plans/Future Activities**

Janet Barfus 6/14/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS- David Searfoss + Glen Pennington

Date: 6/15/10
Task No.: 12.2

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | X | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

0645 Arrive at office. Calibrate + load equipment. Travel to site
0730 On site. Conduct Tailgate meeting. Sample DPT0099 at 16-20', 21-25', 26-30', 31-35', 36-40' 41-45' and 46-50'. Trimmey grout hole. Decon screens + rods.
1020 Hand auger DPT0100 (Location C on map) to 5'. Sample at 8-12', 12-16', 16-20', 21-25', 26-30' + 31-35'
1215 Lunch break
1245 Sample DPT0100 at 36-40', 41-45 + 46-50'
1400 Work discontinued due to phase II weather warning.
1430 Resume work. Pressure grout DPT0100. Pressure wash screens + rods.
1515 Hand auger DPT0101 (Location E on map) to 5'. Sample at 8-12', 12-16', 16-20', 21-25', 26-30', 31-35'

**Plans/Future Activities**

0830 Pete + ~~Geoff~~ Jeff on site To verify Location C is clear.

Janet Barfus 6/15/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: Same as p. 1

Date: 6/15/10
Task No.: 12.2

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | X | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

36-40', 41-45' and 46-50' Surface grout hole.
1745 Drop samples at KB Labs in MLPVAB area.
1800 Leave site.

**Plans/Future Activities**

Janet Barfus 6/15/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS- David Searfoss + Glen Pennington

Date: 6/16/10
Task No.: 12.2

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | X | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

0645 Arrive at office. Calibrate & load equipment. Travel to site.
0730 On site. Conduct Tailgate meeting. Hand auger DPT0102 (Location F on map) to 5'. Sample at 8-12', 12-16', 16-20', 21-25', 26-30', 31-35', 36-40', 41-45', and 46-50'. Surface grout hole.
1100 Hand auger DPT0103 (Location G on map) to 5' Sample at 8-12', ~~12-30'~~ 12-16', 16-20', 21-25', 26-30', 31-35', 36-40' and 41-45'. Surface grout hole.
1420 Work discontinued due to phase II lightening warning.
1450 Resume work. Sample DPT0103 at 46-50'.
1520 Hand auger DPT0104 (Location H on map) to 5'. Sample at 8-12', 12-16', 16-20', 21-25', 26-30', 31-35' & 36-40'.
1730 Take samples to KB Labs at MLPVAB area.
1745 Leave site.

**Plans/Future Activities**

Drum Bar Code 170409 (DPT0102- DPT0106)

Janet Barfuss 6/16/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1687
Date: 6/17/10
Task No.: 12.2
Contractors: EDS - David Searfoss & Glen Pennington

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | X | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

0645 Arrive at office. Calibrate & load equipment. Travel to site.
0730 On site. Conduct tailgate meeting. Sample DPT0104 at 41-45' and 46-50'. Surface grout hole.
0850 Hand auger DPT0105 (Location I on map) to 5'. Sample at 8-12', 12-16', 16-20', 21-25', 26-30', 31-35', 36-40', 41-45" and 46-50'. Surface grout hole.
1200 Lunch break
1245 Hand auger DPT0106 (Location J on map) to 5'. Sample at 8-12', 12-16', 16-20' and 21-25'.
1410 Work discontinued due to phase II lightening warning.
1550 Resume work. Sample DPT0106 at 26-30', 31-35', 36-40', 41-45' and 46-50'.
1730 Work discontinued due to phase II lightening warning.
1745 Drop samples at KB Labs in MLP VAB area.
1800 Leave site.

**Plans/Future Activities**

Janet Barfus 6/17/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHF
Project No.: FR1681
Contractors: EDS- David Searfoss & Glen Pennington

Date: 6/18/10
Task No.: 13.2

**Work Performed**

Well Installation:
Soil Borings:
DPT: X
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0620 Arrive at office. Calibrate & load equipment. Travel to site.
0700 On site. Conduct tailgate meeting. Receive request to move decon area. Locate new area and move decon equipment.
0830 Hand auger DPT0107 (Location K on map) to 5'. Sample at 8-12', 16-20', 26-30', 31-35', 36-40', 41-45' and 46-50'.
1110 Hand auger DPT0108 (Location L on map) to 5'. Sample at 8-12', 16-30', 26-30', 31-35', 36-40' and 41-45'.
1245 Lunch break.
1315 Sample DPT0108 at 46-50' and 56-60'.
1445 Surface grout DPT0107 & DPT0108 and top off all previous locations. Clean up & secure site in anticipation of bad weather moving in.
1530 Set up on DPT0109 (Location M on map).
1540 Work discontinued due to Phase II lightening warning.
1600 Lightening projected to last until 2100 hrs. Drop samples at KB Labs. Leave site.

**Plans/Future Activities**

IDW added to drums 170410 and 178712. Spill pallet 170407 (DPT0107 + DPT0108 + Decon water) (DPT0109-115)

Janet Barfus 6/18/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Contractors: EDS- David Searfoss + Glen Pennington

Date: 6/21/10
Task No.: 12.2

**Work Performed**

Well Installation:
Soil Borings:
DPT: X
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0615 Arrive at office, Calibrate and load equipment. Travel to site.
0700 On site. Conduct tailgate meeting. Sample DPT0109 at 8-12', 16-20', 26-30', 31-35', 36-40', 41-45' and 46-50'.
0945 Hand auger DPT0110 (Location N on map) to 5'. Sample at 31-35', 36-40', 41-45' and 46-50'.
1130 Hand auger DPT0111 (Location O on map) to 5'. Sample at 8-12', 16-20', 26-30' and 31-35'.
1230 Lunch break
1300 Sample DPT0111 at 36-40', 41-45', 46-50' and 56-60'.
1530 Hand auger DPT0112 (Location P on map) to 5'. Sample at 8-12', 16-20', 26-30', 31-35', 36-40', 41-45' and 46-50'.
1800 Drop samples at KB Labs in VP Area. Leave site.

**Plans/Future Activities**

Janet Barker 6/24/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS- David Searfoss & Glen Pennington

Date: 6/22/10
Task No.: 12.2

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | X | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

0620 Arrive at office. Calibrate and load equipment. Travel to site.
0700 On site. Conduct tailgate meeting. Surface grout locations DPT0110 - 112. Hand auger DPT0113 (Location Q on map) to 5'. Sample at 8-12', 16-20', 26-30', 31-35', 36-40', 41-45' and 46-50'. Surface grout hole.
1035 Hand auger DPT0114 (Location R on map) to 5'. Sample at 8-12', 16-20', 26-30', 31-35 36-40' and 41-45'.
1230 Lunch break. Pick up GPS from VPF area.
1330 Sample DPT0114 at 46-50'. Surface grout hole.
1400 Hand auger DPT0115 (Location S on map) to 5'. Sample at 8-12', 16-20', 26-30', 31-35', 36-40', 41-45' & 46-50'. Surface grout hole.
1620 Load equipment and complete grouting.
1730 Take spill paller, 2 drums & strap to HMFN.
1745 Drop samples at lab in VPF area.
1800 Leave site.

**Plans/Future Activities**

IDW- 1 spill paller with 4 drums onsite. (strapped)
1 empty spill paller with 2 extra bottoms strapped together on site.

Janet Barfus 6/22/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: NASA - CRHE
Project No.: ER1681
Contractors: EDS (J.R & Davey)

Date: 2 Aug 2016
Task No.:

## Work Performed

Well Installation:
Soil Borings:
DPT: ✓ Groundwater sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

## Observations/Issues of Concern

0645 Equipment calibration conducted.
0745 J. McKinnon gets badge at NASA badging station; meet EDS.
0825 J. Barfus conducts health and safety meeting with Geosyntec and EDS.
0840 Geosyntec meets with NASA Site personnel.
0850 Barfus off-site. DPT groundwater sampling activities begin.
0900 DPT0116("A") drilling begins. All boreholes will be hand augered to 5 ft bls.
0915 DPT0116-010.0 collected.
0930 DPT0116-018.0 collected.
0950 DPT0116-028.0 collected.
1010 DPT0116-033.0 collected.
1015 EDS decontaminates screens at spill pad.
1030 DPT0116-038.0 collected.
1055 DPT0116-043.0 collected.
1185 DPT0116-048.0 collected.
1125 DPT0116 sampling complete. Mobilization to DPT0117 and screen decontamination conducted.
1130 DPT0117 drilling begins. ("B")

## Plans/Future Activities

DPT groundwater sampling
Sample Depths:
10 = 8-12 ft BLS
18 = 16-20 ft BLS
28 = 26-30 ft BLS
33 = 31-35 ft BLS
38 = 36-40 ft BLS
43 = 41-45 ft BLS
48 = 46-50 ft BLS

Joey M. 8.2.16
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: NASA - CRHE
Project No.: FR1681
Contractors: EDS (J.R. + Davey)

Date: 8.2.10
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: ✓ Groundwater sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1145 DPT0117-010.0 collected.
1158 DPT0117-018.0 collected.
1210 Geosyntec and EDS break for lunch.
1240 DPT activities continue.
1300 DPT0117-028.0 collected.
1320 DPT0117-033.0 collected. EDS decontaminates (Sump) ~~well~~ screens at spill pad.
1408 DPT0117-043.0 collected.
1345 DPT0117-038.0 collected.
1430 DPT0117-048.0 collected.
1445 DPT0117 sampling complete. Mobilization to DPTD118 and screen decontamination conducted.
1452 DPTD118 sampling/drilling begins. ("C")
1505 DPT0118-010.0 collected.
1520 DPT0118-018.0 collected.
1537 DPT0118-028.0 collected.
1555 DPT0118-~~028.0~~ (FM) 033.0 collected.

**Plans/Future Activities**

DPT Groundwater Sampling

Jerry McKinnon 8.2.10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: NASA - CRHE
Project No.: FR1681
Contractors: EDS (J.R. & David)
Date: 8.2.10
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1603 EDS decontaminates screens at spill pad.
1617 DPT0118 - 038.0 collected.
1637 DPT0118 - 043.0 collected.
1700 DPT0118 - 048.0 collected.
1715 DPT0118 sampling complete. Mobilization to DPT0119 conducted.
1725 EDS disposes of purge and decontamination water at drum staging area.
1735 EDS and Geosyntec off-site; site secured; no health and safety incidents observed.

EM
8.2.10

**Plans/Future Activities**

DPT groundwater sampling

Joey M 8.2.10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: NASA-CRHE
Project No.: FR1681
Contractors: EDS (J.R. + Davey)

Date: 8.3.10
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

Weather: hot, sunny, clear skies (TM), little to no wind, partly cloudy

**Observations/Issues of Concern**

0700 EDS on-site; preparation for DPT groundwater sampling with 6620 DT track-mounted Geoprobe.
0712 Geosyntec on-site. EDS decontaminates DPT screens.
0720 EDS unable to hand auger current location, due to refusal at 2 ft bls.
0730 EDS attempted five locations in the ~~vicinity~~ (SW) vicinity of "D" location -- refusal encountered at 2 ft bls. NASA locator will check utilities in area later today. Groundwater quality equipment calibrated by Geosyntec.
0740 EDS mobilizes to "E" location -- renamed DPT0119.
0800 Geosyntec conducts a health and safety meeting with Geosyntec.
0810 DPT0119 drilling begins. ("E")
0830 DPT0119-010.0 collected.
0843 DPT0119-014.0 collected.
0848 NASA locators on-site to check "D" location for utilities.
0857 DPT0119-018.0 collected.
0905 NASA locators off-site.
0915 DPT0119-023.0 collected.

**Plans/Future Activities**

DPT groundwater sampling
Sample Depths:

| | | |
|---|---|---|
| 10 = 8-12 ft BLS | 33 = 31-35 ft BLS | 48 = 46-50 ft BLS |
| 14 = 12-16 ft BLS | 38 = 36-40 ft BLS | |
| 18 = 16-20 ft BLS | 43 = 41-45 ft BLS | |

Joey MK 8.3.10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: ~~FR1681~~ (FW) NASA-CRHE
Project No.: FR1681
Contractors: EDS

Date: 8.3.10
Task No.:

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | Groundwater Sampling | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

0953 0943 (FW) DPT0119-033.0 collected.
1035 (FW) 1013 DPT0119-038.0 collected.
1035 DPT0119-043.0 collected.
1100 DPT0119-048.0 collected
1115 DPT 0119 sampling activities complete. EDS mobilizes to "D" location and decontaminates sampling screens.
1125 EDS attempts to auger a borehole 24 ft South of "D" location but unsuccessful due to refusal at 2 ft bls.
1135 EDS attempts to auger a borehole approximately 19 ft north of "D" location, but unsuccessful due to refusal at 2 ft bls
1145 DPT 0120 drilling activities begin at "F" location.
1200 EDS and Geosyntec take a lunch break
1235 Geosyntec onsite.
1253 DPT0120-010.0 collected.
1305 DPT0120-014.0 collected.
1320 DPT0120-018.0 collected.

**Plans/Future Activities**

DPT Groundwater sampling

J. Mk. 8.3.10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: ~~KSC~~ NASA-CRHE
Date: 8.3.10
Project No.: FR1681
Task No.:
Contractors: EDS

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | Groundwater sampling | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

1335 DPT0120 - 023.0 collected.
1357 DPT0120 - 028.0 collected. Anne (NASA) visited site.
1402 Anne off-site, EDS decontaminates sampling screens.
1415 DPT0120 - 033.0 collected.
1447 DPT0120 - 038.0 collected.
1500 DPT0120 - 043.0 collected.
1523 DPT0120 - 048.0 collected.
1530 DPT0120 sampling activities complete.
1535 EDS mobilizes to DPT021 and decontaminates sampling screens.
1550 DPT0121 drilling begins, at "G" location.
1608 DPT0121 - 010.0 collected.
1620 Grouting to land surface of previous sampling location boreholes complete.
1625 DPT0121 - ~~016.0~~ 014.0 collected.
1640 DPT0121 - 018.0 collected.
1658 DPT0121 - 023.0 collected. EDS disposes of purge water at drum staging area.
1715 Geosyntec and EDS off-site; site secured; no health and safety incidents observed.

**Plans/Future Activities**

DPT groundwater sampling.

8.3.10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: NASA - CRHE
Project No.: ER1681
Contractors: EDS (S.R. or Darey)

Date: 8.4.10
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

Weather: sunny, hot, partly cloudy, light winds

**Observations/Issues of Concern**

0700 EDS on-site; preparation for DPT groundwater sampling with Geoprobe 6620DT track-mounted rig and equipment maintenance conducted.
0712 Geosyntec on-site. EDS decontaminates DPT samplers.
0720 Geosyntec conducts groundwater quality meter calibration.
0735 Geosyntec conducts a health and safety meeting with EDS.
0740 DPT0121 drilling and sampling continues.
0757 DPT0121-028.0 collected.
0817 DPT0121-033.0 collected.
0837 DPT0121-038.0 collected.
0857 DPT0121-043.0 collected.
0920 DPT0121-048.0 collected. EDS decontaminates DPT samplers.
0935 DPT0121 sampling activities complete. Mobilization to DPT0122 ("4") conducted.
0945 DPT0122 drilling activities begin.
1005 DPT0122-010.0 collected.
1020 DPT0122-014.0 collected.
1030 DPT0122-018.0 collected.

**Plans/Future Activities**

DPT groundwater sampling
Sample Depths:
10 = 8-12 ft BLS
14 = 12-16 ft BLS
18 = 16-20 ft BLS
33 = 31-35 ft BLS
38 = 36-40 ft BLS
43 = 41-45 ft BLS
48 = 46-50 ft BLS

Joey MK 8.4.10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: NASA-CRHE
Project No.: FR1681
Contractors: EDS
Date: 8.4.10
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1047 DPT0122-023.0 collected. EDS decontaminates DPT samplers.
1105 DPT0122-028.0 collected.
1123 DPT0122-033.0 collected.
1145 DPT0122-038.0 collected.
1205 DPT0122-043.0 collected
1228 DPT0122-048.0 collected.
1240 DPT0122 sampling activities complete. EDS and Geosyntec take a lunch break.
1315 EDS begins preparation for pressure grouting of DPT0121 and DPT0122 boreholes. EDS decontaminates DPT samplers.
1325 Pressure grouting activities begin at DPT0122.
1335 Phase 1 weather in effect.
1350 DPT0122 pressure grouting complete.
1355 Pressure grouting activities begin at DPT0121.
1420 DPT0121 pressure grouting complete. EDS decontaminates DPT samplers.
1428 DPT0123 ("I") drilling activities begin
1432 DPT0123 location offset 3 ft to the northeast due to refusal.

**Plans/Future Activities**

DPT Groundwater activities

8.4.10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: NASA - CRHE
Project No.: FR1681
Contractors: EDS

Date: 4 Aug 2010
Task No.:

## Work Performed

Well Installation:
Soil Borings:
DPT: Groundwater Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

## Observations/Issues of Concern

1510 DPT0123 - 010.0 collected.
1525 DPT0123 - 014.0 collected.
1543 DPT0123 - 018.0 collected. Geosyntec moves all empty drums onto spill pallettes.
1605 DPT0123 - 023.0 collected. EDS decontaminates DPT samplers at spill pad.
1623 DPT0123 - 028.0 collected.
1640 DPT0123 - 033.0 collected.
1700 DPT0123 - 038.0 collected. EDS begins breaking down work area for the day. Purge and decontamination water are disposed of at drum staging area.
1728 EDS and Geosyntec offsite; site secured; no health and safety incidents were observed.

8.4.10

## Plans/Future Activities

DPT Groundwater sampling

8.4.10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: NASA - CRTE
Project No.: FR1681
Contractors: EDS (J.R. + Davey)

Date: 8.5.10
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

Weather: hot, sunny, partly cloudy, light winds

**Observations/Issues of Concern**

0700 EDS on-site; preparation for DPT groundwater sampling activities, with a track-mounted 6620DT (Tm) Rig, Geoprobe rig, conducted.
0715 Geosyntec on-site.
0720 Geosyntec conducts a health and safety meeting with EDS
0725 Geosyntec conducts calibration of YSI 556 MPS.
0730 DPT0123 sampling activities continue.
0745 DPT0123-043.0 collected.
0807 DPT0123-048.0 collected.
0815 DPT0123 sampling activities complete. Mobilization to DPT0124 ("J") conducted. EDS decontaminates DPT samplers.
0835 DPT0124 drilling activities begin. EDS picks up spill pallette covers.
0910 DPT0124-010.0 collected.
0915 Maintenance conducted on DPT rig
0933 Drilling activities resume.
0935 ~~DPT014.0~~ DPT0124-014.0 collected.
0947 DPT0124-018.0 collected.

**Plans/Future Activities**

DPT Groundwater Sampling
Sample Depths:
10 = 8-12 ft BLS  33 = 31-35 ft BLS  48 = 46-50 ft BLS
14 = 12-16 ft BLS  38 = 36-40 ft BLS
18 = 16-20 ft BLS  43 = 41-45 ft BLS

J. M. 8.5.10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: NASA - CRHE
Project No.: FR1681
Contractors: EDS

Date: 5 Aug 2010
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1000 DPT 0124-023.0 collected.
1017 DPT 0124-028.0 collected. EDS decontaminates DPT samplers.
1033 DPT 0124-033.0 collected.
1050 DPT 0124-038.0 collected.
1105 DPT 0124-043.0 collected.
1125 DPT 0124-048.0 collected.
1137 DPT 0124 sampling activities complete. Mobilization to DPT 0125 ("K") conducted.
1150 EDS decontaminates DPT samplers.
1205 DPT 0125 sampling activities begin.
1205 DPT 0125-010.0 collected.
1210 EDS and Geosyntec take a lunch break.
1240 DPT activities resume.
1255 DPT 0125-018.0 collected.
1305 KSC utility locator on-site for locating activities.
1317 DPT 0125-028.0 collected.
1335 DPT 0125-033.0 collected. KSC locators off-site.

**Plans/Future Activities**

DPT groundwater sampling

8.5.10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: NASA - CRHE
Project No.: FR1681
Contractors: EDS
Date: 5 Aug 2010
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: groundwater sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1400 DPT0125-038.0 collected. EDS decontaminates DPT samplers
1422 DPT0125-043.0 collected.
1445 DPT0125-048.0 collected. Mobilization to DPT0126 conducted. EDS decontaminates DPT samplers
1455 DPT0125 sampling activities complete.
1510 Unsuccessful in attempt to hand auger "D" location again, due to refusal at 2 ft bls. DPT0126 moved to "T" location.
1515 Mobilization to DPT0126 conducted.
1520 DPT0126 drilling begins.
1540 DPT0126-010.0 collected
1555 DPT0126-018.0 collected. Grouting of all open boreholes complete to surface.
1610 DPT0126-028.0 collected.
1630 DPT0126-033.0 collected
1645 DPT0126-038.0 collected.
1715 DPT0126-043.0 collected. EDS off-site. Purge water disposed of at drum staging spill area.
1740 EDS and Geosyntec off-site; Site secured; no health and safety incidents observed

**Plans/Future Activities**

DPT groundwater sampling

8.5.10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: NASA-CRHE
Project No.: FR1691
Contractors: EDS
Date: 8.6.10
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: groundwater sampling
Well Inventory:
Other:
Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:
Weather: sunny, hot, partly cloudy, light winds

**Observations/Issues of Concern**

0700 EDS on-site; preparation for DPT groundwater sampling activities conducted. A 6620 DT Geoprobe track-mounted rig used for sampling.
0709 Geosyntec on-site. Calibration of YSI 556 MPS conducted.
0720 A health and safety meeting is conducted between Geosyntec and EDS.
0725 DPT0126 sampling resumes.
0735 DPT0126-010.0 collected.
0747 DPT0126 sampling complete. EDS decontaminates DPT samplers. Mobilization to DPT0127 conducted ("L" location).
0800 DPT0127 drilling begins.
0810 Geosyntec changes dissolved oxygen probe on YSI 556 MPS. D.O. values have seemed low.
0825 DPT0127-033.0 collected
0845 DPT0127-038.0 collected.
0905 DPT0127-043.0 collected
0920 DPT0127 sampling complete. EDS decontaminates DPT samplers. Mobilization to DPT0128 ("M") conducted. Sam Barfus (Geosyntec) on-site for utility locate.

**Plans/Future Activities**

DPT groundwater sampling
Sample Depths:
10 = 8-12 ft BLS
18 = 16-20 ft BLS
28 = 26-30 ft BLS
33 = 31-35 ft BLS
38 = 36-40 ft BLS
43 = 41-45 ft BLS
48 = 46-50 ft BLS

Joe M 8.6.10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: NASA - CRHE
Project No.: FR1681
Contractors: EDS
Date: 8.6.10
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0445 DPT0128 drilling begins.
1007 DPT0128 - 033.0 collected.
1030 DPT0128 - 038.0 collected
1050 DPT0128 - 043.0 collected.
1110 DPT0128 - 048.0 collected
DPT0128 sampling complete. EDS mobilizes to DPT0129 ("N") and decontaminates DPT samplers.
1118 Geosyntec takes a lunch break
1145 Geosyntec on-site. DPT0129 sampling begins.
1155 DPT0129 - 010.0 collected
1210 DPT0129 - 018.0 collected.
1225 DPT0129 - 028.0 collected.
1240 DPT0129 - 033.0 collected. EDS decontaminates DPT samplers
1300 DPT0129 - 038.0 collected. Light rain; weather Phase 1 in effect.
1315 DPT0129 - 043.0 collected. Heavy rain and thunder — Phase 2 weather.
1330 Tornado spotted -- Phase 3 in effect. EDS and Geosyntec take shelter inhibiting

**Plans/Future Activities**

DPT groundwater sampling

Joey MK 8.6.10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: NASA - CEHE
Project No.: FR1681
Contractors: EDS

Date: 8.6.10
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: groundwater sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1350 Phase 3 lifted. Phase 2 in effect.
1445 Phase 2 lifted; Phase 1 in effect; DPT sampling resumes.
1510 DPT0129 - 048.0 collected.
1525 DPT0129 sampling activities complete. EDS decontaminates DPT samplers. Mobilization to DPT0130 ("P") conducted.
1530 Geosyntec samples IDW consisting of purge water in Drum# 178747. DPT0130 drilling activities begin.
1543 DPT 0130 - 033.0 collected.
1605 DPT0130 - 038.0 collected.
1630 DPT0130 - 043.0 collected.
1650 DPT0130 - 048.0 collected. EDS begins site demobilization for weekend.
1700 Purge and decontamination water dumped at drum staging area - IDW management conducted.
1728 EDS and Geosyntec offsite; site secured; no health and safety incidents observed.
1728

**Plans/Future Activities**

DPT groundwater sampling

8.6.10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Date: 8/9/10
Task No.: 12.2
Contractors: EDS - Glen Pennington + David Searfoss; KB Labs; Brad Weichert

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | X | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

0600 Arrive at office. Calibrate and load equipment.
0700 Arrive on site. KB Labs on site. mark locations for utility locate. Check in with railroad mantainence office. OK to work along tracks.
0720 EDS on site. Conduct tailgate meeting. Sample DPT0131 (location R on map) at 31-35', 36-40', 41-45' and 46-50'.
1000 Sample DPT0132 (location O on map) at 8-12', 16-20', 26-30', 31-35', 36-40', 41-45' and 46-50'.
1230 Lunch
1330 Sample DPT0133 (location U on map) at 8-12', 12-16', 16-20', 21-25', 26-30', 31-35', 36-40', 41-45' and 46-50'. Sample DPT0134 (location V on map) at 8-12', 12-16', 16-20' and 21-25'.
1745 Leave site.

**Plans/Future Activities**

DPT locations are hand augered to 5' and surface grouted.

Janet Barfus 8/9/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Date: 8/10/10
Task No.: 1.2.2
Contractors: EDS - Glen Pennington + David Searfoss; KB Labs - Brad Weichert

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | X | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

0630 Arrive at office, Calibrate + load equipment.
0720 meet EDS + KB Labs on site. Conduct tailgate meeting. Sampled DPT0134 at 26-30', 31-35', 36-40', 41-45' and 46-50'.
0915 Sample DPT0135 (location X on map) at 8-12', 16-20', 26-30', 31-35' 36-40', 41-45' and 46-50'.
1130 Sample DPT0136 (? on west side of Contractor's Rd) at 31-35' and 36-40'.
1215 Lunch break
1245 Sample DPT0136 at 41-45', 46-50' and 61-65'.
1430 Sample DPT0137 (Location S on map) at 31-35', 36-40', 41-45' and 46-50'. Sample DPT0131 at 61-65'. Collect Sample from IDW drum #
1715 Leave site.

**Plans/Future Activities**

DPT locations are hand augered to 5' and surface grouted.

Janet Barfus 8/10/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Date: 8/11/10
Task No.: 12.2
Contractors: EDS- Glen Pennington + David Searfoss; KB Labs- Brad Weichert

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | X | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

0600 Arrive at office. Calibrate + load equipment.
0700 Meet EDS + KB Labs on site. Conduct Tailgate meeting. Sample DPT0138 (western most ? next to RR tracks) at 8-12', 16-20', 26-30', 31-35', 36-40', 41-45' and 46-50'.
1000 Sample DPT0139 (next to RR tracks - East - on diagonal between DPT0129 + DPT0131) at 8-12', 16-20', 26-30', 31-35' 36-40', 41-45' + 46-50'. ~~and~~ RBH
1230 Lunch break
1300 Sample DPT0140 (Location W on map) at 8-12', 12-16', 16-20', 21-25', 26-30', 31-35', 36-40', 41-45' + 46-50'. Clean up site, Tie down spill pallets.
1700 Leave site

**Plans/Future Activities**

DPT locations are hand augered to 5' and surface grouted.

Initially got refusal at 2' at DPT0140. Called Pete and got OK to step out. Got refusal at 6 more locations before successfully sampling DPT0140.

Janet Barfuss 8/11/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: ~~FR18604~~ 1681 (JA)
Contractors: EDS → (JR & Davie) KB Labs (Glenn)
Date: 10/11/10
Task No.: 7.4.4

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | no | Sampling Soil: | no |
| Soil Borings: | no | Sampling SW/Sediment: | no |
| DPT: | yes | Sampling Monitor Wells: | no |
| Well Inventory: | no | Sampling Hazardous Waste: | no |
| Other: | — | Sampling Drums: | no |

**Observations/Issues of Concern**

0630: arrived @ office; met Jan; calibrated YSI & loaded car
0730: met EDS (Davie & JR) @ badging station
0745: arrived on site
0750: conducted tailgate; discussed hazards associated w/ DPT, PPE, scope of work
0815: Rebecca called; wanted to go to AA after A → scratch → go to B after A,
0820: set up @ DPT-0141
0935: Davie went to decon screens
1055: Finished DPT 141; Davie decon'ed ~~screens~~ screen & rods (JA), JR moved to DPT-142
1110: JR began hand augering DPT-142
1200: left site for lunch
1225: returned from lunch
1230: Pete from "utility locate" arrived onsite and investigated @ AA and AB
1235: called Rebecca to confirm where to go next; she requested AA → C → D → 139 → E
1310: Davie decon'ed screens
1423: Finished DPT 142; Davie decon'ed rods and ~~fitte~~ filed threads

~~Plans/Future Activities~~

1440: JR began hand augering DPT-143
1620: Davie decon'ed screens
1651: Finished DPT-143; Davie decon'ed rods & screens; JR moved to DPT-144
1705: JR began hand Augering DPT-144 → took 10' sample
1715: end of day

* completed: 20 samples
DPT 141 → 10', 18', 28', 33', 38', 43', 48'
DPT 142 → 10', 18', 28', 33', 38', 43', 48'
DPT 143 → 28', 33', 38', 43', 48'
DPT 144 → 10'

10/11/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Contractors: EDS - (Davie & JR) KB Labs (Glenn)
Date: 10/12/10
Task No.: 7.4

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | no | Sampling Soil: | no |
| Soil Borings: | no | Sampling SW/Sediment: | no |
| DPT: | yes | Sampling Monitor Wells: | no |
| Well Inventory: | no | Sampling Hazardous Waste: | no |
| Other: | — | Sampling Drums: | no |

**Observations/Issues of Concern**

0650: Arrived onsite; calibrated YSI
0700: Drillers arrived onsite
0715: I conducted tailgate; discussed emergency contact info; hazards, scope for the day
0730: began DPT 144 - 18'
0810: Davie deconned screens
0830: called Rebecca to check in
0920: Davie deconned screens
1032: Finished DPT-144; moved to DPT-145; Davie deconned rods - Davie filed rod threads; material is very hard & compact
1054: JR started hand augering DPT-145
1205: Davie deconned screens
1215: lunch
1245: returned from lunch
1350: Davie deconned screens
1437: Finished DPT-145; Davie deconned rods & screens; JR moved to DPT-139

**~~Plans/Future Activities~~**

1540: Finished DPT-139; Davie deconned rods and screens; JR moved to DPT-146) 1700 - Davie deconned screens
1725: Finished DPT-146
completed: DPT-144-18', 28', 33', 38', 43', 48', 53', 63'
DPT-145 → 10', 18', 28', 33', 38', 43', 48', 53', 63'
DPT-139 → 53', 63'
DPT-146 → 28', 33', 38', 43', 48'

24 samples

10/12/10
Signature/Date

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Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRITE
Project No.: ~~FR1686~~ FR1681
Contractors: EDS - Davie & JR KB Labs (Glenn)

Date: 10/13/10
Task No.: 7*4

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | no | Sampling Soil: | no |
| Soil Borings: | no | Sampling SW/Sediment: | no |
| DPT: | yes | Sampling Monitor Wells: | no |
| Well Inventory: | no | Sampling Hazardous Waste: | no |
| Other: | — | Sampling Drums: | no |

**Observations/Issues of Concern**

0630: arrived onsite; calibrated YSI
0700: EDS arrived
0710: conducted tailgate; discussed today's scope; RR safety; drum & IDW disposal
0735: Davie & JR dumped IDW while I supervised; no waste was spilled; bung screw was tightened ~~appropriately~~ appropriately
0745: Davie decon'ed and Filed rods
0750: JR moved to DPT-0147
1005: Finished DPT-0147; Davie decon'ed rods & screens
1030: began DPT-0148 - Davie grouted previous DPT locations
1114: Davie decon'ed screens
1232: finished DPT-0148; Davie decon'ed rods & screens
1240: began mob process
1350: lunch
1400: setup @ DPT-0149
1450: Davie decon'ed screens

**Plans/Future Activities**

1600: finished DPT-0149; Davie decon'ed rods and screen
1620: set up @ DPT-0150
1640: Finished DPT-0150 - 28'
1645: davie decon'ed screen; took purge water to spill pallet; dumped all water
1700: end of day

completed: DPT-147 → 28', 33', 38', 43', 48'
DPT-148 → 10', 18', 28', 33', 38', 43', 48'
DPT-149 → 10', 18', 28', 33', 38', 43', 48'
DPT-150 → 28'

10/13/10
Signature/Date

→ 20 samples

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Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRITE
Project No.: FR1681
Contractors: EDS (Davie & JR) KB Labs (Glenn)

Date: 10/14/10
Task No.: 7*4

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | no | Sampling Soil: | no |
| Soil Borings: | no | Sampling SW/Sediment: | no |
| DPT: | yes | Sampling Monitor Wells: | no |
| Well Inventory: | no | Sampling Hazardous Waste: | no |
| Other: | — | Sampling Drums: | no |

**Observations/Issues of Concern**

0630: I arrived onsite; calibrated YSI
0700: Drillers arrived
0720: I conducted tailgate; discussed decon procedures; issues dealing w/ traffic and working along the road.
0725: got started @ DPT-150
0830: Davie decon'ed screens
0940: Finished DPT-150; davie decon'ed rods & screens; JR moved to DPT-151
1120: Davie decon'ed screens
1210: lunch
1240: end of lunch
1330: finished DPT-151; Davie decon'ed rods and screens; JR moved to DPT-152
1453: Davie decon'ed screens
1630: Finished DPT-152; Davie Decon'ed rods & screens; JR moved to DPT-153

**Plans/Future Activities**

1715: Finished DPT-153-28'
1725: disposed IDW and decon water into drums
1735: end of day
completed: DPT 150: 33', 38', 43', 48', 53', 63'
DPT 151: 28', 33', 38', 43', 48', 53', 63'
DPT 152: 10', 18', 28', 33', 38', 43', 48'
DPT 153: 28'

21 samples

10/14/10
Signature/Date

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Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of

Project: CRTE
Project No.: FR1681
Contractors: EDS (Davie & JR) KB Labs (Glenn)

Date: 10/15/10
Task No.: 7*4

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | no | Sampling Soil: | no |
| Soil Borings: | no | Sampling SW/Sediment: | no |
| DPT: | yes | Sampling Monitor Wells: | no |
| Well Inventory: | no | Sampling Hazardous Waste: | no |
| Other: | — | Sampling Drums: | yes |

**Observations/Issues of Concern**

0620: arrived onsite; I calibrated the YSI
0700: Drillers arrived
0715: tailgate; I went over decon procedures and reinforced importance of PPE's
0730: set up @ DPT-153
1020: finished DPT-153; Davie decon'ed screens; JR moved to DPT-154
1230: finished DPT-154
1230 – 1250: lunch
1250 - Davie decon'ed screens; JR moved to DPT 155
1530 - finished DPT 155
1600 - cleaned up site; Davie & JR loaded drill rig onto trailor
1630 - ~~dropped spill pallet off~~ JA took IDW samples from drums
1650 - dropped off spill pallet @ CMS
1700 - dropped off Drum @ GBA
1715 - offsite; end of day

**~~Plans/Future Activities~~**

Completed:
DPT-153: 33', 38', 43', 48', 53', 63'
DPT-154: 10', 18', 28', 33', 38', 43', 48'
DPT-155: 10', 18', 28', 33', 38', 43', 48'
(20 samples)

10/15/10
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CLNA
Project No.: FR1081
Contractors: DMS

Date: 5/11/11
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1330 Begin Marking paths for additional Trail Clearing. Comments on Trail markers will be included on a marked up Site Figure and added to project folder.

**Plans/Future Activities**

5/11/11
Signature/Date

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Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CR42 FA1600 FA1681
Project No.:
Contractors:

Date: 5/12/11
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1230 Continue marking path of proposed new trails.
1700 Depart Site - Trail marking Complete.

**Plans/Future Activities**

5/12/11
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: Contractors Road
Project No.: FR1681
Date: 10-19-11
Task No.: 17.2
Contractors: EDS - Chris Phelps & Keith Olsen
KB Labs - Glenn Jackson

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0156, 0157, 0158, 0159
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0620 - Arrive at TVL office; calibrate YSI
0720 - Arrive on-site; locate staging areas, talk to Dave about decon pit / spill pallet area
0745 - Tailgate safety meeting - COCs, hard hat, heavy equipment
0810 - Speak to a man inside the building where Michael Palmer used to be - he said we can stage our spill pallet near the decon pit
0905 - Begin drilling location A (DPT 0156); 26-30 @ 0924
31-35 @ 0937; 36-40 @ 0949; 41-45 @ 1003; 46-50 @ 1019 decon screens grout
1049 - Begin drilling location B (DPT 0157); 26-30 @ 1106
31-35 @ 1118; 36-40 @ 1230; 41-45 @ 1245; 46-50 @ 1302 decon screens grout
1145 - Took sample of Drums IDW 185534 & 185535
1340 - Begin drilling location C (DPT 0158); 26-30 @ 1347; 31-35 @ 1403
36-40 @ 1420; 41-45 @ 1435; 46-50 @ 1451; decon screens; grout
1542 - Begin drilling location L (DPT 0159); 26-30 @ 1601; 31-35 @ 1613
36-40 @ 1628; 41-45 @ 1644; 46-50 @ 1657; decon screens; grout

**Plans/Future Activities**

*Note: Very close to the KSC highway - only cones are setup as warning
1720 - Leaving site; put decon water in drum 185538

10-19-2011
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: ~~Wilson~~ Contractors Road
Project No.: FR 1691
Contractors: KB Labs - Glenn Jackson
EDS - Chris Phelps & Keith Olsen

Date: 10-20-2011
Task No.: 17*2

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0160, 0161, 0162, 0163
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0630 - Arrive at TVL office - calibrate YSI
0730 - Arrive on site; mobilize and setup decon pit
0740 - Tailgate safety meeting - road hazards for our locations
0750 - Begin drilling DPT0160 @ location M; 26-30 @ 0807
31-35 @ 0820; 36-40 @ 0833; 41-45 @ 0850; 46-50 @ 0910 - decon & grout
0940 - Begin drilling DPT0161 @ location ~~R~~ S; 26-30 @ 0950; 31-35 @ 1026
36-40 @ 1040; 41-45 @ 1055; 46-50 @ 1114 - grout/decon screens
I relocated 2 stakes to location R & S - the previous stakes were not in the correct area/spot
1130 - Begin drilling DPT0162 @ location S; 26-30 @ 1141; 31-35 @ 1154
36-40 @ 1249; 41-45 @ 1304; 46-50 @ 1322; 51-55 @ 1339; 61-65 @ 1401
1215 - 1230 lunch
1415 - Begin drilling DPT0163 @ location R; 26-30 @ 1428; 31-35 @ 1501
36-40 @ 1515; 41-45 @ 1531; 46-50 @ 1547
1800 - Empty purge & decon water in drum 185538 & 185537
1620 - Leave site;

**Plans/Future Activities**

10-20-2011
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: Contractors Road
Project No.: FR1681
Date: 10-21-2011
Task No.: 17*2
Contractors: EDS- Keith Olsen & Chris Phelps
KB Labs- Glenn Jackson

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0164, 0165
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0630- Arrive at TVL office; calibrate YSI
0720- Arrive on-site - setup decon pit, decon screens
0740- Tailgate safety meeting - road hazards, plan for day
0750- Begin drilling DPT0164; 26-30 @0804; 31-35 @0834
36-40@0852; 41-45@0909; 46-50 @0924; 51-55@0942; 61-65@1023
decon screens after 51-55; grout 1052
1040 ~~0950~~ - Begin drilling DPT0165; 26-30@~~0949~~ 1055; 31-35@1104; 36-40@1119
41-45@1134; 46-50@1148
1220 - Clean up decon pit - empty purge & decon water in drum 185537
1235 - Sample IDW drums 185537 & 185538
1240 - Clean up decon pit & break down to mobilize to HMF North
1300 - Leave site

**Plans/Future Activities**

10-21-2011
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: FR1681 - CRTE
Project No.: FR1681
Contractors: Boart Longyear

Date: 12.19.11
Task No.:

**Work Performed**

Well Installation: -
Soil Borings: SB0005
DPT: -
Well Inventory: -
Other: -

Sampling Soil: -
Sampling SW/Sediment: -
Sampling Monitor Wells: -
Sampling Hazardous Waste: -
Sampling Drums: See Drum Log.

**Observations/Issues of Concern**

0850 J. McKinnon (Geosyntec) arrives at Badging Station (KSC-NASA); obtains badge.
0918 Boart Longyear (V. Scott, J. Kiever, J. Smith, S. Conley) arrive; obtain badge.
0930 Mobilization to Contractor's Road Site (CRTE).
0940 Geosyntec conducts a health and safety meeting with Boart Longyear (BL).
0950 Unloading of equipment and preparation for soil boring activities using a sonic rig. Geosyntec checks in with site personnel.
1020 Geosyntec and BL off-site to pick up drum staging platforms
1120 On-site -- mobilize to SB0005.
1200 Geosyntec offsets SB0005 approximately 30 ft NW. S. Conley and BL support truck off-site.
1230 Lunch.
1310 BL fills water truck at CRTE decontamination area.

**Plans/Future Activities**

12.19.11
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRTE
Project No.: FR1681
Contractors: BL
Date: 12.19.11
Task No.:

**Work Performed**

Well Installation: -
Soil Borings: SB0005
DPT: -
Well Inventory: -
Other: -

Sampling Soil: -
Sampling SW/Sediment: -
Sampling Monitor Wells: -
Sampling Hazardous Waste: -
Sampling Drums: See Drum Log

**Observations/Issues of Concern**

1420 NASA locator clears new SB0005 location; off-site.
1430 SB0005 boring installation begins. At each location, BL will hand auger to 5 ft bls, collect a continuous soil core to 80 ft bls, decontaminate drill rod, and place decontamination water, soil cuttings, and drill fluid in 55 gal drums at the approved IDW staging area. Geosyntec will conduct lithology description, photo documentation, documentation, and drilling oversight. See all attached field forms.
1600 SB0005 boring complete. BL fills water tank.
1640 BL pressure grouts from bottom to land surface to abandon SB0005.
1715 SB0005 abandonment complete. De-mobilization and IDW management conducted.
1820 Geosyntec and BL off-site; site secured; no health and safety issues observed.

**Plans/Future Activities**

- Soil borings
- Monitoring well installation

12.19.11
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRTE
Project No.: FR1681
Date: 12.20.11
Task No.:
Contractors: Boart Longyear (V. Scott, J. Kiaver, J. Smith)

**Work Performed**

Well Installation: MW0022, MW0023
Soil Borings: SB0006, SB0007
DPT: -
Well Inventory: -
Other: See attached field forms.

Sampling Soil: -
Sampling SW/Sediment: -
Sampling Monitor Wells: -
Sampling Hazardous Waste: -
Sampling Drums: See Drum Log

**Observations/Issues of Concern**

0707 J. McKinnon (Geosyntec) and Boart Longyear (BL) on-site at Badging Station; mobilize to CRTE.
0720 Geosyntec conducts a health and safety meeting with BL; special topic = Site traffic and utilities.
0730 BL mobilizes equipment to SB0006.
0800 BL sets up sonic rig at SB0006, fills water truck, and constructs work zone. Geosyntec checks in with Site personnel.
0830 SB0006 boring installation begins; hand auger to 5 ft bls.
0850 SB0006 drilling begins.
1020 SB0006 drilling complete. BL back plugs 80 - 70 ft bls, and installs MW0022.
1105 Lunch. Bentonite seal hydrates.
1145 MW0022 installation continues.
1345 MW0022 installation complete. BL mobilizes to SB0007, fills water tank, and IDW management. Geosyntec moved SB0007 30 ft South due to proximity of heavy equipment.
1355 NASA locator clears new SB0007 location, BL sets up sonic rig

**Plans/Future Activities**

J. McK 12.20.11
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



| | |
|---|---|
| Project: CRHE | Date: 12.20.11 |
| Project No.: FR1681 | Task No.: |
| Contractors: BL | |

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | MW0022, MW0023 | Sampling Soil: | - |
| Soil Borings: | SB0006, SB0007 | Sampling SW/Sediment: | - |
| DPT: | - | Sampling Monitor Wells: | - |
| Well Inventory: | - | Sampling Hazardous Waste: | - |
| Other: | - | Sampling Drums: | - |

**Observations/Issues of Concern**

at SB007, and water truck filled. BL sets up work zone
1415 SB0007 boring installation begins with hand augering to 5 ft bls
1425 SB0007 drilling begins.
1545 SB0007 boring complete. BL back plugs 80-70 ft bls and begins MW0023 installation.
1630 MW0023 bentonite seal hydrates. BL off-site to fuel rig.
1645 Geosyntec conducts IDW management.
1715 Geosyntec off-site, site secured, no health and safety issues observed.

**Plans/Future Activities**

- Monitoring well development
- De-mobilization

J. M. 12.20.11

Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRTE
Project No.: FR1681
Contractors: Boart Longyear (V. Scott, J. Kiaver, J. Smith)

Date: 12.21.11
Task No.:

**Work Performed**

Well Installation: MW0022, MW0023
Soil Borings: -
DPT: -
Well Inventory: -
Other: Monitoring Well Development. See attached field forms.

Sampling Soil: -
Sampling SW/Sediment: -
Sampling Monitor Wells: -
Sampling Hazardous Waste: -
Sampling Drums: See Drum Log

**Observations/Issues of Concern**

0715 Geosyntec (J. McKinnon) and Boart Longyear (BL) at Badging Station; mobilize to CRTE.
0730 Geosyntec conducts a health and safety meeting with BL; special topic = weather phases.
0745 BL fills water truck and conducts preparation for monitoring well development activities and completion. Geosyntec checks in with Site personnel.
0758 Development of MW0023 begins.
0900 BL off-site to buy asphalt saw.
0940 MW0023 development stopped
1020 BL on-site. Grouting of MW0023 to surface begins.
1200 MW0023 installation complete. Pad construction begins at MW0023.
1310 E. Guyer (Geosyntec) on-site with sample kits and supplies. Geosyntec locates SB locations with GPS
1330 Geosyntec samples soil IDW. ~~BL grouts MW~~ MW0022 development begins.
1355 Geosyntec samples liquid IDW.

**Plans/Future Activities**

J. McK 12.21.11
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRTE
Project No.: FR1681
Contractors: BL

Date: 12.21.11
Task No.:

**Work Performed**

Well Installation: MW0022, MW0023
Soil Borings: -
DPT: -
Well Inventory: -
Other: -

Sampling Soil: -
Sampling SW/Sediment: -
Sampling Monitor Wells: -
Sampling Hazardous Waste: -
Sampling Drums: -

**Observations/Issues of Concern**

1410 E. Guyer off-site with IDW samples.
1430 MW0022 development complete. BL begins grouting of MW0022 to surface and pad completion.
1530 MW0022 complete. Geosyntec checks out with Site personnel. BL conducts de mobilization. IDW management conducted.
1645 Geosyntec and BL off-site, Site secured, no health and safety incidents observed.

EW 12.21.11

**Plans/Future Activities**

EW 12.21.11

J. M. 12.21.11
Signature/Date

FR1681 - CONTRACTOR'S ROAD 1/9/24

630 ALEX RIVERA (AR) ARRIVES @ BADGING STATION. - MEET W/EMILY LAWSON (EL) TO OBTAIN HASP, DRUM LABELS, ETC.

640 BADGING COMPLETE / AR CONTACTS BRAD WEICHERT (BW) OF KB LABS TO COORDINATE LAB EFFORTS FOR TODAY (SCHEDULED LAB HAS MECH. ISSUES AND WILL NOT BE AVAILABLE UNTIL TUESDAY.) - BW WILL CONTACT AR WHEN ON SITE

- AR REVIEWS LAB / DRILLER WO'S AND SCOPE OF WORK.

700 ENVIRONMENTAL DRILLING SERVICES (EDS) ON SITE - JR (LEAD DRILLER) AND SEAN (HELPER) / ~~ERS~~ MOBS TO OBTAIN DPT RIG (CURRENTLY @ L39B) / AR MOBS TO NOTIFY MIKE PALMER (MP) - NASA PER LAUREN PETTY (LP) REQUEST

- JILL JOHNSON (JJ) CALLS TO UPDATE LAB STATUS. (SEE ABOVE)

720 CHECK IN W/MIKE PALMER - OFFICE HAS RELOCATED TO OSSI 4200B - ~~H~~ 321-861-6253

- AR IDENTIFIES DRUM STAGING / DECON AREA FOR CONTRACTOR'S ROAD.

FRI 6/1 - NASA CRHE

750 EAS @ CROAD. - BEGIN SETUP OF DECON AREA. / AR OBTAINS ICE FOR SAMPLES

835 EAS SETS UP FOR DPT ACTIVITIES / AR REVIEWS HASP W/ STAFF TOPICS INCLUDE HEAT AWARENESS, WILDLIFE BASED ON LOCATION
- AR BEGINS CALIBRATION OF GW EQUIPMENT

840 EAS BEGIN H.A. OF LOCATION DPT 0166 ("M" ON MAP) TO W.T. ~3-4 FT BGS.

900 BEGIN DPT OF 0166 TO 30' BGS. RIG 662 DPT (GEOPROBE), 1.5 IN DIAM. RODS, 4 FT SCREENS (TOTAL OF 5FT) SS WIRE WOUND.

0915 SAMPLE DPT-0166 (26-30) / ADVANCE DPT TO 35' BGS.

0938 SAMPLE DPT-066 (31-35) / ADVANCE DPT TO 40' BGS.

0955 @ DEPTH OF 40' BGS (SCREEN 36-40), LOW VOLUME OF GW EXTRACTED, AR CONTACTS EL., TO DISCUSS, PER E.L., PRIORITY IS COLLECTING SAMPLES, 2ND IMPORTANCE IS WQ PARAMETERS ~~AR~~

1000 SAMPLE DPT-0166 (36-40) - NO WQ PARAMETERS RECORDED. - ADVANCE TO

1020 SAMPLE DPT 0166 (41-45) / ADVANCE DPT TO 50' BGS.

1040 SAMPLE DPT 0166 (46-50) / AR TRANSFERS ALL DPT-066 TO EB LABS FOR ANALYSIS.
- EAS EXTRACTS ALL RODS IN PREPARATION FOR DECON PROCAPURES PRIOR TO MOB TO DPT-0167 / SOIL CUTTINGS INTO BOREHOLE.
(TO GLEN JACKSON)
- APP. 4 GAL OF PURGE/DECON WATER GENERATED @ DPT-0166

1055 EAS DECONS ALL SCREENS USING STEAM WASH @ DECON AREA.

1105 L.P. UPDATED OF DPT ACTIVITIES VIA TEXT / EAS BEGINS H.A. OF DPT-0167 ("N" ON MAP.) TO W.T. ~4 FT BGS.

1134 BEGIN DPT OF 0167 TO 30' BGS.

1148 SAMPLE DPT 0167 (26-30) / ADVANCE DPT TO ~~35~~ 35' BGS.

1204 SAMPLE DPT 0167 (31-35) / ADVANCE DPT TO ~~40~~ 40' BGS.

1230 SAMPLE DPT 0167 (36-40) / ADVANCE DPT TO 45' BGS.

1248 SAMPLE DPT 0167 (41-45) / ADVANCE DPT TO 50' BGS

1307 SAMPLE DPT 0167 (46-48) / AR TRANSFERS ALL DPT-0167 TO G.S (EB LABS)

- EDB EXTRACTS ALL RODS IN PREPARATION FOR DECONTAMINATION PROCEDURES.

1313 EDB MOBS TO DECON AREA / AR UPDATES L.P. OF STATUS OF SAMPLING

- APP. 3.5 GAL OF PARGE / DECON WATER GENERATED FROM DPT-0169

- SOIL CUTTINGS (FROM H.A.) PLACED INTO BOREHOLE

1340 EDB RETURNS TO WORK AREA / H.A. TO WT. @ DPT-0168 ("0" ON FIGURE)

1345 BEGIN DPT OF 0168 TO 30' BGS

1355 SAMPLE DPT-0168 (26-30) / ADVANCE DPT TO 35' BGS.

1412 SAMPLE DPT-0168 (31-35) / ADVANCE DPT TO 40' BGS.

1432 SAMPLE DPT-0168 (36-40) / ADVANCE DPT TO 45' BGS.

1450 SAMPLE DPT-0168 (41-45) / ADVANCE DPT TO 50' BGS.

1512 SAMPLE DPT-0168 (46-50)

1515 AR TRANSFERS ALL DPT-0168 SAMPLES TO KB LABS (GJ.) / EDB EXTRACTS ALL RODS IN PREP. FOR MOB TO NEXT LOCATION

- EDB MOBS TO DECON AREA FOR PRESSURE WASH OF ALL TOOLING / SOIL CUTTINGS INTO BORE HOLE

- AR MOBS TO LOCATE ACCESS TO DPT-0169

FR16E1 NASA CRHE

1/9

1530 EDB SETS UP DPT RIG @ DPT-0169 ("K" ON FIGURE) / JR TO H.A. DPT-0169 TO WT (~4 FT BGS)

1605 EDB RETURNS TO DPT-0169 LOCATION

1610 BEGIN DPT OF 0169 (26-30)

1620 SAMPLE DPT 0169 (26-30) / ADVANCE DPT TO 35 FT BGS

1632 SAMPLE DPT 0169 (31-35) / ADVANCE DPT TO 40 FT BGS

1646 SAMPLE DPT 0169 (36-40) / ADVANCE DPT TO 45 FT BGS

1704 SAMPLE DPT-0169 (41-45) / ADVANCE DPT TO 50 FT BGS.

1718 SAMPLE DPT 0169 (46-50) / SAMPLES TRANSFERRED TO KB LABS (GJ.)

1725 ALL RODS EXTRACTED BY EDB / EDB MOBS TO DECON AREA TO DECON SCREENS USING PRESSURE WASH AND REMOVE LIQUIDS FROM DECON PIT

SIGNAL OF JOB

1745 REVIEW PROGRESS W/ L.P.

- SCHEDULED DPT LOC'S: E, F, G, H ON FIGURE

- MEET KB LABS @ GARGE STATION @ 2000

- AR, EDB DEMOB FROM SITE

FR1681 CRAE 3/10

645 ALEX RIVERA (AR) ON SITE @ NASA BADGING STATION. AR CONTACTS BOB GEORGE (BG), KB LABS @ 352-538-6507 OF ETA. BG EN ROUTE, WILL ARRIVE @ BADGING STATION MOMENTARILY.

705 AR CONTACTS JR (EAR) FOR DETAILS OF NEXT SCHEDULED BOREHOLE LOCATION AND ACCESS POINTS. BOREHOLE "E" (DPT-0170) LOCATED IN WOODED AREA WEST OF RAILROAD TRACKS (CONTRACT. ROAD)

- BG ON SITE @ BADGING STATION -

0710 AR BEGINS CALIBRATION OF GW EQUIPMENT

0725 AR COMPLETES CALIBRATION OF GW EQUIPMENT (SEE ATT. FORM)

- BG RECEIVES "ESCORT" BADGE - AR/BB MOB TO CONTRACTORS ROAD.

0740 KB LABS SETS UP IN GATED AREA NEAR DRUM STAGING (EAST OF CONTRACTORS ROAD)

- BG RECEIVED CALL THAT APPROPRIATE PAPERWORK FOR UNESCORTED BADGE LOCATED BY BADGE STATION; BG MOBS TO OBTAIN APPROPRIATE BADGING

0745 AR NOTIFIES R.R. OFFICE OF DRILLING IN WOODED AREA (NO CROSSING OF RR TRACKS)

FR1681 CRAE 1/10

*0750 - SAFETY TAILGATE W/ ALL STAFF

- EAR HAS H.A. TO WT (~4FT) @ LOCATION "E" (DPT-0170) / SET UP FOR DRILLING ACTIVITIES OF DPT-0170

0812 EAR BEGINS DPT OF 0170 TO 30' BGS

0823 AR SAMPLES DPT-0170 (25-30) / ADVANCE DPT. TO 35 FT BGS.

0836 AR SAMPLES DPT-0170 (31-35) / ADVANCE DPT TO 40 FT BGS / AR OBSERVES SPEC. CONDUCTANCE READING HIGH (COMPARED W/ YESTERDAY'S READINGS) - WILL ATTEMPT CAL CHECK. OF PROBES.

0845 CALIBRATION ERROR CORRECTED - NOTED ON CAL FORM.

0854 AR SAMPLES DPT-0170 (36-40) / ADVANCE DPT TO 45 FT BGS

0915 AR SAMPLES DPT-0170 (41-45) / ADVANCE DPT TO 50 FT BGS

0932 AR SAMPLES DPT-0170 (46-50)

- IN PROCESS OF RETRIEVING RODS FOR DECON, THE UP-DOWN (VERTICAL) LEVER ON DPT RIG BREAKS - JR TO ADDRESS MAINTENANCE OF LEVER.

1000 SEAN MOBS TO DECON SCREEN @ DECON AREA / AR DELIVERS ALL 0170 SAMPLES TO B.Q. / LAUREN PETTY UPDATED

FRI 8/1 CRHE



1030 SEAN/AR RETURN TO WORK AREA - PER JR, LEVER IS IN PROCESS OF TEMP. REPAIR. - MAY AFFECT OUTPUT DUE TO SLOWED PROGRESS.

1038 DPT-0170 HAS BEEN H.A. TO 4'BGS (INT ~ 3FT) / EDS BEGINS DPT OF ~~DPT-0170~~ 0171 ("F" ON FIGURE) TO 30'BGS.

1049 AR SAMPLES DPT-0171(25-30) / ADVANCE DPT TO 35 FT BGS.

1105 AR SAMPLES DPT-0171(31-35) / ADVANCE DPT TO ~~55~~ 40 FT BGS

1121 AR SAMPLES DPT-0171(36-40) / ADVANCE DPT TO 45 FT BGS.

1137 AR SAMPLES DPT-0171(41-45) / ADVANCE DPT TO 50'BGS

1155 AR SAMPLES PPT-0171(46-50) / ~~ADVANCE DPT TO~~ EDS EXTRACTS ALL RODS FOR DECON

1205 AR MOBS TO LAB W/ALL DPT-0171 SAMPLES / EDS MOBS TO DECON ALL TOOLING AND OBTAIN A SPILL PALLET FOR DRUM STAGING

1215 AR TO OBTAIN ADDT'L ICE FOR SAMPLE STORAGE; LOCATE BOREHOLE 'G' (DPT-0172) / I.P. UPDATED OF STATUS.

1300 EDS @ WORK AREA - SPILL PALLET HAS BEEN STAGED @ STAGING AREA - ALL SCREENS HAVE BEEN PRESSURE WASHED - BEGIN MOB TO "G" LOCATION (DPT-0172)

1315 EDS H.A. OF DPT-0172 TO 4'BGS (INT 3')

1333 EDS BEGINS DPT OF 0172 TO 30'BGS.

1346 AR SAMPLES DPT 0172(26-30) / ADVANCE DPT TO 35' BGS

1402 AR SAMPLES DPT 0172(31-35) / ADVANCE DPT TO 40 FT BGS

1418 AR SAMPLES DPT 0172(36-40) / ADVANCE DPT TO 45 FT BGS / AR TRANSFERS ABOVE 3-0172 INTERVALS TO B.G. (KB)

1436 AR SAMPLES DPT 0172(41-45) / JR. CONT. DPT ADVANCE TO 50 FT BGS - SEAN MOBS TO DECON 4 SCREENS / - AR CONFIRMS W/L.P. OF FINAL INTERVAL @ CURRENT LOCATION IS 65 FT. (NO 55-60 FT)

1500 AR SAMPLES DPT 0172(46-50) / JR EXTRACTS SCREENS & RODS FOR CONTINUED ADVANCEMENT

1510 SEAN ON SITE W/ DECON' RODS. / EDS ADVANCES TO 55 FT BGS

1526 AR SAMPLES DPT 0172(51-55) / EDS ADVANCES TO 65 FT BGS

1550 AR SAMPLES DPT-0172 (61-65) / EDS BEGINS EXTRACTION OF ALL CASING PRIOR TO MOB TO 0173 / AR TRANSPORTS REMAINING INTERVALS @ DPT-0172 TO FB LABS FOR ANALYSIS

1610 JR H.A. OF DPT-0173 ("H" ON FIGURE) TO 4' BGS

1618 EDS BEGINS DPT ADVANCE OF DPT-0173 TO 30' BGS.

1635 AR SAMPLES DPT-0173 (26-30) / EDS ADVANCES TO 35 FT BGS.

1647 AR SAMPLES DPT-0173 (31-35) / EDS ADVANCES TO 40 FT BGS.

1705 AR SAMPLES DPT-0173 (36-40) / EDS EXTRACTS ALL TOOLING FOR DECONT.

- EDS TO ALSO BREAK DOWN DECON PIT AND STAGE DECON/IDW DRUMS INTO STAGING AREA

- AR TO TRANSFER ALL SAMPLES TO FB.

1745 AR/EDS DEMOB FROM SITE /

- AR UPDATES L.P. OF PROGRESS - PER L.P., SCHEDULE TO CONTINUE DPT-0173 AND FOLLOW W/ "X" AND "C" ON FIGURE

CRHE - FRI 8/1 1/11

700 ALEX RIVERA (AR), EDS (SR + SEAN) ON SITE FOR CONTINUATION OF DPT ACTIVITIES IN WOODEN AREA WEST OF CONTRACTORS ROAD

0710 HEALTH AND SAFETY TAILGATE

0715 AR BEGINS CALIBRATION OF GAS EQUIPMENT (SEE CAL FORM)

- EDS SETS UP FOR DPT @ ~~DPT~~ 0173

0732 EDS CONTINUES DPT TO 45 FT BGS @ DPT-0173 / LAUREN PETTY (LP) UPDATED

0745 AR SAMPLES DPT-0173 (41-45) / DPT ADVANCES TO 50 FT BGS.

0805 AR SAMPLES DPT-0173 (46-50) / DPT ADVANCES TO 55 FT BGS

0825 AR SAMPLES DPT-0173 (51-55) / DPT ADVANCES TO 65 FT BGS.

0850 AR SAMPLES DPT-0173 (61-65) / EDS EXTRACTS TOOLING ~~DPT ADVANCES~~ @ DPT-0173 FOR DECON / PER PREVIOUS CONVO'S W/ L.P. (SEE 1-10-12)

APP. 4-5 GAL GENERATED

EDS WILL MOB TO LOCATION "X" ON FIGURE (DPT-0174)

0910 EDS MOBS TO DECON AREA FOR DECON OF SCREENS USING PRESSURE WASH/STEAM WASH USING FACILITY WATER. / AR TRANSPORTS SAMPLES TO FB LABS.

CRHE FRI681

0940 EDS RETURNS TO WORK AREA/ H.A. TO 4 FT BGS @ DPT-0174

0948 EDS BEGINS DPT OF 0174 TO 30' BGS.

1003 AR SAMPLES DPT-0174 (26-30)/EDS ADVANCES DPT TO 35 FT BGS.

1018 AR SAMPLES DPT-0174 (31-35)/EDS ADVANCES DPT TO 40 FT BGS.

1034 AR SAMPLES DPT-0174 (36-40)/EDS ADVANCES DPT TO 45 FT BGS

- AR MOBS TO TRANSPORT ALL DPT-0174 SAMPLES (TO 40' BGS) TO EB LABS.

1053 AR SAMPLES DPT-0174 (41-45)/EDS ADVANCES DPT TO 50 FT BGS.

1109 AR SAMPLES DPT-0174 (46-50)/EDS BEGINS EXTRACTION OF ALL TOOLING FOR DECON

1130 EDS MOBS TO STEAM PRESSURE WASH ALL SCREENS AND DISPOSE OF PURGE WATER FOR DPT 0174 (~3.5 GAL) @ DESIGNATED DRUM AREA. / JR MOBS DPT RIG TO 0175 (TO "C" ON FIGURE)

1154 EDS RETURNS TO WORK AREA/H.A. DPT-0175 TO 4' BGS.

1148 1155 - EDS BEGINS D.P.T. OF 0175 TO 30' BGS



1202 AR SAMPLES DPT-0175 (26-30) / EDS BREAKS FOR LUNCH

1230 EDS CONTINUES DPT ACTIVITIES @ DPT-0175 TO 35 FT BGS.

- AR UPDATES L.P. ON PROGRESS / L.P. REQUESTS DPT OF "A" (LOCATION FARTHEST EAST) AFTER DPT OF "B".

1248 AR SAMPLES DPT-0175 (31-35)/EDS ADVANCES DPT TO 40 FT BGS.

1304 AR SAMPLES DPT-0175 (36-40)/EDS ADVANCES DPT TO 45 FT BGS

1320 AR SAMPLES DPT-0175 (41-45)/EDS ADVANCES DPT TO 50 FT BGS.

1342 AR SAMPLES DPT-0175 (46-50)/EDS EXTRACTS ALL RODS FOR DECON / SR TO MOB TO DPT-0176 ("B" ON FIGURE)

1350 EDS MOBS TO STEAM PRESSURE WASH ALL SCREENS @ DECON AREA AND DISPOSE OF PURGE WATER @ AVAILABLE DRUMS @ STAGING AREA (~3.5 GAL)

- AR MOBS TO DELIVER ALL DPT-0175 SAMPLES TO EB LABS.

- PER NASA WEATHER OFFICE, RSC CURRENTLY IN PHASE I LIGHTNING WATCH

188675

CRTE FR1681

1/1

1426 - ERS RETURNS TO WORK AREA H.A. TO 4' BGS @ DPT-0176

1427 ERS BEGINS DPT-0176 TO 30' BGS

1437 AR SAMPLES DPT-0176 (26-30) / ERS ADVANCES DPT TO 35 FT BGS.
- PHASE I CANCELLED.

1455 AR SAMPLES DPT-0176 (31-35') / ERS ADVANCES TO 40 FT BGS.

1512 AR SAMPLES DPT-0176 (36-40) ERS ADVANCES TO 45 FT BGS.

1532 AR SAMPLES DPT-0176 (41-45') ERS ADVANCES TO 50 FT BGS.

1555 AR SAMPLES DPT-0176 (46-50) / ERS BEGINS EXTRACTION OF ALL RODS FOR DECONTAMINATION / AR MOBS TO DELIVER ALL 0176 SAMPLES TO KB LABS.

1620 AR ATTEMPTS LOCATING BOREHOLE "U" AND ACCESS POINT.

1640 AR CONTACTS JAN BARFUS (JB) W/TO PREVIOUSLY STAKED LOCATIONS FOR CRTE FOR UTILITY LOCATE - PER JB, LOCATIONS EAST OF CONTRACT. ROAD ~~HAM~~ WERE NOT STAKED DUE TO ACCESSIBILITY ISSUES -

CRTE FR1681

- AR CONTACTS L.P. TO UPDATE STATUS OF LOCATIONS EAST OF CONTRACTOR ROAD - PER L.P, @ BASED ON RESULTS THUS FAR, JILL JOHNSON HAS ELECTED TO SAMPLE LOCATION "J" ON FIGURE - AR NOTES LOCATION "J" IS CLOSE TO ROADWAY AND DUE TO SAFETY CONCERNS, WILL COMPLETE IN THE MORNING. @ ALSO, CLIENT WANTS TO ADD LOCATION WEST OF CONTRACTORS ROAD (NEAR DITCH AND DPT-0166) BUT IS CONTINGENT ON UTILITY LOCATE

1715 AR SAMPLES DRUM ID 188675 (80% FULL) AND DELIVERS TO LAB.

1730 ERS DEMOBS FROM SITE

1745 AR, KB LABS DEMOB FROM SITE.

CRHE FR1681 1/12

0715 ALEX RIVERA (AR) ONSITE @ PROPOSED BOREHOLE LOCATION "J" ON FIGURE
- AR REVIEWS ~~HAS~~ HEALTH AND SAFETY RE: WORKING NEAR ROADWAYS. / EDS STAFF HAVE SET UP ORANGE CONES AND HIGH VISIBILITY SAFETY VESTS

0730 - EDS SETS UP DPT RIG @ DPT-~~147~~(J) DUE EAST OF CONTRACTORS ROAD.
- AR MARKS OUT LOCATION Y (EAST OF DPT-0166, JUST WEST OF CANAL)

0745 AR SETS UP FOR CALIBRATION OF GW EQUIPMENT / EDS H.A. TO 4' BGS OF DPT-0177

0756 EDS BEGINS DPT OF 0177 TO 30' BGS

0826 AR SAMPLES DPT-0177 (26-30) / EDS ADVANCES DPT TO 35 FT / AR MOBS TO TRANSAMPLE 0177-28' AND ~~LOCAL~~ STAKE DPT-"U" FOR UTILITY LOCATE (EAST WOODED AREA, EAST OF CONTRACTORS ROAD)

0850 NASA UTILITY LOCATOR HAS CLEARED BOTH PROPOSED LOCATIONS AS DESCRIBED ABOVE / AR UPDATES L.P. OF STATUS.

0856 AR SAMPLES DPT-0177 (31-35) / EDS ADVANCES DPT TO 40 FT

CRHE FR1681 1/12

0918 AR SAMPLES DPT-0177 (36-40) / EDS ADVANCES DPT TO 45 FT BGS

0934 AR SAMPLES DPT-0177 (41-45) / EDS ADVANCES DPT TO 50 FT BGS

0952 AR SAMPLES DPT-0177 (46-50) / EDS EXTRACTS ALL RODS FOR DECONTAMINATION @ DECON AREA - ALSO PREPS DPT RIG FOR MOBILIZATION TO LOCATION "Y" (JUST ~~EAST~~ WEST OF WEST CONTRACTORS ROAD CANAL)
- JR WILL REVIEW LOCATION "U" TO IDENTIFY IF ACCESS FROM THE NORTH IS REQUIRED (WOULD REQUIRE ACCESS TO GEN. MAINT. SHOP (RG-1543))

1005 - AR MOBS TO DELIVER DPT 0177 SAMPLES TO EB LABS.

1020 AR, JR REVIEW PROPOSED LOCATION "U" (FAR EAST WOODED AREA), BASED ON OBSERVATIONS OF CONDITIONS, JR DEEMS COMPLETE AREA INACCESSIBLE DUE TO LOW LYING MARSHY ~~AREA~~ CONDITION.

1030 AR UPDATES LAUREN PETTY (LP) W/ CURRENT STATUS OF SAMPLING

1050 EDS SETS UP @ DPT LOCATION Y (DPT 017~~7~~) - LOCATED JUST WEST OF WESTERN CANAL UC (S.R.O.) / H.A. TO 4 FT BGS

Y12

1100 - BRAD FROM NASA HEALTH & SAFETY ON SITE FOR REVIEW OF SAFETY PROCEDURES

1115 BRAD DEPARTS WORK AREA - STATES SAFETY PROCEDURES ARE SATISFACTORY

1110 AR SAMPLES DPT-0178(26-30)/EDS ADVANCES TO 35 FT BGS

1129 AR SAMPLES DPT-0178(31-35)/EDS ADVANCES TO 40 FT BGS.

1145 AR SAMPLES DPT-0178(36-40)/EDS ADVANCES TO 45 FT BGS

1200 AR SAMPLES DPT-0178(41-45)/EDS ADVANCES TO 50 FT BGS.

1218 AR SAMPLES DPT-0178(46-50)/EDS ~~ADVANCES~~ EXTRACTS ALL TOOLING FOR DECON

1225 AR MOBS TO DELIVER ALL DPT-0178 SAMPLES TO KB LABS

1300 EDS MOBS TO GROUT ALL BORINGS

1400 EDS COMPLETES (1) GROUTING ALL BOREHOLES, (2) BREAKING DOWN DECON PAD (3) DISPOSING OF ALL IDW INTO DRUMS

1415 AR COLLECTS ONE IDW SAMPLE FROM DRUM NO. 188676; PALLET LABELED NO. 188677

1/12

1430 ALL SAMPLES DELIVERED TO KB LABS / EDS DEMOBS FROM SITE AR UPDATES L.P. OF DEPARTURE AND DEMOBS FROM SITE

Geosyntec consultants

# DAILY FIELD REPORT



Project: CRITE
Project No.: FR1681
Contractors: GPI - Groundwater Protection Inc.
KB Labs
Date: 2-7-12
Task No.: 18#1

## Work Performed

Well Installation: _____
Soil Borings: _____
DPT: X
Well Inventory: _____
Other: _____

Sampling Soil: _____
Sampling SW/Sediment: _____
Sampling Monitor Wells: _____
Sampling Hazardous Waste: _____
Sampling Drums: _____

GPI personnel - Scott Neilson, Nick Bishop
Geosyntec personnel - Cody Smith (CS)

## Observations/Issues of Concern

06:00 CS (Geosyntec) arrives at Geosyntec Titusville office.
06:38 CS Arrives at NASA KSC Badging office.
07:01 CS, Scott + Nick (GPI) on-site at CRITE de-con area.
07:08 CS conducts Health and Safety Tailgate Meeting
GPI constructs de-con pit.
07:51 Bob (KB Labs) drops off sample bottles, cooler
GPI de-conning screens and rods.
09:10 Drilling commences at location DPT0159.
10:00 Drilling/Sampling completed at location DPT0159.
10:12 CS, GPI re-locate to Location DPT0161.
11:00 Drilling/Sampling completed at location DPT0161.
11:09 GPI re-located to de-con pit for de-con, then to the POL to pick up a spill pallet, then lunch break.
11:15 CS takes lunch break, off-site to NASA cafeteria
12:21 CS returns from Lunch break.
CS meets GPI at de-con pit.
12:35 Spill pallet moved to drum staging area.
13:06 Drilling commences at location DPT0167

## Plans/Future Activities

CS

Cody Smith 2-7-12
Signature/Date

Geosyntec consultants

# DAILY FIELD REPORT



Project: CRHE
Project No.: FR1681
Contractors: GPI
KB Labs

Date: 2-7-12
Task No.: 18*1

## Work Performed

Well Installation:
Soil Borings:
DPT: X
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

Geosyntec personnel: Cody Smith (CS)

## Observations/Issues of Concern

13:58 Drilling / sampling completed at location DPT0179, Scott (GPI) re-locates to de-con pit for de-con.
14:06 Drilling commences at location DPT 0179
16:09 Drilling / sampling completed at location DPT0179
16:12 CS, GPI re-locate to location DPT 0180
16:37 Drilling / sampling completed for the day - One sample collected at location DPT 0180. 20 samples collected for the day. GPI re-locates to de-con pit.
17:08 GPI completes de-con, drumming of IDW and de-con water. Drums labeled, barcoded, spill pallet labeled / barcoded.
IDW drummed in drum # 188736, spill pallet #188737
17:12 GPI off-site.
17:31 CS off-site. Spill pallet racheted down, site secure.

Note: during sampling / drilling near roadway, 7 cones used to line road and mark work Area. No incidences to report

## Plans/Future Activities

CS

Cody Smith 2-7-12
Signature/Date

Geosyntec consultants

# DAILY FIELD REPORT



Project: CRHE
Project No.: FR1681
Date: 2-8-12
Task No.: 1881
Contractors: Ground Water Protection Inc. (GPI)
KB Labs

## Work Performed

Well Installation:
Soil Borings:
DPT: X
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

GPI personnel: Scott Nielson, Nick Bishop

Geosyntec personnel: Cody Smith (CS)

## Observations/Issues of Concern

06:20 CS arrives at Geosyntec Titusville office for calibration of YSI
06:45 CS departs office for site
07:08 CS arrives on-site, at de-con pit to meet GPI
07:15 CS conducts Health and Safety Tailgate Briefing
07:32 CS, GPI re-located to location DPT0180. Cones placed near road, rig.
07:35 Drilling commenced at location DPT0180
09:45 Drilling/Sampling completed at location DPT0180
CS, GPI re-locate to de-con area.
10:36 CS, GPI set up at location DPT0181
10:40 Drilling commences at location DPT0181. Six cones placed
(CS) ~~10:40~~ around rig to mark exclusion zone.
12:17 Drilling/Sampling completed at DPT0181
12:19 CS, GPI leave site for lunch break
13:12 CS, GPI return to site after lunch break
GPI de-cons screens
13:56 GPI, CS re-located to location DPT0182
13:58 Drilling commences at location DPT0182
15:32 Drilling/Sampling completed at location DPT0182
15:40 CS, GPI move to location DPT0183, then de-con pit.

## Plans/Future Activities

Signature/Date

Geosyntec consultants

# DAILY FIELD REPORT



Project: CRHE
Project No.: FR1681
Contractors: GPI
KB Labs

Date: 2-8-12
Task No.: 18 * 1

## Work Performed

Well Installation:
Soil Borings:
DPT: X
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

## Observations/Issues of Concern

16:33 Drilling commenced at location DPT0183
16:42 Drilling/Sampling completed for the day. CS, GPI re-located to de-con pit
17:02 de-con pit water collected, taken to drums in drum staging area.
17:08 IDW/de-con water drummed. Drum ≈ 75% full IDW drummed in drum #
17:12 CS offsite, to Geosyntec Titusville office
18:06 CS completes calibration of YSI, leaves office.

CS

## Plans/Future Activities

Cindy Sommer 2-8-12
Signature/Date

Geosyntec consultants

# DAILY FIELD REPORT



Project: CRHE
Project No.: FR1681
Date: 2-9-12
Task No.: 18*1
Contractors: GPI - Groundwater protection Inc.
KB Labs

## Work Performed

Well Installation:
Soil Borings:
DPT: X
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

GPI personnel - Scott Melsan, Nick Bishop

Geosyntec personnel - Cody Smith (CS)

## Observations/Issues of Concern

06:47 CS arrives on-site at de-con pit
06:51 GPI arrives on-site
06:55 CS conducts Health and Safety Tailgate Meeting
06:59 CS, GPI re-locate to location DPT0183.
CS checks in with CR office, site managers office (Mark Smith)
CS checks in with office of property just east of CR, where location DPT0183 lies.
07:05 Drilling commences at location DPT0183.
08:39 Drilling/Sampling completed at location DPT0183.
CS awaiting ~~for~~ update from Lauren Petty about next location.
GPI re-locates to de-con pit.
09:20 GPI de-conning.
CS Heads to N Kennedy parkway DPT locations to GPS
09:35 CS hears from Lauren to continue drilling/Sampling at location DPT0177.
09:51 GPI, CS re-locate to location DPT0177.
11:40 Drilling/Sampling completed at location DPT0177.
GPI leaves site for lunch.

## Plans/Future Activities

Cody Smith 2-9-12
Signature/Date

Geosyntec consultants

# DAILY FIELD REPORT



Project: CRHE
Project No.: FR 1681
Contractors: GPI
KB Labs

Date: 2-9-12
Task No.: 18*1

## Work Performed

Well Installation:
Soil Borings:
DPT: X
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

Geosyntec personnel: Cody Smith (CS)

## Observations/Issues of Concern

11:44 Bob (KB Labs) picks up samples completed today.
11:45 CS leaves site for lunch break.
12:33 CS, GPI on-site. CS hears back from Lauren Petty to move to location A.
12:50 GPI re-locates to de-con pit.
13:15 GPI, CS re-locate to location DPT0184 (A)
13:27 Drilling/sampling commences at location DPT 0184
15:09 Drilling/Sampling completed at location DPT0184
GPI re-located to de-con pit
16:30 GPI re-located support truck and rig truck to location DPT 0184 to load rig.
16:47 GPI loads rig into truck, re-locates to de-con pit.
* during loading of rig, cones were used to block lane on Kennedy parkway, along w/ support truck following w/ hazard lights *
17:23 GPI disassembles de-con area, loads up.
GPI off-site; area clear by approval of CS.
17:37 CS completes sampling IDW, collecting GPS locations.
Site clean, spill pallet racketed down. CS off-site.

## Plans/Future Activities

CRHE-IDW-188738-20120209 17:10 → IDW Samples
CRHE-IDW 188736 20120209 17:11

Cody Smith 2-9-12
Signature/Date

Geosyntec consultants

# DAILY FIELD REPORT



Project: CRHF
Project No.: FR 1681
Contractors: GPE
KB Labs

Date: 2-9-12
Task No.: 1881

## Work Performed

Well Installation:
Soil Borings:
DPT: X
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

Geosyntec personnel: Cody Smith (CS)

## Observations/Issues of Concern

17:57 CS arrives at Geosyntec Titusville office for calibration.
18:50 CS leaves office.

CS

CS

## Plans/Future Activities

Cody Smith 2-9-12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 3

| | |
|---|---|
| Project: CRAE | Date: 3/12/12 |
| Project No.: FR16681 | Task No.: 17.03 |
| Contractors: GPE | |

**Work Performed**

| | |
|---|---|
| Well Installation: mw36, 37, 39, 39 | Sampling Soil: |
| Soil Borings: | Sampling SW/Sediment: |
| DPT: | Sampling Monitor Wells: |
| Well Inventory: | Sampling Hazardous Waste: |
| Other: | Sampling Drums: |

**Observations/Issues of Concern**

0900 Meet Drillers at badging station, GPE Drillers are Bryan Nazworth driller; Ben Yarema assistant. Mob to site
0913 Review drum staging area; drillers decon & prep equip.
932 Begin ~~Drilling~~ drilling mw38.
944 drilling mw38 complete; begin set, sand & seal.
951 mw38 complete (except surface completion); Begin drilling mw39.
1010 Drilling mw39 complete; Begin set, Sand & Seal.
1033 mw39 complete. Mob to drum staging area to ~~decon~~ pms
Set up decon pit & decon drive casing.
1040 Arrive ~~decon~~ drum staging area. Erica Williams of Innovative Health Applications (IHA) is @ Drum staging area ~~to~~ Inventorying drums to be Disposed of. Williams points out that one of the drums is Leaking and informs me that she has contacted the fire department ~~for~~ to respond to haz. mat.

**Plans/Future Activities**

3/12/12

Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 2 Cont'd of 3

Project: CRHS
Project No.: FR 1681
Contractors:

Date: 3/12/12
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

Spill.
1045 Fire Depart and Police Arrive Site and Evacuate drum Staging area and Block Traffic in each direction on Contractors Road. Environment Health and Hazmat Spill Cleanup Crew arrives site. Hazmat Crew Begin pumping out drum, Spill Pallet and Leaking Drum. Anne Chrest and Bob Cline arrive Site. Bob Cline ask if GeoSyntec can Collect PH Values for each Liquid Drum. To avoid ~~Drill~~ DMS being in the way of Hazmat Cleanup Crew DMS and drillers Leave Drum Storage Area. Per Bob Cline's Request DMS Contacts Neil Stapley to Check his availability to Collect Ph in all Liquid drums. Stapley will be available Shortly after 1400 hrs. Drillers decon drive Casing.
1320 Drillers & DMS mob to mw 36.

**Plans/Future Activities**

3/12/12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRMLP
Project No.: FA1681
Contractors: GPI

Date: 3/12/12
Task No.: 1743

**Work Performed**

Well Installation: See page 1 of 3
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1335 Set up on MW36.
1349 Drilling MW36 Complete, Begin Set, Sand & Seal.
1353 MW36 Complete, Begin MW37
1411 Drilling MW37 Complete; Begin Set, Sand & Seal.
1426 MW37 Complete. Mob to Decon Area
1430 Decon drilling tools. DMS & NRS collect Ph readings from existing purge/decon water.
1455 Drillers mob to MW-34.
1520 Drillers depart ~~site~~ site to buy materials & Build Forms, for 3'x3' pads - they only have Form for 2'x2' pads.
DMS Joins ~~STA~~ NRS in collecting Ph values and ~~Inventoring~~ DMS inventoring ~~drums~~. Drums
1615 Bob Cline arrives site and observes Ph results. Cline is convinced that Ph values are not declining after venting Drums. A second drum was found to be Leaking

**Plans/Future Activities**

By Hazmat Cleanup Crew. Drum was Labeled Decon Water but was half filled w/ ~~Water~~ DMS Liquid & half filled w/ Solids (appeared to be Soil returns & Bentonite).
1715 DMS & NRS Depart site.

3/12/12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHS
Project No.: FR1681
Contractors: GPC

Date: 3/13/12
Task No.: 1763

**Work Performed**

Well Installation: MW ~~73~~ 33, 34, 24, 25, 26
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

722 meet drillers on site. DMS Conducts tailgate meeting w/ Safety discussion. ~~MOBE~~ MOB to MW34.
738 Begin drilling on MW ~~33~~34
0804 Drilling on MW34 Complete; Begin Set, Sand & Seal.
0901 MW34 complete; ~~MOB~~ DMS Decon. Drive Casing.
940 MOB to MW33 proposed location, MW33 proposed loc. is in a swale - Speak to Lauren Petty about moving MW33 to a Higher elevation. Petty ask that MW33 be installed @ DPT 172 location. DMS Contacts ~~for~~ Jeff Mcdowell, Utility Locator who gives Clearance to move to DPT 172.
1020 Begin drilling MW33.
1109 Drilling MW33 Complete begin Set, Sand & Seal.
1119 MW33 Complete ~~MOBE~~ MOB to decon Area, Note: ~~DMS~~ DMS it was difficult to Reach 50' w/ Geoprobe 6620DT, DMS Contacts Lauren Petty to Get in touch w/ GPT management to See if a Larger Geoprobe is available

**Plans/Future Activities**

for the 50' wells

3/13/12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHR
Project No.:
Contractors:

Date: 3/13/12
Task No.: 17+3

**Work Performed**

Well Installation: DNT ~~MW24, 25~~
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1213 Break for Lunch
~~1446~~ 1246 Return from Lunch; mob to MW24 & Begin drilling.
1301 Drilling MW24 Complete; Begin Set, Sand & Seal.
1311 MW24 Complete; Begin MW25
1332 Drilling MW25 Complete; Beg. in Set, Sand & Seal.
1339 MW25 Complete, Decon Drive Casing.
1430 Begin drilling MW26
1508 Drilling MW26 Complete; Begin Set, Sand & Seal.
1524 MW26 Complete; mob to decon area and decon drive casing.
1602 Begin Surface Completion for MW38 & MW39. DMS develops wells - See attached Well development log.
1749 All personnel Depart Site.

**Plans/Future Activities**

3/13/12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHA
Project No.: FR1688.1
Contractors: GPI

Date: 3/14/12
Task No.: 17+3

**Work Performed**

Well Installation: MW 35
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0800 Arrive Badging Station.
0820 Jon Aguery of GPI Arrives, Badge Info. has not been submitted Per Jon. Dan meets Drilling crew onsite.
Drilling crew - Bryan & Ben mob to Badging Station to pick up barges ~~Dan~~ Dan DPT Rig from Jon.
0915 ~~Drillie~~ Dan Drillers return to site, Decon & set up on MW 35
1010 Begin drilling MW35
1142 Drilling MW35 Complete, Begin set, Sand & Seal.
1154 MW35 Complete, Mob to Decon pit & Decon prime Casing. Geoprobe hammer Seal Leaking Slightly - Fluid Cleaned up before getting on ground. ~~For the Fire~~ and ~~Dan~~ ~~50 45 and 50' wells~~ ~~groans on~~ Refusal is seen in all ~~45' and~~ ~~our~~ 40', 50' and 45' wells. Drillers pushed the limits of Geoprobe to install these wells but it is determined by GPI and Geosyntec that the Geoprobe

**~~Plans/Future Activities~~**

is undersized to complete these deeper wells. Alternative drilling techniques will be discussed among Geosyntec and GPI.
1212 All personnel Break for Lunch
1259 All personnel return from Lunch

3/14/12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRLP
Project No.: FR1681
Contractors: GPE

Date: 3/14/12
Task No.: 1.4.3

**Work Performed**

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

Drillers begin Completing Surface completions; DMS Begins developing mws - see development Log

1724 Ph of ~~drillers~~ DMS water from drillers Tank is 7.19.

1804 All personnel Depart Site

**Plans/Future Activities**

3/14/12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRMR
Project No.: FR1681
Contractors: CPI

Date: 3/15/12
Task No.: 1.3

**Work Performed**

Well Installation: mw30, 31, 32, 29, 28, 27
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0700 Dms Arrives, Drillers are on site. Dms Conducts tailgate meeting w/ Safety discussion. Drillers prep. equipment &
0757 Begin drilling mw30. Dms Collects PH of Soil from 5-50' PH=7.0-7.5
832 Drilling mw30 Complete; begin Set, Sand & Seal.
837 mw30 Complete; Begin mw31
949 Attempt to Set well. Drive Casing filled from 45'-50' w/ Silt.
1019 Finished driving Second Set Drive Casing to 50' Re-set mw31, Sand & Seal.
1043 mw31 Complete; mob to decon pit.
1109 Begin drilling mw32.
1203 Drilling mw32 Complete; Begin Set, Sand & Seal.
1219 mw32 Complete, Break for Lunch
1256 Return from Lunch; Begin deconing drive Casing.
1323 Begin drilling mw27
1426 Drilling mw27 Complete; Begin Set, Sand & Seal.

**Plans/Future Activities**

1445 mw27 Complete; Decon drive Casing.
1423 Begin mw29
1611 Drilling mw29 Complete; Begin Set, Sand & Seal.
1624 mw29 Complete; Decon drive Casing.
1645 Begin mw28

3/15/12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHK
Project No.: FR1681
Contractors: None

Date: 3/19/12
Task No.: 17 ~~8~~ 4

**Work Performed**

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells: MW38, MW39
Sampling Hazardous Waste:
Sampling Drums:

Develop MWS 27, 28 & 29

**Observations/Issues of Concern**

1425 Arrive p.o.l. & Pick up additional spill pallet
1435 Arrive Site, Set up & Begin developing Newly Installed MWs.
1620 Calibrate WQMs and begin Sampling MWs.
1645 Clean up & Secure Site for departure.

**Plans/Future Activities**

3/19/12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: KSC-CRITE
Project No.: FR11681
Contractors: None

Date: 3-19-12
Task No.: 17#4 (MW Samp)

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | - | Sampling Soil: | - |
| Soil Borings: | - | Sampling SW/Sediment: | - |
| DPT: | - | Sampling Monitor Wells: | ✓ |
| Well Inventory: | - | Sampling Hazardous Waste: | - |
| Other: | YSI 556MPS 09A131001, 2100P Turbidimeter 03054, GeoPump 14978 (Pink), Solinst Water Probe & hand tools | Sampling Drums: | - |

**Observations/Issues of Concern**

0700 - Arrived @ TVL office collected equip shipped from Pitt & moved to NASA

0740 - Got a temp badge & finger printed for pass badge. Moved to CRITE. Conducted H&S tailgate. HASP overview, heat stress, insects & dehydration.

Personnel - D. Sizemore / Geosyntec TVL & L. Petty / Geosyntec Pcola

Weather - Sunny & Clear.

0830 - Calibrated equip. See calibration log for specifics. No apparent issues w/ calibration noted.

1020 - Began purging MW0032.

100 - Collected [CRITE-MW0032-03192012].

1120 - Moved to MW0030, began purging.

1205 - Collected [CRITE-MW0030-03192012]

1400 - Moved to MW0023 & began purging

1440 - Collected [CRITE-MW0023-03192012]. Drummed purge water in [1801776].

**Plans/Future Activities**

SEE PG 2

LP

Laura Petty / 3-19-2012
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: KSC-CRHE
Project No.: FR1681
Contractors: None

Date: 3/19/12
Task No.: 1744

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | - | Sampling Soil: | - |
| Soil Borings: | - | Sampling SW/Sediment: | - |
| DPT: | - | Sampling Monitor Wells: | ✓ |
| Well Inventory: | - | Sampling Hazardous Waste: | - |
| Other: | | Sampling Drums: | - |

SEE PG 1

**Observations/Issues of Concern**

1450 - Mobed to MW0031, began purging well.
1525 - collected [CRHE-MW0031-03192012]
1530 - collected [2B01-03192012]. Mobed to IW0021I, began purging.
1640 - collected [CRHE-IW0021I-03192012]
1700 - Drummed purge water in [198676]. Generated overall drum log. Staged new spill pallet & drums for high pH liquid transfer.
1930 - Left site.

RECAP: Sampled → MW0032, MW0030, MW0023, MW0031, 2B01, IW0021I

All Purge water drummed in Drum # 198676 generated 3/19/2012

**Plans/Future Activities**

1. Continue sample activities
2. Collect GW levels (site-wide)
3. Transfer liquid from drums w/ high pH to poly-lined drums.

Tammy Perry / 3-19-2012
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRERF
Project No.: FR1068.1
Contractors: None

Date: 3/20/12
Task No.: 1.1.4 ~~3.6.4~~

**Work Performed**

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells: GW2 (+ MW36, 34, 33
Sampling Hazardous Waste: 35, 37,
Sampling Drums:

**Observations/Issues of Concern**

0645 Calibrate WQMs @ Titusville office.
~~0800~~ 0830 Arrive Site & begin Collecting GW Samples.
1530 GW Sampling Complete, begin Collecting Water Levels.
1830 Collecting GW Levels Complete; Clean up & Secure Site for departure.

**Plans/Future Activities**

3/20/12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: KSC-CRITE
Project No.: PR1681
Contractors: None

Date: 3-20-12
Task No.: 1744

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | - | Sampling Soil: | - |
| Soil Borings: | - | Sampling SW/Sediment: | - |
| DPT: | - | Sampling Monitor Wells: | ✓ |
| Well Inventory: | - | Sampling Hazardous Waste: | - |
| Other: | YSI 556 MPS 09A131001, 2100P Turbidimeter 03054, Geopump 14978 (Pine Rentals), Solinst water probe & hand tools | Sampling Drums: | - |

**Observations/Issues of Concern**

0630 - Arrive @ site. Review H&S plan, COCs, pinch points, spills, traffic control & hazards, & drum contents transfer including JHA. Calibrated equipment. D. Sizemore onsite. No issues to note w/ calibration, see log for specifics. Weather is sunny & clear.
0730 - Conference call to discuss IDW BMPs & processes @ NASA.
0900 - Mobed to IW0019I, began purging well.
0940 - Collected CRITE-IW0019I-03202012.
0956 - Mobed to MW0028. Geopump no longer working. Mobed to TVL office to pick up spare pump & Tyvek for drum contents transfer.
1130 - Back @ CRITE. H&S (Bart) onsite for 5 min to discuss field activities & IDW Mgmt. Conducted H&S tailgate for drum contents transfer including PPE upgrade to Level D+ w/ poly-lined tyvek, 15 mil nitrile gloves extending to elbows over normal nitriles & face shields over safety glasses.
1145 - Began contents transfer. The liquid contents of 4 drums

**Plans/Future Activities**

SEE PG 2

3-20-12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: FSC - CRTE
Project No.: FR1681
Contractors: None

Date: 3-20-12
Task No.: 1754

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | – | Sampling Soil: | – |
| Soil Borings: | – | Sampling SW/Sediment: | – |
| DPT: | – | Sampling Monitor Wells: | ✓ |
| Well Inventory: | – | Sampling Hazardous Waste: | – |
| Other: | | Sampling Drums: | – |

SEE PG 1

**Observations/Issues of Concern**

to poly-ethylene-lined drums (55-gal steel) for disposal. See drum log for pallet IDs & drum IDs. Contents transferred due to high pH.

Drum Transfer as follows:

198655 → ~~198837~~ 198837
198722 → 198839
198738 → 198843
198736 → 198844

0930 - Moved back to MW0028 & began to purge.
1420 - Collected ~~MW~~ CRTE-MW0028-03202012. Moved to IW0017I, began purging.
1510 - Collected CRTE-IW0017I-03202012
1520 - Drummed purge water in 198836. Tightened all bungs & cleaned off drums. Collected water levels on northern half of site. See water level form for data.
1902 - Left site.

**Plans/Future Activities**

RECAP: Collected water levels
Sampled → IW0017I
MW0028
IW0017I
Purge water drums in 198836 generated 3/20/2012

Transferred:
198655 → 198837
198722 → 198839
198738 → 198843
198736 → 198844

① Finish collecting GW samples
② Sample soil IDW generated w/o 3/12

Signature/Date 3/20/12

Geosyntec consultants

**DAILY FIELD REPORT**



Project: KSC-CRITE
Project No.: FR11081
Contractors: None

Date: 3-21-12
Task No.: 17#4

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | - | Sampling Soil: | - |
| Soil Borings: | - | Sampling SW/Sediment: | - |
| DPT: | - | Sampling Monitor Wells: | ✓ |
| Well Inventory: | - | Sampling Hazardous Waste: | - |
| Other: | YSI 556 MPS 09A131001, 2100P Turbidimeter 03054 (PAM Rental) TVL Geopump, solinst Water Probe & Hand tools | Sampling Drums: | ✓ |

**Observations/Issues of Concern**

0600 - Calibrated equipment @ hotel.
0700 - Mobed to TVL office, no key, Mobed to KSC. Received HASP plan. Personnel → L. Petty/Geosyntec P-cola, weather → sunny & clear, hot.
0740 - Mobed to IW0014I.
0905 - Collected [CRITE - IW0014I - 03212012], Mobed to IW0014D.
1000 - Collected CRITE - IW0014D - 03212012. Received CRITE (M) IW0014D was not part of SAP, will not analyze.
1025 - Mobed to MW0029, began purging.
1100 - Collected [CRITE - MW0029 - 03212012]
1115 - Mobed to MW0026, began purging.
1155 - Sampled [CRITE - MW0026 - 03212012], Drummed all purge water generated in [180636].
1210 - Left site to pick up drums from drillers for soil transfer.
1430 - Returned to site, drums were refirbed. New drums on way to site.

**Plans/Future Activities**

SEE PG 2 → Recap & will drop samples @ lab 3/22/12
NO more activities planned under probe.

Signature/Date 3-21-12

Geosyntec consultants

**DAILY FIELD REPORT**



Project: KSC-CRHE
Project No.: FR1681
Contractors: NDW

Date: 3-21-12
Task No.: 17#4

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | - | Sampling Soil: | - |
| Soil Borings: | - | Sampling SW/Sediment: | - |
| DPT: | - | Sampling Monitor Wells: | ✓ |
| Well Inventory: | - | Sampling Hazardous Waste: | - |
| Other: | | Sampling Drums: | ✓ |

SEE PG 1

**Observations/Issues of Concern**

1445 - Moved to MW0022, began purging.
1507 - Collected [CRHE-MW0022-03212012], moved to MW0027, began purging.
1545 - Collected [CRHE-MW0027-03212012].
1000 - Met driller @ drums w/ new steel 55-gal drums. Transferred solids from [198656] → [198796]. ~~Generated~~ (P) started drum [198797] w/ soil generated during HSA & hand augering activities the week of 3/12/2012. Sampled soil drums generated week of 3/12/2012. Sample IDs are as follows: [CRHE-198649-IDW-03212012] sampled @ 1615. [CRHE-198797-IDW-03212012] sampled @ 1610. [CRHE-198642-IDW-03212012] sampled @ 1645, & [CRHE-198838-IDW-03212012] sampled @ 1702.
1710 - Moved to MW0024, began purging.
1750 - Collected [CRHE-MW0024-03212012], moved to MW0025, began purging.
1930 - Collected [CRHE-MW0025-03212012] ~~left site~~ (PD) Drummed purge water [198836]
1900 - Left site.

**Plans/Future Activities**

No more activities associated w/ Phase.

RECAP: Sampled MW0029, MW0026, MW0022, MW0027, MW0024 & MW0025 & Drums 198849, 198797, 198842 & 198838.
Purge water drummed in 198836.
Transferred solids from 198656 → 198797, filled 198797 to 2/3 w/ soil from Week of 3/12/2012 HSA & Hand augering.
pH normal ~7 SU.

Signature/Date 03-21-12

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRTE
Project No.: FR1681
Contractors: EDS (JR + Mitch)

Date: 10/2/12
Task No.: 17*2

**Work Performed**

Well Installation:
Soil Borings: I H G L
DPT: 0185, 0186, 0187, 0188
Well Inventory: ↓28, 33
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0640: At badging station. Waiting on EDS.
0650: EDS @ badging
0710: at site. Conducted safety Mtg
0720: EDS went to get spill pallet
0800: Started building decon pit
0810: at site (next to trails). Unload equipment. Move to location I (DPT0185)
0855: Started drilling DPT0185
1050: finished DPT0185
1100: decon'ed / lunch
1150: started H (DPT0186)
1320: finished DPT0186
1330: started G (DPT0187) (28, 33, 38)
1425: decon'ed
1440: continued DPT 0187 (43, 58)
1520: finished DPT0187

**Plans/Future Activities**

1545: moved to L (DPT0188)
1550: started DPT0188
1620: imminent Phase II
1630: disposed of purge/decon water in drums on spill pallet
1645: left site

weather: 321-861-5050
321-853-8486

10/2/12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: CRHE
Project No.: FR1681
Contractors: EDS (JR & Mitch)

Date: 10/3/12
Task No.: 17.2

**Work Performed**

Well Installation:
Soil Borings: ~~0189, 0189~~ NWS
DPT: NWS ~~0188, 0189, 0190, 0191, 0192~~
Well Inventory: L ~~V8~~ A F ~~V16~~
Other:
DPTs → ~~V8 0174~~ ~~0149~~
0189(B), 0188(L), 0190(A), 0191(F), 0174(V8), 0149(V16)

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0715: Arrive at site
0740: EDS on site. Conducted Safety Mtg.
0750: Continued DPT0188 (38, 43, 58)
0900: finished DPT0188; deconned
0925: moved to V8 (DPT0174), started ~~DPT0189~~ 0174
0955: low yield - took just sample for ~~DPT0189~~ 0174 (53)
Tried 3 different tubing attempts before sample, possible clay layer
1025: finished DPT0189; moved to A (DPT0190)
1158: finished DPT0190; moved rig to F; deconned
1210: lunch; EDS working on getting rig out of wet ground
1305: Started DPT0190 (F)
1405: Safety person arrived on site. Informed Geosyntec all vehicles must be 2' off of roadways
1406: Safety person left.

**Plans/Future Activities**

1445: Finished DPT0191; moved to V16 (DPT0192) 0149
1450: Started DPT0192 0149
1525: Finished DPT0149 ~~deconned~~
1535: Moved to B (DPT0189), started DPT0189 (18, 23)
1600: Decon
1620: Continued DPT0189 (28, 33, 38, 43, 58)

~~MJ~~ 10/3/12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRITE
Project No.: FR1681
Contractors: EDS (JR & Mitch)

Date: 10/3/12
Task No.: 17*2

**Work Performed**

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1725 : Finished DPT0189
1735 : Moved rig to ~~E (DPT0192)~~ parking lot
1740 : Decanned
1755 : Added purge and decon water into drums. Secured spill pallet.
1800 : Left for the office; EDS offsite

**Plans/Future Activities**

10/3/12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1608.1
Contractors: EDS (JR & Mitch)

Date: 10/4/12
Task No.: 17*2

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0192(E), 0148(V6) 0138(V7)
Well Inventory: 0010 (V13), 0044 (V12)
Other: 0158(V9), 0193 (V10)

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0710: Arrive at site; EDS onsite; Conducted Safety Mtg
0720: Moved to location E (DPT 0192); driller truck get stuck twice
0800: Started DPT 0192
0810: Rocket launched from CC Air Station.
1006: Finished DPT 0192; decon grouted, truck stuck
1025: Moved to decon
1040: Moved to V6 (DPT 0148)
1050: Started DPT 0148
1105: rig overheated. Turned off to cool. Drillers working to fix problem.
1110: Geosyntec lunch.
1150: On the site
1200: Bart - NASA safety → discussed roadway work
1200: EDS continued DPT 0148

**Plans/Future Activities**

1240: Finished DPT 0148
1245: Moved to V7 (DPT 0138)
1250: Started DPT 0138
1300: Utility locators arrive onsite moved V5 12' west, V10 8' West, V11 8' West
1320: Utility locators leave

V6, V7, V9, V13

10/4/12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS (JR & Mitch)

Date: 10/4/12
Task No.: 17.2

**Work Performed**

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1355: Finished DPT0138, moved to V13 (DPT0010)
1400: Took break to cool off; JR feeling weak & dizzy
1412: Started DPT0010
1435: No parameters collected for DPT0010 @ 053.0 due to low yield. Clay layer suspected.
1455: Finished DPT0010; moved to V12 (DPT0044)
1500: Started DPT0044
1540: Finished DPT0044; moved to V9 (DPT0158)
1545: decon
1600: Started DPT0158
1645: Finished DPT0158
1705: Started V10 (DPT0193)
1755: Finished DPT0193
1805: Decon, added Decon & purge water to drum
1810: left site for office

**Plans/Future Activities**

10/4/12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of

Project: CTRE
Project No.: FR1681
Contractors: GDS- JR + Mitch | LB labs- Greg

Date: 10/5/12
Task No.: 17*2

## Work Performed

Well Installation:
Soil Borings:
DPT: DPT0194-0195, 0044, 0171, 0155
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

## Observations/Issues of Concern

615-arrive@ office + begin calibrating YSI.
700-arrive on site. tail gate safety meeting.
710-rig won't start. go investigate standing water in woods while drillers work on rig.
910: rig still not starting. go take pictures of source area for Jill.
900 - Drillers leave to pick up part.
1036- drillers arrive w/part.
1040- rig is running
1106- began sampling DPT0194 (V11)*
1210- began sampling DPT0195 (V5)* (pressure grouted)
1329- began sampling DPT0044 (V12)*
1454- began sampling DPT0155 (V14)*
1512- lost extendable point in ground @ DPT0171.
1559- began sampling DPT0171 (V15)*.
1715- began sampling DPT0197 (V3)*. (pressure grouted)

## Plans/Future Activities

1800- ~~dist~~ Rod rods broke down decon pit.
1930- disposed of IDW in drum
1930- sampled drum 190515 @ 1930
1945- left site
* = see sampling forms for details

10/5/12
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 3

Project: CRHE
Project No.: FR1681 / 25*2
Contractors: Environmental Drilling Services (EDS) JR/Shawn
New Age Landmark Lab=Celeste

Date: 3/18/13
Task No.: 25*2

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0196(Z), 0197(Y), 0198(AA)
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

| | |
|---|---|
| 0730 | CT meets Celeste with New Age Labs at Badging office. |
| 0740 | CT/Celeste go to CCF to park Mobile lab |
| 0800 | CT/EDS on site at CRHE/Drillers set up decon pit/Safety Briefing COCs, PPE, Traffic Control Utilities Phase I/II warnings |
| 0810 | Locators (Jeff/Ryan) on site. Notified me of no dig restriction in place for Cat 1, 4, 5. |
| 0832 | Call Lauren Petty to inform of no dig ~~and file~~ |
| 0835 | Speak with locators about any possibility of digging. Ryan says they can give special clearance to dig at locations east of building. No dig in place for location near ROW until Wed (if launch on Tues goes as planned). |
| 0838 | Call K.P. Ask if ok to begin with locations Y, Z, AA. Says yes |
| 0858 | Begin calibration |
| 0915 | Begin DPT0196 at Y. Meet refusal at 16" |

**Plans/Future Activities**

| | |
|---|---|
| | Locators give permission to punch through |
| 0920 | Locators can't approve locations A, B, C, E, G due to utilities/force main |
| 0924 | Call KP to inform. Says to contact her when drilling locations D and I. May need to vertically delineate |

Signature/Date 3/18/13

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRTE
Project No.: FR11681
Contractors:

Date: 3/18/13
Task No.: 25x2

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0196(Z) 0197(Y) 0198(AA)
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0930 Continue DPT0196 at Y. Rig will not penetrate beyond 6". Abandon location.
0940 Begin DPT0196 at Z.
1008 Celeste drives on site. Says lab will be ready to analyze around 1400. Takes 4 hrs to warm up and she just got it hooked up.
1110 Call Locator Ryan to ask if location Y can be moved 3' W of approved location. He says "Yes as long as no lines are marked." No lines are marked w/in ~10'.
1134 L.P. called to ask why locations A-D,F,G were not going to be drilled. Told her D, F, G were good to go. Locators approved. A-C are located b/t the main electrical and water main. She says locators also told her vibrations from rig could bust(CT) compromise water main. LP says to delineate F vertically instead of D.

**Plans/Future Activities**

1200 Finish DPT0196 at Z / Drillers decon
1210 Break for lunch
1240 Begin DPT0197 at Y. Moved Y 3' due W of original location.
1422 Celeste picks up samples. We discuss delivering reports via email. She doesn't have internet connection. Checked with someone inside CRTE Building on accessing wifi. He will look into it

Signature/Date 3/18/13

Geosyntec consultants

**DAILY FIELD REPORT**

Page 3 of 3

Project: CRHE
Project No.: FR1681
Contractors: EDS
NewAge Lab

Date: 3/18/18
Task No.: 25*2

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT 0196(Z) 0197(Y) 0198(AA)
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1455 Finish DPT0191 at Y. Drillers decon / do rig maintenance.
1515 Begin DPT0198 at AA.
1700 Finish DPT0198 / Celeste picks up samples / Drillers decon / Drillers do decon pit maintenance
(CT)
~~1515~~ 1715 CT/EDS depart site / CT to TVL office to pickup map/air monitoring
1850 Calibration Check / Calibrate Equipment

**Plans/Future Activities**

Signature/Date 3/18/18

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**DAILY FIELD REPORT**

Page 1 of 2

Project: CRTIE / FEC
Project No.: FR1681
Date: 3/19/13
Task No.: 25+2
Contractors: Environmental Drilling Services (JR-Shawn)
New World Landmark Labs (Celeste)

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0199, 0200, 0201, 0196 (68')
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0900 CT / EDS on site
0910 Tailgate Safety Meeting - Air Monitoring for VC / COCs / PPE
0940 Begin DPT 0199
0935 Finish DPT 0199 / celeste picks up samples / Drillers decon @ AC
0955 Begin DPT 0200 / L. Petty calls - asks if I can email analytical results to her & Johnston. I tell her about qualifiers, send file
1040 Johnson calls @ Asks how close drillers can drill next to existing hole to avoid dragdown @ Asks how far we can move from existing location without having locators reapprove. JR-EDS says 5' minimum because rig will move toward existing hole
1105 Call Johnson Says ~~Keep 0196~~ @ keep DPT 0196 open until she can confirm with A. Christ. Can pressure grout

**Plans/Future Activities**

DPT 0198. Keep 0197 open for now due to TCE exceedance at 58'
1150 Finished DPT 0200 / Break for lunch / Drillers decon @ CT
1245 Begin Drilling DPT 0201 at X
1300 L. Petty sends text message to go down same hole on DPT 0196. Get to 70' sample. Pressure grout 0197, 0198
1330 Celeste picks up samples.

Signature/Date 3/19/13

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRTF
Project No.: FR1681
Contractors: EDS / New World Landmark Lab

Date: 3/19/13
Task No.: 25.2

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0199, 0200, 0201, 0196(68')
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1445 ~~1400~~ (CT) Finish DPT0201. Text L Petty. Asking if it's ok to pressure grout 0196 after sampling. She says 'yes' ~~Drillers decon~~ (CT)
1450 Begin DPT0196-66'-70' interval
1510 Begin pressure grouting DPT0196.
1520 Begin calibration ICV on equipment
1530 Finish pressure grouting DPT0196. Move to DPT0198.
1600 Begin pressure grouting DPT0197.
1630 Finish pressure grouting DPT0197. Drill do rig maintenance.
1602 (CT) Call Celeste to ask why samples are taking so long to run. Says she's had to run a couple samples twice with a blank in between. Each takes 30 min. Relay info to L. Petty.
1645 Drillers do decon pit maintenance/empty decon / purge water
EDS / CT depart site

**Plans/Future Activities**

Signature/Date 3/19/13

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Contractors: Environmental Drilling Services (EDS/JR-Shawn)
New World Landmark Lab (Celeste)

Date: 3/20/13
Task No.: 25*2

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0202(V), 0203(S)
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0700 EDS/CT on site/Drillers set up decon pit/Decon
0720 Tailgate safety briefing (weather warnings, hydration)
0730 Begin DPT 0202 at V
0930 Celeste picks up samples
0945 Finish DPT 0202/Drillers decon
0956 Phase II weather warning
1236 Phase II weather warning ends
1240 Begin DPT 0203(S)/Drillers decon
1435 Finish DPT 0203/Drillers decon
1350 Celeste picks up samples
1450 Begin DPT 0204(N)
1548 Finish sampling for day
1555 Begin pressure grouting DPT 0199, 0200, 0201
1600 Celeste picks up samples
1615 Begin equipment calibration
1710 Drillers do decon pit maintenance/Empty purge/decon water

**Plans/Future Activities**

1730 EDS/CT Leave site
1800 Scanned utility maps to K. Petty

Signature/Date 3/20/13

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Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: CRHE
Project No.: FR1681
Date: 3/21/13
Task No.: 25x2
Contractors: Environmental Drilling Services (EDS) JR/Shawn
New World Landmark Labs- Celeste

**Work Performed**

CT DPT Well Installation:
~~Soil Borings:~~ 0204(N), 0205(T), 0206(U),
CT DPT DPT: 0207(AB), 0202 66-70'(V),
~~Well Inventory:~~ 0203(AE)
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

| | |
|---|---|
| 0700 | CT/EDS arrive on site. /Drillers decon |
| 0710 | Tailgate Safety Briefing / PPE · COCs · Traffic / Equipment Awareness / Utilities / Weather Phase I/II |
| 0715 | Begin DPT 0204 at N |
| 0825 | Finish DPT 0204 / Drillers decon |
| 0830 | Begin DPT 0205 at T |
| 1005 | Finish DPT 0205 / Drillers decon |
| 1010 | Celeste picks up samples / Begin DPT 0206 at U |
| 1210 | Finish DPT 0206 / Problem with top valve of main ram Rig inoperational. JR calls Geoprobe / Lunch break |
| 1330 | Rig operational. Begin DPT 0207 at AB |
| 1451 | L. Petty texts to collect ~~5'-10'~~ 66-70' interval sample from DPT 0202, grout after collecting, grout 0204, wait for results before grouting 0203. If <MDL, grout 0203 first thing Friday morning |

**Plans/Future Activities**

| | |
|---|---|
| 1525 | Finished DPT 0207 |
| 1535 | Begin DPT 0202, 66-70' interval |
| 1555 | Finished DPT 0202 / Drillers decon |
| 1605 | Begin pressure grouting DPT 0202 / CT calls Celeste to see when she will pick up. Says she's in the middle of running something and will be there soon. |

Signature/Date 3/21/13

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS
New World Landmark Lab

Date: 3/21/13
Task No.: 25*2

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0204(N), 0205(T), 0206(W), 0207(AB)
Well Inventory: 0202, 66-70'(V), 0208(AE)
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1611 Celeste picks up samples.
1618 Begin equipment calibration
1622 Discontinue calibration, decide to begin a new location
1626 Begin DPT0208 at AE
1730 Finish sampling DPT0208 / Begin calibration (CT)
1735 Pressure grout DPT0204
1753 Collect IDW193858 sample. / Drillers do decon
pit maintenance / Empty decon / purge water
1800 1755 Bring samples to Celeste
1805 EDS / CTowns depart site

**Plans/Future Activities**

C. Phil Towns 3/21/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT** Page 1 of 1

Project: CRHE
Project No.: FR1681
Contractors: Environmental Drilling Services (EDS: JR/Shawn)
New Age, Landmark Lab (Celeste)

Date: 3/22/13
Task No.: 25.2

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | 0208 (AE), 0209 (L), 0210 (H), | Sampling Monitor Wells: | |
| Well Inventory: | 0211 (Q) | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

| | |
|---|---|
| 0700 | CT/EDS on site / Drillers decon |
| 0715 | Tailgate Safety Meeting: Utilities, Traffic / Equipment Awareness (will be drilling in parking lot starting today) |
| 0728 | Begin DPT 0208 at AE |
| 0820 | Finish DPT 0208 |
| 0828 | Begin DPT 0209 at I |
| 0915 | ~~Celeste picks up samples~~ |
| 0836 | Met complete refusal beyond 6" at I. Abandon location, move to L. / Text K. Petty to notify of refusal |
| 0843 | Begin DPT 0209 at L |
| 0915 | Celeste picks up samples. Ask her to prioritize 58' samples all day. |
| 1039 | Finish DPT 0209 / Drillers decon |
| 1045 | Begin DPT 0210 at H. |
| 1225 | Finish DPT 0210 / Celeste picks up samples / Drillers decon |

**Plans/Future Activities**

| | |
|---|---|
| 1230 | Begin DPT 0211 (Q) |
| 1255 | Finish sampling to CT. Drillers begin pressure grouting 0203, 0205, 0206, 0207, 0208, 0209, 0210 |
| 1600 | Drillers top off holes, do rig maintenance |
| ~~1425~~ 1625 | Drillers empty decon/purge water / collect IDW sample |
| 1635 | CT drops samples to Celeste / Check calibration of equipment |
| 1645 | CT/EDS depart site |

Signature/Date 3/22/13

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Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 3

Project: CRHE
Project No.: FR1681
Contractors: Environmental Drilling Services (EDS) Shawn/JR
New World Landmark Labs (Celeste)

Date: 3/25/13
Task No.: 25*2

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT 0211(Q), 0212(R), 0213(K),
Well Inventory: 0214(O)
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0715 CT/EDS on site
0725 Calibrate equipment. Drillers decon/set up pit
0735 Drillers pick up new drum pallet
CT conducts tailgate safety meeting (Utilities (will call locators today to verify a path the rig can safely travel in front of building), Weather warnings, COCs
0750 Begin DPT 0211 at Q
0937 Finish DPT 0211/Drillers decon
0940 Begin DPT 0212 at R
0930 Celeste picks up Samples
1052 Call L. Petty. ① ASK Celeste to change sample names from CHRE to CRHE ② If any locations need to be moved, document changes (X' N and X' W) for GIS ③ locators are scheduled to come out Thurs L.P will send map to TVL office to be printed showing next locations ④ Call locators-ask if they can stop by to approve driving rig

**Plans/Future Activities**

on grass in front of building, location X needs 25' stepout to S, location AC needs 2 stepouts: BG (25'N) and BH (25'S). Buy wooden stakes (tall) at Home Depot & upside down paint ⑤ Schedule next locate for Tues, April 2

Signature/Date 3/25/13

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS
New World Lab

Date: 3/25/13
Task No.: 25*2

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0211(Q), 0212(R), 0213(R), 0214(O)
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1126 Call Ryan Osterly (locator) and asked about driving rig on grass. Said to avoid area that's barricaded. That's where mains are shallow and tend to bust.
1130 Finish DPT 0212 / Drillers decon
1137 Begin DPT 0213 at K
1218 Break for lunch
* Call Pine Environmental last Thursday (3/21/13) to ask about cal gas delivered on wed 3/20. Spoke to James. Told him I called on ~~Mon~~ Tues to inquire about cost about shipping cal gas for PID. Total cost would be ~$100. I told girl on phone I needed to ok the purchase with my PM before ordering. She said ok, no problem. I never ordered because VAB field workers had plenty I could use. I asked James to look into the matter and make sure we weren't charged.
1255 Begin DPT 0213.

**Plans/Future Activities**

1408 Finish DPT 0213 / Drillers decon
(CF) 1415 Begin DPT 0214 at O
1419 Celeste picks up Samples
1550 Finish sampling for day, DPT 0214 complete / Drillers begin pressure grouting 0209, 0210, 0211 (0209-0210 tagged off)
1600 Begin equipment calibration

Graphic Artist 3/15/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHF
Project No.: FR1601
Contractors: EDS
New World Labs

Date: 3/25/13
Task No.: 25-02

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0211-0214
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1048 Celeste picks up samples
1700 Driller do decon pit maintenance / empty decon & purge water
1715 EDS/GT depart site

**Plans/Future Activities**

Gayle Sound 3/25/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: CAHE
Project No.: FR1681
Contractors: Environmental Drilling Services (EDS) - JR/Shawn

Date: 3/26/13
Task No.: 2.5.2

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT 0213 (16.6-10') K, 0215 (M),
Well Inventory: 0216 (P), 0217 (DG)
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

| | |
|---|---|
| 0700 | CT/EDS onsite. Drillers Set up decon pit/Decon |
| 0720 | Tailgate Health & safety briefing. Traffic awareness/Safety - cones, vests, looking for moving equipment |
| 0735 | Begin DPT 0213, 16.6-10' interval. (K) |
| 0750 | Collect Sample, pressure grout hole./Pressuregrout 0212 (K). |
| 0815 | Begin DPT 0214 at J. Met refusal at 6". Closer to building, more compact the material is/harder to advance. Abandon J. Text L. Petty. |
| 0828 | Begin DPT 0215 at M. |
| 0835 | Call Ryan Osterly (locator) to ask about moving up the Thurs. appt. He is on a big job & cannot come before Thurs. Says CT CAT 5 is on a No Dig Day today. |
| 0843 | Inform L. Petty. Says to drill location AD and only move 3' N. |

**Plans/Future Activities**

| | |
|---|---|
| 0920 | Call Ryan Osterly to schedule locate appt for next Tues, April 2 |
| 1020 | locators (Ryan & Jeff) on site. Approve BG, BH, & 25' S of 'X'. For location AD, cannot move 10' S. Approved original location & location 3' due W. |
| 1040 | Finish DPT 0215./Drillers decon |

Gupkl Jeuns 3/26/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS
New World Lab

Date: 3/26/13
Task No.: 25x2

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT 0213(K), 68' / 0215(M) / 0216(P)
Well Inventory: (0217) (BG)
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1047 L. Petty notified. Says stepout 25' S of X is BJ, 25' N of X is BI.
1050 Drillers patch Asphalt / Begin DPT0216 at P.
1215 Break for lunch
1240 Celeste picks up samples / Begin DPT0216 again. Finish DPT0216 / Drillers decon Begin DPT0217 at BG
1525 Finish DPT0217 / Drillers decon
1528 L Petty texts, says to collect 68' sample from DPT0214
1540 Begin DPT0214, 66-70' interval
1605 Drillers pressure grout 0214(0). / Celeste picks up samples
1615 CT departs site. Drillers to topoff DPT0213 & DPT 0212, do decon pit maintenance, then depart.
1645 CT TO TVL office to pick up GPS

**Plans/Future Activities**

1705 Equipment calibration
1745 To lowes to buy stakes / spray paint

Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: CRHE
Project No.: FR1681
Date: 3/21/13
Task No.: 25x2
Contractors: Environmental Drilling Services (EDS) JR/Shawn
New World Landmark Labs (Celeste)

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT 0218(AD), 0219(BH), 0220(F),
Well Inventory: 0216(66-70'), 0217(66-70')
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

| | |
|---|---|
| 0707 | CT/EDS on site/Drillers set up decon pit |
| 0720 | Tailgate Safety briefing. Utilities, weather warning phases, PPE |
| 0730 | Begin DPT 0218 at AP |
| 0935 | Finish DPT0218/Drillers decon |
| 0940 | Begin DPT0219 at BH/Celeste picks up samples |
| 1155 | Finish DPT0219/Drillers decon/Break for lunch/ |
| 1206 | Collect IDW sample (193861) |
| ~~1300~~ 1248 | Begin DPT0220 at BJ/ met refusal at 1-2'. Abandon location until locators clear punch through |
| 1300 | Begin DPT0220 at F |
| 1508 | Finish DPT0220, collected 68' sample per L.P./ Drillers decon |
| 1525 | Begin DPT0216, 66-70', collect sample, drillers pressure grout |
| 1537 | L.Petty calls. Wants to move J 8' E, take picture of building layout that shows break room area. send to her |
| 1605 | Begin DPT0217, 66-70', collect sample, pressure grout |
| 1625 | Celeste picks up samples |
| 1635 | CT GPS week 3 locations/Drillers pressure grout 0215(M). Then to do decon maintenance |

**Plans/Future Activities**

Signature/Date 3/21/13

~~1730~~

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS
New World Labs

Date: 3/21/13
Task No.: 25*2

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT 0218(AD), 0219 (BH), 0220 (F),
Well Inventory: 0216 (66-70'), 0217 (66-70')
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1738 CT Depart Site / Vacuum car
1900 Calibration check/calibrate equipment

**Plans/Future Activities**

Signature/Date 3/21/13

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: CRTE
Project No.: FR1681
Contractors: Environmental Drilling Services (EDS) JR | Shawn
New Age Landmark Labs (Celeste)

Date: 3/28/13
Task No.: 25 x 2

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0221(D), 0222(G)
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0730 EDS | CT on site / Drillers decon | set up decon pit
~~0735~~ 0720 Tailgate safety meeting - Utilities, what to do if water line is ever hit (move away from rig!), traffic awareness | Safety, Exclusion zone
0730 Begin DPT 0221 at D
0800 Locators (Ryan | Jeff) on site. In reference to BJ, They cannot give permission anymore to punch through due to our regulations stating drillers must hand auger to 5'. Cannot approve I due to travel trailer parked over it. For BJ, will approve a nearby spot that we can try to see if no refusal.
0805 Building Layout Pic: N is to the R, W is up
112: Break area 114: Locker area 121: Lockers, water cooler 118: Storage room 114B: Janitors closet 100: desks, office 102: office 104: office 106: office 119: storage

**Plans/Future Activities**

0905 Lpetty would like to drill in 104 or 100. N side. Its important for completion of job. BJ: can step up N. Stay W/in 5'. Step out 25' N of BJ → Mark this
0920 call Locator Ryan to ask about approving a building location. He says they will not approve. I informed him other people have drilled in buildings recently.

Gupta Jeevan 3/28/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRTE
Project No.: FR1681
Date: 3/20/13
Task No.: 25*2
Contractors: Environmental Drilling Services (EDS) JR/Shawn
New Age Landmark Labs (Celeste)

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0221(D), 0222G
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0940 Finish DPT 0221 / Drillers clean / Claire Osborn on site
0955 Begin DPT 0222 at G
1145 Celeste picks up samples / Finish DPT 0222
1200 Break for lunch / CT departs site
1220 Drop GPS off at TVL office

**Plans/Future Activities**

Crystal Young 3/20/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHF
Project No.: FR1681
Date: 3/28/13
Task No.: 25 & 12
Contractors: EDS - JR & Shawn. New Age/Landmark Inc - Celeste Wheeler

**Work Performed**

Well Installation: NA
Soil Borings: NA
DPT: Temporary sample locations
Well Inventory:
Other: Geoprobe 6620DT, peristaltic pump & Tubing provided by EDS, YSI (556 MPS/10A100199) rented from Pine.

Sampling Soil: NA
Sampling SW/Sediment: NA
Sampling Monitor Wells: NA
Sampling Hazardous Waste: NA
Sampling Drums: NA

**Observations/Issues of Concern**

930: Arrived onsite. Left tampa at 715. Assisted 1 picked up badge before proceeding to site / watched Crystal Towns on the process
1200: Broke for lunch. Crystal Towns left site
1240: Started to work again. Started at 223 (BJ) For each ~~well~~ location, & a sample (covers) was taken at 8 different depth intervals. For each depth interval readings for pH, conductivity, DO, Temp. Salinity, TDS, ORP, & color were measured. 3 times (GW parameters)
Groundwater samples were collected using a ~~Temporary wells were installed with a~~ DPT rig (EDS). The firs 5' were hand cleared by hand (hand auger).
1253 Started to take GW parameters at depth interval 8-12 ft bgs (feet below ground surface)
1259 Took CVOC sample for 223 (8-12)
1300 crew started to drill to 16-20 interval after removing tubing & deconing equipment

**Plans/Future Activities**

3/28/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRTF
Project No. FR1661
Contractors: see page 1

Date: 3/28/13
Task No.: 25.02.02

**Work Performed**

Well Installation: ~~temp wells~~
Soil Borings: NA
DPT: Groundwater sampling
Well Inventory: NA
Other: see page 1

Sampling Soil: NA
Sampling SW/Sediment: NA
Sampling Monitor Wells: NA
Sampling Hazardous Waste: NA
Sampling Drums: NA

**Observations/Issues of Concern**

This takes place after each interval

1302 started taking GW parameters at ~~16-20~~ 16-20 ft bgs depth interval. 3 different readings
1309 took sample @ 223 (16-20) — location — depth interval
1314 started taking parameters at 223 (21-25)
1320 sampled 223 (21-25)
1324 start taking parameters @ 223 (26-30)
1330 sampled 223 (26-30)
1334 started taking GW parameters @ 223 (31-35)
1340 sampled 223 (31-35)
1344 started taking GW parameters @ 223 (36-40)
1350 sampled 223 (36-40)
1407 started taking GW parameters @ 223 (41-45)
1413 sampled 223 (41-45)
1420 started taking GW parameters @ 223 (56-60)
1428 sampled 223 (56-60)

**Plans/Future Activities**

3/28/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRTF
Project No.: FR1681
Contractors: see page 1

Date: 3/28/13
Task No.: 25A2

**Work Performed**

Well Installation: ~~temp wells~~ NA
Soil Borings: NA
DPT: Groundwater sampling
Well Inventory: NA
Other: ~~ASA~~ scope page 1

Sampling Soil: NA
Sampling SW/Sediment: NA
Sampling Monitor Wells: NA
Sampling Hazardous Waste: NA
Sampling Drums: NA

**Observations/Issues of Concern**

| | |
|---|---|
| 1440 | loaded up rig and cleaned up around 223. put cone over 223. Drove to 224 (BI) |
| 1450 | start ~~drilling~~ hand augering |
| 1457 | start taking GW parameters @ 224 (8-12) |
| 1504 | sample 224 (8-12) |
| 1506 | start taking parameters @ 224 (~~8~~ 16-20) |
| 1512 | sample 224 (16-20) |
| 1516 | start taking parameters @ 224 (21-25) |
| 1522 | sample 224 (21-25) |
| 1526 | start taking GW parameters @ 224 (26-30) |
| 1532 | sample 224 (26-30) |
| 1547 | clean up around 224; place cone over it |
| 1555 | start grouting BH |
| 1615 | Finish grouting BH (#219) |
| 1620 | start grouting AD (#218) |
| 1630 | Finish grouting AD |

**Plans/Future Activities**

3/28/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: FR1681 3
Project No.: 0HHE
Contractors: see page 1

Date: 3/28/13
Task No.: 25.02

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | ~~temp wells~~ NA | Sampling Soil: | NA |
| Soil Borings: | NA | Sampling SW/Sediment: | NA |
| DPT: | groundwater sampling | Sampling Monitor Wells: | NA |
| Well Inventory: | NA | Sampling Hazardous Waste: | NA |
| Other: | see page 1 | Sampling Drums: | NA |

**Observations/Issues of Concern**

1635 Start grouting F (*220)
1650 ~~Start~~ Finish grouting F
1700 Arrive @ IDW station start taking pH reading. pH = 6.99
1710 Take sample of IDW drum 193862
1712 hand off samples to lab
1715 go to pick up spill palett
1730 ~~titrate~~ could not access gate (locked) to pick up sill pallete. ~~Leave~~ Call Lauren Drill crew & Claire Osborn leave site
1750 Pick up key from Titusville office
1815 Arrive @ home depote to purchase stakes & spray paint
1825 arrive @ hotel
1840 Calibrate equipment (CCV)
1855 Finish continuous calibration verification/calibration

**Plans/Future Activities**

3/28/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Date: 3/29/13
Task No.: 25-07
Contractors: EDS (JR & Shawn). NewAge/Landmark Inc (Celeste Wheeler)

**Work Performed**

Well Installation: ~~temp. wells~~ NA
Soil Borings: NA
DPT: Groundwater sampling
Well Inventory: NA
Other: Geoprobe 6620DT, peristaltic pump, tubing provided by EDS, 451 (556 hrs/10C100199) rented from Pine

Sampling Soil: NA
Sampling SW/Sediment: NA
Sampling Monitor Wells: NA
Sampling Hazardous Waste: NA
Sampling Drums: NA

**Observations/Issues of Concern**

| | |
|---|---|
| 630 | Leave hotel |
| 700 | Arrive onsite, pick up spill paletti w/ drill crew. |
| | Take spill paletti to IDW location. Set up |
| 800 | Safety briefing w/ drill crew |
| 810 | Start drilling @ 224 (BI) → interval 31-35 ft bgs |
| 820 | Start taking GW parameters |
| 826 | Sample 224 (31-35) |
| 832 | start taking GW parameters @ 224 - (36-40) |
| 840 | sample 224 (36-40) |
| 847 | start taking GW parameters @ 224 (41-45) |
| 855 | sample 224 (41-45) |
| 905 | start taking GW parameters @ 224 (56-60) |
| 911 | sample 224 (56-60) |
| 915 | Crew starts to clean up 224 |
| 930 | pass off samples to lab (final samples @ 224) |
| 920 | Crew starts to hand auger 225 (J) then drill 225 |

**Plans/Future Activities**

3/29/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRC CRTIE
Project No.: FC1081
Contractors: see page 1

Date: 3/29/13
Task No.: 2.3.2

**Work Performed**

Well Installation: ~~temp well~~ NA
Soil Borings: NA
DPT: groundwater sampling
Well Inventory: NA
Other: see page 1

Sampling Soil: NA
Sampling SW/Sediment: NA
Sampling Monitor Wells: NA
Sampling Hazardous Waste: NA
Sampling Drums: NA

**Observations/Issues of Concern**

| | |
|---|---|
| 944 | start taking GW parameters |
| 950 | sample 225 (8-12) |
| 1000 | start taking GW parameters & 225-(16-20) |
| 1006 | sample 225-(16-20) |
| 1014 | start taking GW parameters 225 (21-25) |
| 1020 | sample 225 (21-25) |
| 1024 | start taking GW parameters @ 225-(26-30) |
| 1030 | sample 225 (26-30) |
| 1034 | start taking SW parameters @ 225 (31-35) |
| 1040 | sample 225 (31-35) |
| 1044 | start taking GW-parameters @ 225 (36-40) |
| 1050 | sample 225-(36-40) |
| 1054 | start taking GW-parameters @ 225 (41-45) |
| 1100 | sample 225 (41-45) |
| 1104 | start taking parameters @ 225 (56-60) |
| 1110 | sample 225 (56-60) |

**Plans/Future Activities**

3/29/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1661
Contractors: ~~FEDS~~ see page 1

Date: 3/29/13
Task No.: 2SA2

**Work Performed**

Well Installation: ~~temp wells~~ NA
Soil Borings: NA
DPT: groundwater sampling
Well Inventory: NA
Other: see page 1

Sampling Soil: NA
Sampling SW/Sediment: NA
Sampling Monitor Wells: NA
Sampling Hazardous Waste: NA
Sampling Drums: NA

**Observations/Issues of Concern**

1130 Crew finisher cleaning up; place cone over 225
1140 start grouting D → 1145 pull off samples to lab
1150 finish grouting D
1202 start grouting G
1216 finish grouting G
1230 Claire starts to mark BK, BL, BM, BO, BP
1233 Crew starts to grout BJ
1248 Crew finishes grouting BJ
1250 Crew starts to grout BI
1300 Claire finishes staking locations; double check locations
1310 Crew finishes & grouting BI
1330 Crew starts to drill 225 (J) - (66-70) → depth interval
1352 Start taking GW parameters C225 (66-70)
1358 Sample 225 (66-70)

**Plans/Future Activities**

3/29/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR 16681
Contractors: ~~EDS~~ see page 1

Date: 3/29/13
Task No.: 25.A.2

**Work Performed**

Well Installation: ~~temp wells~~ NA
Soil Borings: NA
DPT: groundwater sampling
Well Inventory: NA
Other: see page 1

Sampling Soil: NA
Sampling SW/Sediment: NA
Sampling Monitor Wells: NA
Sampling Hazardous Waste: NA
Sampling Drums: NA

**Observations/Issues of Concern**

→ lab picks up sample ↗ lab picks up sample

1410 Finish ~~decon~~ cleaning up @225; start to grout 225 (J)
1420 Finish grouting 225
1430 Head to IDW; put on all ~~labels~~ affixed labels on new drums; Crew transfers IDW to drum. Fill out IDW check list
~~1440~~ 1447 Crew + Claire head off site
1500 Claire stops to get lunch. Starts to calibrate in car
1520 Finish CCV
1530 Arrive at Titusville office
1600 Claire leaves office, gets gas, heads back to Tampa
1830 Arrives back in Tampa

**Plans/Future Activities**

3/29/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Contractors: Environmental Drilling Svcs. (EDS)

Date: 04/01/13
Task No.: 2582

**Work Performed**

Well Installation:
Soil Borings:
DPT: GW DPT sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0630 Get materials at Titusville office, get badge + mobe to site.
0715 Meet drillers. Need to get strap for pallet + give drillers back. Check woods for accessibility + point them there. Will need mat to cross mud. Prepping to set up on DPT 0226. Calibrate PID + YSI. PID 0/100 ppm isobutylene
0805 Conduct H+S briefing then begin hand augering DPT 0226.
0845 PID reading 0.0 ppm at DPT 0226. Will screen ~~Qual + report~~ QA/QC + approx overages + stop.
1100 Pull off DPT 0226 + move to DPT 0227 (A0 on map). Decon equipment.
1350 Pull off DPT 0227 + move to DPT 0228 (A11 on map). Decon equipment.
1615 Pull off DPT 0228 + move to DPT 0229 (A11 on map). Decon equipment.
1651 Collect CRHE-DPT0229-010.0-20130401 sample + deliver to mobile lab at CCE. Transfer purge water to drums + secure spill pallet. Rig left at DPT 0229 location to resume in morning. Air at 0.0 ppm all day.
1720 Walk woods w/ driller to determine feasible DPT access.
1745 Depart site. Contact L. Puffy to summarize activities.
1800 Calibrate YSI at hotel.

**~~Plans~~/Future Activities**

Note: PID calibration gas 100 ppm isobutylene
Lot No. LTB213-RR-CM
Exp. Date February 2016

Signature/Date 04/01/13

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**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHC
Project No.: FR1681
Contractors: EDS

Date: 04/02/13
Task No.: 25 & 2

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT GW sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0630 Depart for site.
0700 Arrive on site. Locate all points to be cleared today. Calibrate PID + YSI. PID calibrated to 0 ppm ambient air + 100 ppm isobutylene.
0715 Conduct safety briefing.
0725 Begin drilling DPT0229 again.
0800 Utility locator show up - walk locations to be cleared with them.
0820 Resume work at DPT0229. All boring locations (new + adjusted) cleared.
0955 Complete DPT0229, decon equipment + move to DPT0230 (A6 on map).
1200 Air screening has been at 0.0 ppm since work began. Rig blew hydraulic line - temporarily down while it is fixed.
1255 Resume drilling at DPT0230.
1400 Complete DPT0230, decon equipment + mobe to DPT0228 (AN) to begin grouting
1430 Move to DPT0226 (AM)
1505 Complete DPT0226 + move to DPT0227 (AO).
1535 Complete DPT0227 + decon. Move rig to advance DPT0231 (AI)
1754 Collect last GW sample at DPT0231, decon + calibrate YSI.

**~~Plans/Future Activities~~**

1830 Transfer decon + purge water from day, give last of samples to mobile lab, secure equipment + depart site

04/02/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHF
Project No.: FR1681
Contractors: EDR

Date: 04/03/13
Task No.: 2.5 + 2

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT GW samples
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0700 Arrive on-site. Rig battery being charged + some maintenance being done. Confirm w/ Lauren Petty to mobe into woods first thing due to coming rain. Calibrate YSI + PID. PID calibrated to 0.0 ppm + 100 ppm isobutylene.
0745 Conduct H+S briefing. Mobe equipment to woods.
0830 Begin DPT0232 (BD on map).
1105 Complete DPT0232 + decon. Mobe equipment to DPT0233 (BF) (or map)
1130 Drilling DPT0233. PID reading 0.0 ppm all morning.
1400 Done with DPT0233, decon + move to DPT0234 (BE on map).
1640 Complete DPT0234 + move to DPT0235 (BC on map).
1700 Pull off DPT0235 + leave rig over borehole. Need to decon for tomorrow morning. Conduct continuing calibration verification on YSI. Drillers decon + transfer decon + purge water to drums.
1730 Pull IDW sample from dram #1938864 sink it's at 80% volume. pH 7.45 (CS)
1740 Depart site after transferring samples to on-site lab. PID air screened at 0.0 ppm all day.

**Plans/Future Activities**

Signature/Date 04/03/13

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**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Contractors: EN

Date: 04/04/13
Task No.: 25.02

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT GW samples
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0700 arrive on site, conduct safety briefing + check w/ NASA (LS) duty ofc. re: Phase I + II weather alerts. On Phase I ~~+ II expected at~~ (CS) until 09:00.
0720 Pull rig off (LS) DPT0235 to grout 0232 + 0233 in woods before weather worsens + they become inaccessible in wetlands area. Calibrate PID + conduct continuing calibration verification on YSI.
0800 Done grouting DPT0232 + move to grout DPT0233.
0835 Done grouting DPT0233 + move to DPT0235 to resume drilling.
1050 Complete DPT0235, decon + move to DPT0234 to grout.
1120 Complete DPT0234 grouting, load equipment to mobe back over by railroad tracks to grout DPT0229 + resume drilling ~~there~~ (LS) area.
1220 DPT0229 grouted + set up to drill DPT0236 (AL on map) moved 13' west of original location to be outside RR tracks.
1510 DPT0236 complete so pull rods from borehole. Phase II weather alert so can't work right now. Check radar + call Lauren.
1530 Send drillers home based on extensive storms on radar + drop samples at mobile lab. Air screened at 0.0 ppm all day.

**~~Plans/Future Activities~~**

1600 Depart site.
1620 Calibrate (CCV) YSI at hotel.

04/04/13
Signature/Date

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Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR-1691
Contractors: EDS

Date: 04/05/13
Task No.: 25.21

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0700 Arrive on site, conduct safety briefing + prep to grout boreholes along RR tracks.
0755 Calibrate YSI + PID (0 ppm + 100 ppm isobutylene)
0840 Load equipment + move to DPT 0237 (AE on map)
0910 Hand augering DPT0237.
1040 Shut down due to phase II weather alert.
1110 Resume working at DPT0237.
1200 Move from DPT0237 to DPT0238 (BA on map). PID 0.0 ppm all morning.
1410 DPT0238 completed + move to DPT0239 (BB on map).
1610 DPT0239 completed + prep to grout. Conduct continuing calibration.
1730 Complete grouting + mobe truck to decon / IDW area. Transfer all purge + decon water remaining to drum.
1740 Collect IDW193P65 sample at pH 7.55. Clean drums (top + sides) + secure pallets w/ straps. Air screened at 0.0 ppm all day.
1800 Drop samples at lab on site. Driller loading equipment.
1830 Depart site.

**Plans/Future Activities**

04/05/13
Signature/Date

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Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 3

Project: CRHE
Project No.: FR1681.25*2
Contractors: Geosyntec: Claire Osborn
EDS: YR: Mitch Pennington

Date: 5/20/13
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

Equipment: Geoprobe 6600DT

**Observations/Issues of Concern**

700 Arrive at NASA badging office, collect badge
715 Dave Szeimore arrives at badging office; Claire and Dave drive over to CRHE. Dave shows Claire cleared locations.
800 Dave locates (GPS unit) & ~~st~~marks new locations to be sampled; Claire calibrates
830 Claire contacts drillers. They are setting up at decon area
900 Claire meets drillers at decon area; holds tailgate safety meeting
910 Inspects spill pallet. Several (2) spill pallets are located next to Geosyntec spill pallets that do not belong to Geosyntec. spill pallets have point of contact (POC) listed as Amanda Beatty/IHA 867-7176 or Sue Tzareff/IHA 867-3609. ~~One~~ The barcodes on spill pallet covers are

**Plans/Future Activities**

5/20/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.:
Contractors:

Date: 5/20/13
Task No.:

**Work Performed**

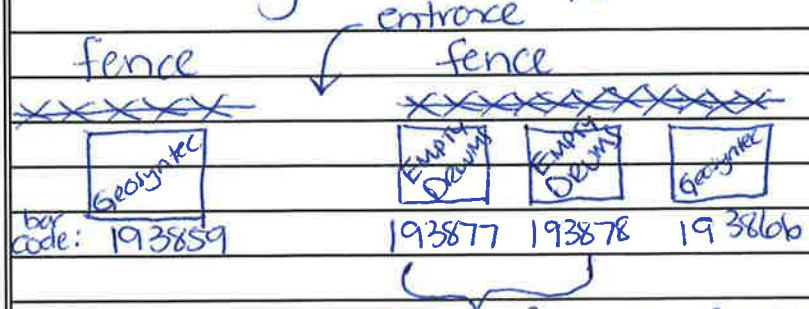
see page 1

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

193877 and 193878. Please see the following diagram for approximate location.




POC: Amanda Beatty or Sue Tzareff

915 mobilize to BL (#240) and hand clear to 5 ft BLS; start drilling (see DPT Geochemical Data form)

1056 collect the final sample at BL, clean area, mobilize to BM (#241)

**Plans/Future Activities**

5/20/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: _____ Date: 5/20/13

Project No.: _____ Task No.: _____

Contractors: _____

**Work Performed**

see page 1

Well Installation: _____ Sampling Soil: _____

Soil Borings: _____ Sampling SW/Sediment: _____

DPT: _____ Sampling Monitor Wells: _____

Well Inventory: _____ Sampling Hazardous Waste: _____

Other: _____ Sampling Drums: _____

**Observations/Issues of Concern**

1115 hand clear location to 5ft BLS, start drilling (see Geochemical Data Form)
1200 take lunch break
1230 start drilling again
1346 collect final sample, clean area, drillers decon equipment
1415 mobilize to BG (#242), hand clear location, start drilling
1630 take final sample, clean area, drillers clean decon area
1700 Claire and drillers leave site

**Plans/Future Activities**

5/20/13

Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: CCHE
Project No.: FR11681.25*2
Date: 5/21/13
Task No.:
Contractors: Geosyntec: Claire Osborn
EDS: JL, Mitch Pennington

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT sampling
Well Inventory:
Other: Equipment: 6620DT Geoprobe

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

700 Claire and drillers arrive on site; drillers set up decon area & keep it covered as it looks like rain; Claire prepares tailgate
715 hold safety tailgate meeting (see tailgate form)
730 mobilize to AF (#243) located ~30' across two railroad tracks, have to make a bridge to cross tracks with rig; Claire calibrates (see calibration form)
750 hand clear location (5 ft BLS); start drilling
956 collect final sample, clean area, mobilize to BU (#244), hand clear
1015 Phase 2 issued
1200 Phase 2 called off; start drilling (see DPT Geochemical Data Form)
1336 collect final sample, clean area, crew decons equipment
1430 mobilize to BQ (#248), ~~hand clear (5 ft BLS)~~ start to drill

**Plans/Future Activities**

5/21/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRITE
Project No.:
Contractors:

Date: 5/21/13
Task No.:

**Work Performed**

Well Installation: see page 1
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1435 collect sample @ 70 ft BLS @ BQ(#242); clean area mobilize to BS-245; hand clear, start to Drill (see DPT Geochemical Data Form)
1526 collect sample @ 25 ft BLS
1530 phase 2 issued; Claire and drillers leave site as radar shows large rain bans in area

**Plans/Future Activities**

5/21/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.:
Date: 5/22/13
Task No.:
Contractors: Geosyntec: Claire Osborn
EDS: J.R. & Mitch Pennington

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT sampling
Well Inventory:
Other: Equipment: Geoprobe 6620DT

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

700 Arrive Onsite - Claire & drillers; start safety briefing
715 Finish safety briefing; drillers set up decon pit. Claire checks in at office to notify manager of working adjacent to traces
720 mobilize to BS-245. start drilling. see geochem. data form; Claire calibrates (see calibration form)
834 Collect final sample. Clean up & load rig. mobilize to 228.0. hand clear location. see geochem data form
910 Collect sample. load rig & mobilize to BO-246.0
920 hand clear location. start drilling BO. see geochem data form
1050 Collect last sample. ~~mob~~ clean up, load rig, mobilize to CC-247.0. hand clear CC.
~~1110~~ 1100 Start drilling CC. see geochemical data sheet
1226 Collect final sample, load rig, clean area, mobilize to BK-248.0. Phase 2 issued. Claire & drillers get into work vehicles.

**Plans/Future Activities**

5/22/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.:
Date: 5/22/13
Task No.:
Contractors: Geosyntec: Claire Osborn
EDS: JR, Mitch Pennington

**Work Performed**

see page 1

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0700 Phase 2 cleared. hand clear BX-248.0. start drilling
1530 Collect final sample. clean area loading
1540 start to surface grout BL-240
1555 Finish grouting BL-240
1605 Start to grout BM-241
1620 Finish grouting BM-241
1630 Discard purge water/decon water into drum; clean up decon area
1650 Leave site (Claire and drillers)

**Plans/Future Activities**

5/22/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 3

Project: CRHE
Project No.: FR1681.25*2
Contractors: Geosyntec: Claire Osborn
EDS: YR: Mitch Pennington

Date: 5/20/13
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

Equipment: Geoprobe 6600DT

**Observations/Issues of Concern**

700 Arrive at NASA badging office, collect badge
715 Dave Szeimore arrives at badging office; Claire and Dave drive over to CRHE. Dave shows Claire cleared locations.
800 Dave locates (GPS unit) & ~~st~~marks new locations to be sampled; Claire calibrates
830 Claire contacts drillers. They are setting up at decon area
900 Claire meets drillers at decon area; holds tailgate safety meeting
910 Inspects spill pallet. Several (2) spill pallets are located next to Geosyntec spill pallets that do not belong to Geosyntec. spill pallets have point of contact (POC) listed as Amanda Beatty/IHA 867-7176 or Sue Tzareff/IHA 867-3609. ~~One~~ The barcodes on spill pallet covers are

**Plans/Future Activities**

5/20/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.:
Contractors:

Date: 5/20/13
Task No.:

**Work Performed**

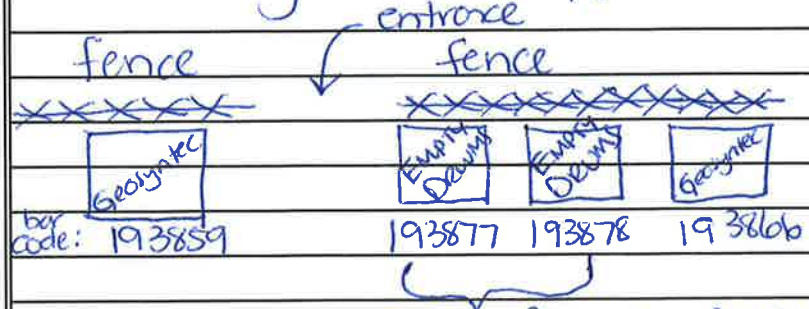
see page 1

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

193877 and 193878. Please see the following diagram for approximate location.




POC: Amanda Beatty or Sue Tzareff

915 mobilize to BL (#240) and hand clear to 5 ft BLS; start drilling (see DPT Geochemical Data form)

1056 collect the final sample at BL, clean area, mobilize to BM (#241)

**Plans/Future Activities**

5/20/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: _____ Date: 5/20/13

Project No.: _____ Task No.: _____

Contractors: _____

**Work Performed**

see page 1

Well Installation: _____ Sampling Soil: _____

Soil Borings: _____ Sampling SW/Sediment: _____

DPT: _____ Sampling Monitor Wells: _____

Well Inventory: _____ Sampling Hazardous Waste: _____

Other: _____ Sampling Drums: _____

**Observations/Issues of Concern**

1115 hand clear location to 5ft BLS, start drilling (see Geochemical Data Form)
1200 take lunch break
1230 start drilling again
1346 collect final sample, clean area, drillers decon equipment
1415 mobilize to BG (#242), hand clear location, start drilling
1630 take final sample, clean area, drillers clean decon area
1700 Claire and drillers leave site

**Plans/Future Activities**

5/20/13

Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: CCHE
Project No.: FR11681.25*2
Date: 5/21/13
Task No.:
Contractors: Geosyntec: Claire Osborn
EDS: JL, Mitch Pennington

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT sampling
Well Inventory:
Other: Equipment: 6620DT Geoprobe

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

700 Claire and drillers arrive on site; drillers set up decon area & keep it covered as it looks like rain; Claire prepares tailgate
715 hold safety tailgate meeting (see tailgate form)
730 mobilize to AF (#243) located ~30' across two railroad tracks, have to make a bridge to cross tracks with rig; Claire calibrates (see calibration form)
750 hand clear location (5 ft BLS); start drilling
956 collect final sample, clean area, mobilize to BU (#244), hand clear
1015 Phase 2 issued
1200 Phase 2 called off; start drilling (see DPT Geochemical Data Form)
1336 collect final sample, clean area, crew decons equipment
1430 mobilize to BQ (#248), ~~hand clear (5 ft BLS)~~ start to drill

**Plans/Future Activities**

5/21/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRITE
Project No.:
Contractors:

Date: 5/21/13
Task No.:

**Work Performed**

Well Installation: see page 1
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1435 collect sample @ 70 ft BLS @ BQ(#242); clean area mobilize to BS-245; hand clear, start to Drill (see DPT Geochemical Data Form)
1526 collect sample @ 25 ft BLS
1530 phase 2 issued; Claire and drillers leave site as radar shows large rain bans in area

**Plans/Future Activities**

5/21/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.:
Date: 5/22/13
Task No.:
Contractors: Geosyntec: Claire Osborn
EDS: J.R. & Mitch Pennington

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT sampling
Well Inventory:
Other: Equipment: Geoprobe 6620DT

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

700 Arrive Onsite - Claire & drillers; start safety briefing
715 Finish safety briefing; drillers set up decon pit. Claire checks in at office to notify manager of working adjacent to traces
720 mobilize to BS-245. start drilling. see geochem. data form; Claire calibrates (see calibration form)
834 Collect final sample. Clean up & load rig. mobilize to 228.0. hand clear location. see geochem data form
910 Collect sample. load rig & mobilize to BO-246.0
920 hand clear location. start drilling BO. see geochem data form
1050 Collect last sample. ~~mob~~ clean up, load rig, mobilize to CC-247.0. hand clear CC.
~~1110~~ 1100 Start drilling CC. see geochemical data sheet
1226 Collect final sample, load rig, clean area, mobilize to BK-248.0. Phase 2 issued. Claire & drillers get into work vehicles.

**Plans/Future Activities**

5/22/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.:
Date: 5/22/13
Task No.:
Contractors: Geosyntec: Claire Osborn
EDS: JR, Mitch Pennington

**Work Performed**

see page 1

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0700 Phase 2 cleared. hand clear BX-248.0. start drilling
1530 Collect final sample. clean area loading
1540 start to surface grout BL-240
1555 Finish grouting BL-240
1605 Start to grout BM-241
1620 Finish grouting BM-241
1630 Discard purge water/decon water into drum; clean up decon area
1650 Leave site (Claire and drillers)

**Plans/Future Activities**

5/22/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: FE CHHE
Project No.: FR1681.25*2
Contractors: Geosyntec: Claire Osborn
EDS: JR, Miten Pennington

Date: 5/23/13
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT sampling
Well Inventory:
Other: Equipment: Geoprobe 6620DT

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0700 Arrive on site.; drillers prep decon area, leave covered in case of rain
0710 have safety briefing
0720 mobilize to 226. start to hand clear; drill. Claire mark new locations. Claire calibrates (see calibration form)
0730 Locators from NASA arrive; due to utility issues, have to step out from original location
0750 226.0 starts to purge (see DPT Geochemical Data Form)
0800 Collect sample @ 226, clean area, mobilize to 244; start to drill
0840 Collect sample @ 70 ft BLS; clean area, mobilize to 231; hand clear, start to drill (see DPT Geochemical Data Form)
0910 Collect sample at 50 ft BLS, clean area; mobilize to 230; hand clear, start to drill (see DPT Geochemical Data Form)
1002 Collect sample @ 50 ft BLS. Clean area; mobilize to 249, hand clear, start to drill
1204 Collect final sample, clean area; drillers decon; break for lunch

**Plans/Future Activities**

5/23/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.:
Contractors:

Date: 5/23/13
Task No.:

**Work Performed**

see page 1

Well Installation:
Soil Borings:
DPT: DPT sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1245 mobilize to 247 start to drill
1318 collect sample @ 70 ft BLS; clean area; mobilize to I (#250), hand clear; start to drill (see DPT Geochemical Data Form)
1512 Collect final sample; clean area
1515 Drillers decon equipment
~~1730 Claire and drillers leave site~~
1535 mobilize to CA (#251); hand clear; start to drill
1704 collect final sample, clean area
1730 Claire and drillers leave area

**Plans/Future Activities**

5/23/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CR HE
Project No.:
Contractors: Geosyntec: Claire Osborn
EDS: JR, Mitch Pennington

Date: 5/24/13
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other: DPT sampling

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

Equipment: Geoprobe 6620 DT

**Observations/Issues of Concern**

| | |
|---|---|
| 700 | Claire arrived onsite |
| 705 | Drillers arrive onsite; hold tailgate safety meeting; mobilize to DN-252. break up gravel to hand clear to 5 ft BLS; claire calibrates equipment |
| 730 | start drilling DN-252; refer to DPT Geochemical data form |
| 912 | collect final sample @ DN-252. clean up area; load rig |
| 930 | mobilize to 230 |
| 940 | start pressure grouting 230 |
| 1000/1015 | Finish pressure grouting 230; decon; start pressure grouting 231 |
| 1050 | start pressure grouting 228 |
| 1040 | Finish pressure grouting 231; surface grout 243(AF) & 244(BU) |
| 1115 | Finish pressure grouting 228; start pressure grouting 226 |
| 1140 | Finish pressure grouting 226 |
| 1145 | Surface grout ~~245~~ 242 (#245-BS) & 242(BQ) |
| 1205 | Start pressure grouting 247 (CC) |
| 1230 | Finish pressure grouting 247 (CC) |

**Plans/Future Activities**

5/24/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRTE
Project No.:
Contractors:

Date:
Task No.:

**Work Performed**

see page 1

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1250 surface grout 249(BN), 248(BK), & 246(BO)
1325 surface grout 1(250) & BN(252).
1345 double check grouted wells to make sure grout hasn't settled below surface elevation. Clean decon area; complete IDW checklist
1415 Drillers and Claire leave site
1620 Claire arrives in Tampa; completes CCV

**Plans/Future Activities**

5/24/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: CRHE
Project No.: FR1681
Contractors: —

Date: 5/31/13
Task No.: 25*2

**Work Performed**

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other: Utility locate

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0700 CT Arrives on site for Utility locate. Meet Rachel Donahue to program coordinates into GPS and mark locations.
0730 GPS indicating that locations are ~200 miles off. Definite problem with GPS. Call Jan Barfus / no answer at TVL office.
0800 Call TVL office. Leave message for Jan or Melissa to call for trouble shooting.
0810 Melissa calls. Says to reset units on GPS from ft. to meters. Guides us through.
0830 Locator Jeff on site. Agrees to return around 1000.
0830 Jan calls. Need to reprogram all coordinates that were programmed before units were changed. Make change, unit now locating Reposed locations accurately
0950 Begin marking locations.
1030 (CT) Call Jill Johnson to discuss issues with DG, CE,

**Plans/Future Activities** (CT)

DPT 0236. DG is in location that has already been drilled (DPT 0195). ~~(CT)~~ CE is due N of DF according to GPS, but looks W according to map. DPT 0236 (already drilled location) is between rails according to GPS. No evidence of drilling here. Believe DPT 0236 was moved and never changed in

Crystal Jones 5/31/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No. FR1681
Contractors: —

Date: 5/31/13
Task No.: 25x2

**Work Performed**

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other: Utility locate

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

GPS. JJ says to move CE 5' W, She will look into other issues. (CT)

1000 Ask employees in office near Rail Station if location was drilled between rails. They do not believe so. Rachel calls Christel Schultz to ask about location of DPT0236. She says location was relocated W of rails. Rachel & I locate drilling location (grout presence). ~~N(a)~~ Re-GPS location.

1030 Discuss DPT0195 and DG with JJ. DPT0195 in same location as DG. JJ says to have locators approve location where DPT195 appears to be according to map. Do not drill until receiving her approval.
- locations DK, DM re-GPS'd in file named June3-CRHE. DPT 0236 also saved in this file. CE coordinates also changed in file.
- CT contacts locator Jeff. Plan to meet at 1215.

**Plans/Future Activities** (CT)

1200 Locators Jeff and Ryan on site. All locations approved. DA, DM both moved <3'.

* - Need to GPS locations after they are drilled each day in order to confirm actual location.

Signature/Date 5/31/13

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: CRHE
Project No.: FR1681
Contractors: Environmental Drilling Services (EDS) Chris/Keith
KB Labs - Brad

Date: 6/3/13
Task No.: 25.2

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0253(DJ), 0229, 0236, 0254(BT),
Well Inventory: 0255(CD)
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0700 Crystal Towns (CT) on site. Get vials from KB Labs.
0730 Check in with railroad maintenance facility office. OK to work on W side of tracks near woods.
07 Calibrate YSI
0800 EDS on site/unload DPT rig / CT talks to Railroad maintenance facility manager about driving support truck between tracks. Says ok, not a problem. Tailgate Safety.*
0815 EDS sets up decon pit / treks rig to location DJ.
0845 Begin DPT0253 at DJ. No 8-12' sample per Jill Johnson (JJ)

* Topics covered in Tailgate Safety Briefing: COCs, Weather Warnings (forecast calling for thundershowers - will notify through weather pager), Utility markings (no utilities found on W side of railroad tracks), hydration

1050 DPT0253 Complete. Trek rig back down side of railroad tracks/Drillers decon.
1130 Begin DPT0229 - only collecting 46-50' sample per JJ

**Plans/Future Activities**

1155 DPT 0229 Complete.
1207 Begin DPT0236 - only collecting 46-50' sample per JJ
1225 DPT0229 complete. Break for lunch.
1255 Begin DPT0254 at BT / KB Labs picks up samples
1330 Drillers decon
1545 DPT 0254 complete

Crystal Towns 6/3/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHF
Project No.: FR1681
Contractors: Environmental Drilling Services Chris, Keith
KB Labs - Brad

Date: 6/3/13
Task No.: 23.2

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0253(DJ), 0229, 0236, 0254(BT),
Well Inventory: 0255(CD)
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1550 Begin DPT 0255 at CD
1630 Drillers decon.
1730 Finished drilling for day. / Unable to pick up spill pallet due to location being closed for day. Place drum on another pallet on site with empty spot. Drillers to pick up pallet tomorrow at 0700. Drum is labeled and bar coded.
- Decon pit maintenance performed. / CT GPS's all locations.
1750 EDS/CT depart site. CT drops last sample off for KB Labs.
1805 Inform JJ of pallet. Will have pallet onsite first thing tomorrow morning.

**Plans/Future Activities**

Signature/Date 6/3/13

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 3

Project: CRHE
Project No.: FR1601
Date: 6-4-13
Task No.: 25x2
Contractors: Environmental Drilling Services (EDS) - Chris Keith
KB Labs (Glenn)

**Work Performed**

Well Installation:
Soil Borings:
DPT: 255 (CD) 256 (CH), 257 (CF) (DE), 258 (DF), 259 (DH)
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0700 EDS/Crystal Towns (CT) on site. Conduct Health and Safety Briefing. Disaussed hydration and heat stress. Very high UV level. Drink plenty of water. Take A.C. breaks if too hot.
- EDS picked up pallet. Drum staged and labeled/bar coded. / Pallet labeled/bar coded.

0705 Calibrate/Calibration check on YSI - Drillers prepare rig.

0720 CT checks in with Railroad Maintenance Facility office.

0723 Begin DPT 0255.

0755 DPT 0255 Complete.

0810 Begin DPT 0256 at CH / Drillers do rig maintenance

1000 Drillers decon

1003 KB Labs picks up samples. Discussed sample name errors with Glenn and gave list of changes to be made: ① DPT 0253-010.0 through 058.0 collected 1355 through 1534 Should be DPT 0254. ② Sample collected at 1153 should be DPT 0229-048.0. Sample collected at 1218 Should be DPT 0236-048.0. Glenn to send out updated data.

**Plans/Future Activities**

Crystal Towns 6/4/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS-Chris, Keith
KB Labs-Glenn

Date: 6-4-13
Task No.: 25*2

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0255(CD) 0256(CH) 0257(CE)
Well Inventory: 0258(DF), 0259(DH)
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1010 Called Michelle Moore at 321-867-3412 to inform of pallet drillers took. Also asked about tie down strap. Drillers said bucket that typically holds tie down straps was empty. No answer- left voicemail detailing above topics. (email: michelle.moore@nasa.gov)
-Received Michelle's contact info from Emily Lawson.
1105 DPT0256 Complete
1110 Begin DPT0257 at CE.
1220 Break for lunch
1250 Resume DPT0256/0251
1330 Complete DPT0257/0251 / Begin DPT0258 at DF.
1335 Michelle Moore returns call about tie down strap. She will drop off at 1600.
1400 Saw lightning from CE in SW direction. Stopped work. Rain started 2-3 min later. Very hard. Strong wind advisory also issued by NASA until 1430.

**Plans/Future Activities**

1408 Phase II
1510 Phase II ended / KB Labs picked up samples.
1535 Drillers de con
1640 DPT0258 complete
1645 Begin DPT0259

Glynis Kane 6/4/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS, Chris, Keith
KB Labs, Glenn

Date: 6-4-13
Task No.: 25x2

**Work Performed**

Well Installation:
Soil Borings:
DPT: 255(CD) 256 (CH), 257(CE), 258(DF),
Well Inventory: 259 (DH)
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1705 Began purging 36-40' interval and EDS's pump motor burned out. No parameters or sample collected. Will have a new pump by tomorrow (6/5/13) morning.
1715 Drillers perform decon pit maintenance/CT GPS's locations.
1730 EDS/CT depart site. CT drops samples at KB Labs.
1755 CT calibrates YSI

**Plans/Future Activities**

Signature/Date 6/4/13

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 3

| | | | |
|---|---|---|---|
| Project: | CRHE | Date: | 6-5-13 |
| Project No.: | FR1681 | Task No.: | 25*2 |
| Contractors: | Environmental Drilling Services (EDS) Chris-Keith<br>KB Labs (Glenn) | | |

**Work Performed**

| | | | |
|---|---|---|---|
| Well Installation: | | Sampling Soil: | |
| Soil Borings: | | Sampling SW/Sediment: | |
| DPT: | 0259 (DH), 0260 (BV) | Sampling Monitor Wells: | |
| Well Inventory: | | Sampling Hazardous Waste: | |
| Other: | | Sampling Drums: | |

**Observations/Issues of Concern**

0645 CT/EDS on site
0700 Health and Safety briefing - traffic safety (vests in parking lot, clear road and cones surrounding rig), Weather warnings, focus and alertness, slips, trips, and falls on wet ground. Utilities
0710 Begin DPT0259 (immediately sample 36-40' interval)
0804 Complete DPT0259
0816 Begin DPT0260 at BV
0828 Called locator Ryan Osterly about clearing locations 25' and 50' S of BJ. He says the locations are clear due to no utilities being located W of railroad tracks. Asked if he needed to sign the dig permit - he says No because they already approved that entire area.
0830 KB Labs picks up samples.
0900 Sensor burned out on Geoprobe. Unable to pull rods.

**Plans/Future Activities** (CT)

Chris calls Geoprobe for troubleshooting.
0945 Chris relays that sensor which allows probe to pull rods on 'fast' speed has gone out. We are still able to pull rods at 'slow' speed but sampling will be significantly slowed down. CT asks him to call EDS and get another probe on site.

Cyrtl Jones 6/5/13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS Chris Keith
KB Labs, Glenn

Date: 6-5-13
Task No.: 25*2

**Work Performed**

Well Installation:
Soil Borings:
DPT: 0259 (DH), 0260 (BV)
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

Chris calls EDS. JR able to mobe another probe to site later today. Current probe can (JJ) pull 10-15 samples per day.

0947 Call Lauren Petty (Jill Johnson out of office in AM) and inform of problem. She will call JT and get back to me.

1020 Call Lauren Petty. Says pack probe and supplies after finishing current location. Will reschedule. Heavy rain expected tomorrow and probe issues mean we will not reach sampling goal.

1049 Collect last sample from DPT0260. KB Labs picks up all remaining samples.

1120 CT collects IDW195117 sample/Drillers dumped all decon water/purge water before sample was collected. Note that drum appears slightly less than 80% full (65-70%). New drum has already been started by drillers.

See p.3

**Plans/Future Activities**

— CT checks YSI — Calibration

1125 Drillers grout/top off all remaining open boreholes. CT checks in with railroad maintenance facility office for clearance to cross tracks.

1145 Glenn from KB Labs calls. Has some waste water he needs to dispose of/Drillers load probe/supplies onto trailer.

1155 Glenn on site. Add lab waste water to drum 195117

Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS (Chris, Keith)
KB Labs (Glenn)

Date: 6-5-13
Task No.: 25*2

**Work Performed**

Well Installation:
Soil Borings:
DPT: 259(DH), 260(BV)
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

and collect new IDW Sample (1155). Glenn performs IDW QC Checklist audit, collects sample.
1210 EDS departs site.
1215 CT ~~departs site~~ @ checks in with manager at CRHE building. ASK him to look at borehole filled outside of building in parking lot (BV). He asks that drillers make it perfectly level due to safety hazard. CT calls drillers to return to site and level grout on asphalt surrounding borehole.
1230 Drillers on site to level borehole.
1235 Took picture of finished borehole with level grout.
1238 ~~Drillers~~ CT depart site.
1300 CT drops key and weather pager at TVL office
1500 CT departs TVL for Navarre FL

**Plans/Future Activities**

CT
1100 Locator Ryan Osterly on site to sign dig permit and approve locations S of DT. CT walks over to location, Ryan approves all locations W of railroad tracks.

Signature/Date 6/5/13

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CHRE
Project No.: FR11681
Contractors: None

Date: 7.11.13
Task No.: 25*1

**Work Performed**

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other: Water levels

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells: MW0040
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

800: arrive @ office + begin calibrating YSI + turbidity meter. (see form) load truck + print forms.
930 - leave office for KSC.
1000 - arrive @ MW0040. very hard to get TUBing to go down well... tubing keeps getting ~~tubing~~ stuck.
1020 - finally get tubing to bottom of well + begin purging. collect sample @ 1050
1100 - go drop off sample @ CCF + dispose of water in drum 195118.
1145 - begin collecting water levels. cannot locate MW0015.
245 - lunch
345 - continue collecting water levels. cannot locate MW0033 (in woods) or MW0026.
1500 - go pick up drums for office @ POL from EDS, Call Jill + left a message that departed site.

~~Plans/Future Activities~~

1630 - Unload truck + end of day

7-11-13
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CAHE
Project No.: FR-1681
Contractors: NA

Date: 05/27/14
Task No.: 31+2 (WR)

**Work Performed**

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other: Utility locate + DPT point GPR locate

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0700 Arrive on site. Locate points on ground to utility check w/ KSC locator Jeff. Use GPR to verify w fen.
0800 Conduct utility locate w/ Jeff.
0915 Complete locate + leave base to get more flags/stakes for marking DPT locations in woods.
1000 Return to site + mark T-Z + AA-AH points in woods when GPR malfunctions + refuses to start on w/ 2/3 battery power remaining. Reset + troubleshoot w/ Tom Barfus on phone but it keeps blanking out screen.
1300 Depart base to drop GPR at Tville office for troubleshooting.
1400 Done for day. Dig permit processed + will be ready for locator signature on site AM tomorrow.

CS

**Plans/Future Activities**

Note: at least two points (BK+BI) need moved ~2'. Utilities "cleared" circle on all A1, A2, B1, B2, C1+C2 locations for vertical drilling only. Verifies clearance to ~7' below surface but utility markers/locators DO NOT clear angled or directional drilling.

Chad Saltsgiver 05/27/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT** Page of

Project: CRHE
Project No.: FR1681
Contractors: EDS
Date: 6/13/14
Task No.: 31.2

## Work Performed

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

## Observations/Issues of Concern

0630 - Arrive on site, begin YSI calibration
0703 - Begin low flow purging DPT0311-048.0'
0711 - Sample DPT0311-048.0'
0732 - Collect final sample, DPT0311-058.0' Mob to DPT0312 CN/DPT0312
0811 - Collect initial sample, DPT0312-033.0'
0931 - Collect final sample, DPT0312-058.0'. Mob to CN/DPT0313 and then to decon area to dispose of IDW & decon screens
1006 - Collect sample CRHE-IDW197035
1022 - Called Crystal Towns to discuss work rest of day. Drillers will grout open boreholes now. Call Jill (904-591-4076) to discuss rest of day (left message). Will tremie grout BW/DPT0309, CL-DPT0311
1045 - Start grouting locations: AM (308) BX (310) CM (312) surface + BW (309) CL (311) tremie
1145 Phase II called as soon as grouting is completed
1545 Phase II ends. Mob back to CN/DPT0313.

## Plans/Future Activities

1600 Drilling starts at CN/DPT0313. Waiting on confirmation of final depth from Jill Johnson
1614 Collect IDS initial sample of DPT0313-033.0'
1705 Collect sample DPT0313-048.0' and this is the last sample for the week. Surface grouting CN/DPT0313 and demobing
1750 IDW secure for weekend.
1800 off site

6/13/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CBITE
Project No.: FR1661
Contractors: EDS

Date: 6/12/14
Task No.: 3102

## Work Performed

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

## Observations/Issues of Concern

0635 - Arrive on site
0640 - Begin calibration of YSI
0650 - EDS begins to demob from AM/0308. Will move to next location, BW/0309.
0700 - EDS begins to grout locations AD (324) & AE (301) (tremie); AF (303), AG (304), AJ (305), AK (306), AL (307) (surface)

0845 - Collect initial sample DPT0309-033.0'.
0918 - Collect sample DPT0309-043.0'. Pull rods & mob to decon area.
1012 - Collect sample DPT0309-048.0'.
1031 - Collect final sample, DPT0309-058.0'. Mob to BX/0310.
1108 - Collect first sample, DPT0310-033.0'. Ben Coppenger arrives on site
1225 - Collect final sample, DPT0310-058.0'. Mob to CL/0311. Break for lunch and to decon rods so that we have 10 clean screens.
1340 - Return from dropping of ~~Rob~~ Mob bringing paperwork and begin to drill at CL/0311
1401 - Collect first sample DPT0311-033.0'
1500 - Phase II called. Stopped right before purging started for DPT0311-048.0'

## Plans/Future Activities

Called Crystal to discuss weather. Will shelter in place and see if phase II passes.
1715 - Lightning observed in area while talking to Crystal Towns about other work, calling work for day. Will resume work at DPT0311-048.0' and
1725 Mob purge extra water ~~from~~ in morning.
1525 - Leave site
1750 - Arrive at TVL office to CCV YSI & drop it off.

6/12/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS

Date: 6/11/14
Task No.: 3#2

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

MB

1814 - Collect final location, DPT0208-058.0. Drillers decontaminating & heading home. ~~MOb~~
Move to stake final locations in woods
1845 - Leave site after talking to Cyndi regarding remnants and drillers
1905 - Drop off GPS unit at TVL office for Jane

MB

**Plans/Future Activities**

6/11/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CBHE
Project No.: FB1681
Contractors: EDS

Date: 6/11/14
Task No.: 3M2 (OLR

## Work Performed

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

## Observations/Issues of Concern

0645 - Arrive on site, begin YSI calibration
0712 - Calibration complete. EDS setting up and review proposed locations of CG BY + CD. Original location of CD approved. BY located approx 18 ft SE of DPT0268 due to railroad tracks. CG will be shifted slightly east upon confirmation by Crystal Towns due to rail road tracks
0730 - EDS mobs to AK/DPT0306.
0740 - Meet Jeff McDowell for utility locate. All new locations BW, BY - CD approved
0819 - Collect first sample, DPT0306-033.0'.
0853 - Collect final sample, DPT0306-043.0'. MOB to AL/DPT0307.
0922 - Collect initial sample, DPT0307-038.0'.
1032 - Collect sample DPT0307-048.0'. Out of rods, drillers mob to clean area. Call Crystal regarding moving clean area to woods area & discuss w/ drillers. Will leave clean pad at current location.
1130 - Collect final sample, DPT0307-058.0'. Mob to AM/0308
1145 - Break for early lunch, plan to grout locations after
1215 - Phase 2 called.

## Plans/Future Activities

1445 - Phase 2 lifted for LC34 area, mob back to AM/0308
1514 - Collect first sample DPT0308-028.0'.
1545 - Collect sample DPT0308-038.0' and then a Phase 2 was called.
1550 - Call Crystal about weather delays and drillers wanting to leave at 1730 regardless
1710 - Phase II lifted. Mob back to DPT0308.
1737 Collect sample DPT0308-043.0'.

6/11/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CBLE
Project No.: FB1681
Contractors: EDS

Date: 6/10/14
Task No.: 31.2 (ULB)

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1710 - Collect initial sample DPT0305-038.0'
1726 - Final sample collected, DPT0305-043.0', Pulled rods + drillers closing up for day
1740 - Off site for day. Picking up stakes at Home Depot for tomorrow

**Plans/Future Activities**

6/10/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FB1681
Contractors: EDS

Date: 6/10/14
Task No.: 3.1.2 (GWLR)

## Work Performed

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

## Observations/Issues of Concern

0635 - Arrive on site, begin VST calibration
0705 - Calibration complete
0738 - Collect final sample, DPT0300-058.0'. Move to ~~AD/301~~ AE/301 per Crystal Tower
0820 - Collect initial sample, DPT0301-038.0'.
0926 - Collect final sample, DPT0301-058.0'. Move to AD/302.
1003 - Collect initial sample, DPT0302-043.0'. Break from drilling to clean + grout locations
1005 - Start locate for additional DPT locations.
Discuss changing locations at BY, CD, CC w/ Crystal due to railroad tracks
1130 - Talk to Jeff McDowell about utility locate tomorrow. Informed that any location in right of way can not be drilled this week
1135 - Grouting complete: X/296, Y/297, Z/298 (tremie) AB/299, AC/300 (surface)
1155 - Collect final sample, DPT0302-~~038.0~~ 048.0'. Move to AF/0303
1205 - Mob to DPT0303. Beside a blocking access, so location was moved approx. 10 ft to SE. Break for lunch
1315 - Collect initial sample, DPT0303-038.0'.

## Plans/Future Activities

1356 - Collect final sample, DPT0303-048.0'. Mob to AG/DPT. Shift location ~3ft east due to root obstructions
1438 - Collect first sample, DPT0304-038.0'.
1557 - Collect final sample, DPT0304-058.0'. Move to AJ/DPT0305. Mob back to decon rods & dispose of IDW
1640 - Collect IDW 197034 sample

6/10/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 2 of

Project: CRHF
Project No.: FB1681
Contractors: EDS

Date: 6/9/14
Task No.: 3152 (ULR)

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1441 - Sample DPT-0299-~~0.33~~ MB 033.0' collected at location ~~DPT0298/AB~~ DPT0299/AB
1517 - Sample DPT-0299-043.0' collected. Out of screens, moving to clean area.
1555 - Resume drilling at AB/DPT0299
1610 - Collect final sample, DPT0299-048.0'. Move to ~~A2~~ MB AC/300
1641 - Collect first sample, DPT0300-038.0'.
1717 - Collect sample, DPT0300-048.0'. Last sample of day. Clean up location and dispose of appropriate IDW
1735 - Depart site for day
1800 - Pick up GPS unit from TVC office
1840 - Start CCV for day

MB

**Plans/Future Activities**

6/9/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of

Project: FRTGST CRHE (mb)
Project No.: FR1631
Contractors: EDS

Date: 6/9/2014
Task No.: 3142 (RLB)

## Work Performed

Well Installation:
Soil Borings:
DPT: DPT GW sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

## Observations/Issues of Concern

0655 - Arrive on-site, discuss with drillers about filling holes that have had grout settle in parking lot (A2 & B2) (DPTs 0294 & 0295)
0700 - Crystal informs that X/296 needs a sample taken from 56-60'
0740 - Contact Crystal about Sp. Cond. calibration. YSI keeps calibrating up to 1,515 instead of 1,413. => Error (mb) was caused by calibrating to Sp. Cond. not conductivity. Issue resolved
0745 - EDS begins to drill to 56-10' at X/296
0800 - Collect DPT0296-058.0 (final sample). Pull rods & move to next location Y/DPT0297
0836 - Collect initial DPT0297-033.0' sample
0853 - Collect DPT0297-038.0' & mob to decon area to decon (drilling mb) equipment
0920 - Decon complete; EDS lays asphalt at locations A2/0294 & B2/0295
1003 - Collect DPT0297-043.0' after decon & asphalt laying
1022 - Collect final sample, DPT0297-048.0'. Move to location Z/0298
1114 - Collect initial sample, DPT0298-033.0'
1212 - Collect DPT0298-048.0' and break for lunch

## Plans/Future Activities

1255 - Back from lunch. Deposit IDW & then mob back to DPT0298
1336 - Collect final sample, DPT0298-058.0'. Move to AA/~~DPT0299~~ mb
1355 - Collect IDW-145130 sample
~~0205~~ (mb) 1405 - Call Crystal. What looks to be a gopher tortoise hole (x2) located ~5ft east of AA. She contacted Becky and instructed to move to next location, AB, until Beck inspects site. Becky performed eco survey in May

note: Crystal = Crystal Towns
Becky = Becky Bolt.

MLB 6/9/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CBHE
Project No.: FR1681
Contractors: EDS

Date: 06/06/14
Task No.: 31#2 (ULR)

## Work Performed

Well Installation:
Soil Borings:
DPT: DPT GW sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

## Observations/Issues of Concern

-1535 Call Crystel. East step-out of S=S-1. Relocate it to southwest of current location, within 25 ft of S/268. AA is best shifted to south. AF is best shifted to southwest. Keep shifting minimal for S-1, AA, and AF. Ace supposed to grout B2/294 & A2/295

-1637 Collect DPT0296-048.0 (final sample). Pull rods & break down location

-1530 Leave site.

MB

## Plans/Future Activities

6/6/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: CRHE
Project No.: FR1691
Contractors: EDR

Date: 06/06/14
Task No.: 3.1.2 (WLR)

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0655 Arrive on site + calibrate ~~equipment~~ (PS) YSI. Drillers grouting.
0715 Mike Burcham arrives on site. Review SOW with him. Show him lab location at CCF, spill pallets + boring locations in + around woods N of ~~Cont~~ (CS) Contractor's Rd.
0810 Conduct H+S briefing + set up on A2/DPT0295 location.
0820 Attempting to break ground at DPT0295
0928 ~~Hand~~ augering complete + begin drilling.
~~1131 Collect DPT08~~ 0945 Collect initial DPT0295-018.0' sample.
1151 Collect DPT0295-033.0' sample + break for lunch after rods are removed from hole. Anne Chrest + Harry Plaza stop by. Tell her that we are on second angled hole w/slightly slower progress on angled drilling but no problems + all applicable samples collected so far.
1215 Actually depart site for lunch.
1245 On site + resume drilling.
1315 Collect DPT0295-038.0' sample.

**Plans/Future Activities**

1354 Collect final DPT0295-043.0' sample. Pull rods + break down equipment to mobe back across street into woods.
1420 Moving equipment + rig off site.
1515 Drilling began at X/DPT0296
1530 Collect DPT0296-033.0 sample (initial sample at location)

6/6/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS

Date: 06/05/14
Task No.: 3.1.2 (WLR)

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1407 Collect ~~Complete~~ initial DPT0294-018.0' sample.
1656 Collect final DPT0294-043.0' sample using 70' of rod at 40° angle.
~~1656 Collect final (S)~~ ~~Calibrate (S)~~ Conduct CCD or YSI while drillers pull rods. ~~Grout (S)~~
1730 Depart site for fuel + water.

**Plans/Future Activities**

Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDS

Date: 06/05/14
Task No.: 3182 (ULR)

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums: IDW sample

**Observations/Issues of Concern**

0700 Arrive on site + calibrate YSI. Drillers picking up another spill pallet.
0730 Drillers arrive + conduct H+S briefing. Then set back up to continue at V/DPT0292 location.
0826 Collect final DPT0292-058.0' sample. Move to W/DPT0293.
0912 Collect initial DPT0293-033.0' sample.
1102 Collect final DPT0293-058.0' sample. Break down rig to move back across street to E+ prep for angled drilling. Talk to Gary Osborn who is currently operating Facilities Mgr. + he ok's location + prepared setup area! He indicates that we should set up cones for our safety in the parking lot but that his guys should have access in/out as needed based on what we discussed.
1213 Collect IDW195129 sample. Move rig to Facilities Mgmt. building along w/truck + materials from spill pallet area.
1255 Attempting to break ground at B2/DPT0294.
1330 Complete hand augering through road base w/help of breaker bar + prep to drill to first depth 20' bls = 31' of rod at 40° angle.

**~~Plans/Future Activities~~**

Note: a difference in surface elevation is evident between the east + west sides of the road w/ the woods w/ the ditches in the woods. The variation in elevation appear to range between 2-5' based on viewing w/naked eye. This may result in discrepancies in data for various "depths below surface" if grouped or evaluated together.

06/05/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Contractors: EDS

Date: 06/04/14
Task No.: 3142 (WR)

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0650 Arrive on site, conduct H&S briefing calibrate YSI + set up to resume sampling at DPT0289 location.
0728 Collect DPT0289-023.0' sample.
0943 Collect final DPT0289-058.0' sample. Move to T/DPT0290.
~~1204 Coffee~~ 1045 Collect initial DPT0290-033.0' sample.
1204 Collect final DPT0290-058.0' sample. Move to U/DPT0291, but get stuck along the way in mud that was concealed beneath clear cut debris. Use mud mats, wood + truck to work rig out.
1345 Rig is out of mud + set up at DPT/0291.
1404 Collect initial DPT0291-033.0' sample.
1558 Collect final DPT0291-058.0' sample. Move to V/DPT0292.
1647 Collect initial DPT0292-033.0' sample.
1725 Collect DPT0292-043.0' as last sample for day. Drillers break down rig, ~~samp~~ CS decon + empty decon pit. Conduct CCV on YSI.
1750 Depart site for Tville office to get new YSI + send old one back + copy additional forms.

**Plans/Future Activities**

1850 Depart Tville office.

CS

CS 06/04/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Contractors: EDS

Date: 06/03/14
Task No.: 3142 (LLE)

## Work Performed

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums: IDW sample

## Observations/Issues of Concern

0650 Arrive on site, conduct H+S briefing, calibrate YSI + set up on BK/DPT0285. This location is 4' east of proposed due to utilities.
0733 Collect initial DPT0285-033.0' sample. (JS)
0854 Collect final DPT0285-058.0' sample + move to BG/DPT0286.
0932 Collect initial DPT0286-028.0' sample.
1134 Collect final DPT0286-058.0' sample. Move to BH/0287.
1246 Collect initial DPT0287-028.0' sample.
1345 Collect final DPT0287-043.0' sample. Move to BI/DPT0288.
1443 Collect initial DPT0288-028.0' sample.
1607 Collect final DPT0288-043.0' sample. Move to R/DPT0289 on other side of tracks toward woods.
1614 Collect IDW195128 sample.
1659 Collect initial DPT0289-010.0' sample.
1712 Collect DPT0299-018.0' sample as last sample for day. Drillers head to decon equipment. Break down sample area + conduct QCV on YSI.

## Plans/Future Activities

1845 Depart site

(JS)

06/03/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Contractors: EDS

Date: 06/02/14
Task No.: 3182 (WLP)

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums: IDW Sample

**Observations/Issues of Concern**

0655 Arrive on site, conduct H&S briefing + calibrate YSI.
0730 Collect initial DPT0281-028.0' sample.
0745 Jeff + Rylan arrive for utility locate. Stop DPT temporarily to go with them to additional locations at facilities bldg across road to west, in woods + along woods + storm ditch west of woods.
0832 Resume sampling at DPT0281-038.0'. We are clear to drill points AI, AH, AO, AN + AP on 6/5, 6, 12 or 13 but not any other days based on current launch schedule. Check back with locators between 6/9-11 to verify if that schedule is still good. All other points are unaffected by launch activities + are cleared for utilities with the exception of angled drill points which are only "clear" for vertical drilling.
0909 Collect final DPT0281-048.0' sample. Move to BQ/DPT0282.
0939 Collect initial DPT0282-023.0' sample.
1137 Collect final DPT0282-058.0' sample. Move to BP/DPT0283.
1234 Collect initial DPT0283-028.0' sample.

**Plans/Future Activities**

1349 Collect final DPT0283-048.0' sample. Move to BJ/DPT0284.
1425 Collect initial DPT0284-028.0' sample.
1558 Collect IDW195127 sample.
1633 Collect final DPT0284-058.0' sample. Conduct CCV on YSI + prep to decon + grout.
1730 Complete grouting DPT0277-0283. Depart site.

06/02/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of

Project: CCHE
Project No.: FR1681
Contractors: EDI

Date: 05/30/14
Task No.: 3 & 2 (LUCE)

## Work Performed

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums: IDW Sample

## Observations/Issues of Concern

0450 Arrive on site, conduct H+S briefing, calibrate YSI + set up on BV/DPT0278.
0729 Collect initial DPT0278-038.0' sample.
0825 Collect final DPT0277-058.0' sample. Move to BT/DPT0278.
0859 Collect initial DPT0278-028.0' sample.
1007 Collect final DPT0278-048.0' sample. Move to BS/DPT0279.
1038 Collect initial DPT0279-028.0' sample.
1157 Collect DPT0279-043.0' sample + decon. Drop samples to lab.
1240 Phase II Lightning shutdown - secure equipment + get in vehicles.
1330 Phase II lifted + set up to push down for final DPT0279 sample.
1346 Collect final DPT0279-048.0' sample. Move to BU/DPT0280.
1422 Collect initial DPT0280-023.0' sample.
1445 Phase II Lightning shutdown. Secure equipment, get in vehicle, drop samples at lab + attempt to contact locators via phone + office.
1520 Phase II terminated + resume drilling DPT0280.
1622 Collect IDW193876 sample.

## Plans/Future Activities

1635 Collect final DPT0280-048.0' sample. Decon + conduct CCV on YSI.
1710 Mark additional locations for Monday utility locate (5 spots around S-S1 25'E + S2 25'W), B3 between A2 + B2 + D1 15'N + W of NE Facilities Bldg (KO-1996H) corner + D2 25'W + 15'N of same bldg. corner.
1800 Finish new location markings + depart site.

05/30/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CCHG
Project No.: FR1681
Contractors: EDT

Date: 05/29/14
Task No.: 3+A2 (ALE)

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0655 Arrive on site. Conduct H+S briefing. Calibrate YSI.
0715 Begin location 0/DPT0273.
0729 Collect initial DPT0273-038.0' sample.
0828 Collect final DPT0273-058.0' sample. Move across tracks to former 227 location to collect single deep sample.
0906 Collect only sample at DPT0227-048.0'. Move to L/DPT0274.
0944 Collect initial DPT0274-033.0' sample.
1045 Break from sampling to decon sample screens.
1132 Collect final DPT0274-058.0' sample. Mobe to K/DPT0275.
1200 Pick up GPS to finish locating points in + around woods.
1220 Drilling DPT0275.
1239 Collect initial DPT0275-038.0' sample.
1342 Collect final DPT0275-058.0' sample. Move to J/DPT0276.
1415 Collect initial DPT0276-033.0' sample.
1540 Collect final DPT0276-058.0' sample. Drillers prep to decon + grout. C. Schultz to see NASA PM - Anne Christ + review engineering drawings ~~Plans/Future Activities~~ for K6-1996 H&S Bldg. re: angled drilling. Photograph of sketched approximation of line or map (Ex) + summary of conversation w/A. Christ emailed to J. Johnson + C. Towns at Geosyntec.
1730 Drillers depart site. C. Schultz marks remaining locations in + around woods west of site that do not require MOT plan.
1820 Conduct CCV on YSI.
1840 Depart site. DPT0268-0276 + 0227 have been grouted per instruction.

Christ Schultz 05/29/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: EDJ

Date: 05/28/14
Task No.: 3142 (ULR)

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1745 Collect final DPT0272-058.0' sample.
1755 Conduct ECV on USI. Label drum + spill pallet
1815 Take samples to KB lab at CCF.
1830 Depart site.

**Plans/Future Activities**

Christ Jolly 05/28/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: No: FR11681
Project No.: CRHE
Contractors: EDS (Environmental Drilling Svcs.)

Date: 05/28/14
Task No.: 31 # 2 (LUR)

**Work Performed**

Well Installation:
Soil Borings:
DPT: DPT GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0700 Arrive on site + calibrate YSI.
0730 Pick up complete approved permit.
0800 Meet drillers on site, conduct H+S briefing + set up rig at S/DPT0268. Contact Diane Bont (321) 861-4121 whose name is on Bldg. K4-1844D + confirm the facility train cars + tracks are inactive (facility mothballed) so drilling between or near tracks OK.
0830 Hand auger DPT0268.
0901 Collect initial DPT0268-033.0' sample.
1017 Collect final DPT0268-058.0' sample. Move to Q/DPT0269.
1051 Collect initial DPT0269-038.0' sample.
1141 Collect final DPT0269-058.0' sample. Set up to move between tracks to location M.
1200 Break for lunch.
1215 Resume working - pick rocks + hand auger at M/DPT0270.
1256 Collect initial DPT0270-038.0' sample.

**~~Plans/Future Activities~~**

1305 Build decon pit + decon sample screens.
1335 Resume sampling at DPT0270.
1427 Collect final DPT0270-058.0' sample. Move to N/DPT0271.
1451 Collect initial DPT0271-038.0' sample.
1549 Collect final DPT0271-058.0' sample. Move to P/DPT0272.
1623 Collect initial DPT0272-038.0' sample.

Chris Kelly 05/28/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR11681
Contractors: Bear

Date: 8/18/14
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

8:00 am - Health & Safety talk - heat stress, bugs
9:19 am - Drillers brought refurbished drums - could not use
9:06 - Begin hand augering AI
AI ~~31-35~~, 36-40, ~~41-45~~, 46-50', 56-60'
Sampled 314 (AI) ~~9:45~~ 9:50 36-40'
Sampled 313 (AI) 41-45' @ 10:16 am
10:50 Sampled 314 (AI) 46-50' ~~@ 10:50~~ no parameters read due to low flow / Sampled 56-60 @ 11:13
Moving to 315 (AO) @ 11:25 36-40', 41-45', 46-50, 56-60'
1:25 AO Complete Moved to AN 316
AN 36-40', 41-45, 46-50, 56-60
3:25 316 (AN) Sampling Complete
317 begin at 3:49 31-35, 36-40, 41-45, 46-50, 56-60
4:40 End of day's sampling

**Plans/Future Activities**

CSM

Signature/Date 8/18/2014

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRTE
Project No.: FR1681
Contractors: Bear

Date: 6/24/14
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

3:30 Grouting complete along with Asphalt
3:34 Begin to transfer waste into DOT drums.

CM

**Plans/Future Activities**

Christopher Martin 6/24/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: CRHE
Project No.: FR1681
Contractors: Bear

Date: 8/24/14
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

C.G. on site
6:30 discussed days plan with MOT
7:23 Could get the YSI to Calibrate PH
7:25 Calibrated Conductance 1.36
7:27 started drilling 337 (AX)
8:13 Sampled 337-045
8:38 sampled 337-044
8:31 Sampled 337-056
8:45 10 min break
8:55 begin drilling 338 (BC)
9:06 Sampled 338-028
9:25 Sampled 338-033
9:45 Sampled 338-036
9:55-10:05 Break for heat
10:15 started drilling 339 (BD)
10:24 Sampled 339-028

**Plans/Future Activities**

10:46 Sampled 339-033
11:07 Sampled 339-038
Started Grouting 11:20
12:13 Drillers have to go get more grout & ashalt
Patch
1:07 Driller back

1:10 begin grouting

Signature/Date 8/24/14

j:\admnshare\rem-form\DAILY

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHF
Project No.: FR1685
Contractors: Bear

Date: 8/23/14
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1250 MOT began switching lane protection
1235 15 min break because of heat
1250 begin drilling 336 (AW)
1314 336-028 Sampled
1333 336-033 Sampled
1352 336-038 Sampled
1415 336-043 Sampled
1442 336-048 Sampled
1504 336-058 Sampled
1520 30 min break due to heat
1550 started drilling 337 (AW)
1609 337-033 Sampled
1628 337-038 Sampled

**Plans/Future Activities**

CDM

Christopher Mathe 8/23/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: GRHF
Project No.: FR1681
Contractors: Bear

Date: 8/23/14
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

6:15 - on site
AR 31-35, 36-40, 41-45, 46-50, 56-60
AQ 31-35, 36-40, 41-45, 46-50, 56-60
AW 26-30, 31-35, 36-40, 41-45, 46-50, 56-60
AX 31-35, 36-40, 41-45, 46-50, 56-60
6:40 MOT begin prepping for days work
6:45 drillers on site
7:40 started drilling 334(AR)
8:01 334-033 Sampled
8:24 334-038 Sampled
8:42 Drillers have to repair equipment - shut down
8:58 repairs Completed
9:17 334-043 Sampled
9:38 334-048 Sampled
10:03 334-058 Sampled
10:20 - 10:30 tooth breaks

**Plans/Future Activities**

10:35 began drilling 335 (AQ)
10:47 335-033 Sampled
10:09 335-038 Sampled
11:32 335-043 Sampled
11:56 335-048 Sampled
12:20 335-058 Sampled

8/23/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRTE
Project No.: FR16081
Contractors: Bear

Date: 8/22/14
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

11:50 Sampled 332-038
11:58 Cracked barrel - had to replace
12:02 Replaced & drilling
12:24 Sampled 332-043
~~13:15~~ 12:59 Sampled 332-049
13:19 Sampled 332-058
13:50 Began drilling 333 CDB
14:13 Sampled 333-026
14:37 Sampled 333-035
14:54 Sampled 333-043
15:17 Sampled 333-048
15:38 Sampled 333-058
15:56 Begin re-drilling CJ
16:22 Sampled 318-045

**Plans/Future Activities**

CM

8/22/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: CRHE
Project No.: FR1684
Contractors: Bear

Date: 6/22/14
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

6:30 Arrived on Site
7:00 Drillers on site
7:31 Labed drums & Container - had to transfer Waste
7:45 Driller had to ~~refill off~~ Site get PPE
~~BG~~ Locations DE 31-35, 36-40, 41-45, 46-50, 56-60
CJ 31-35, 36-40, 41-45, 46-50, 56-60
CK 31-35, 36-40, 41-45, 46-50, 56-60
CX 31-35, 36-40, 41-45, 46-50, 56-60
DB 26-30, 36-40, 41-~~45~~, 46-50, 56-60
7:46 Drillers began MOB TO Site
All Movement today will be hendered by terrain & distance
8:40 Begin drilling DE one driller had to go get hearing protection
8:59 331-033 Sampled
9:24 331-038 Sampled

**Plans/Future Activities**

9:49 tubing Clogged with Sediment
9:56 Sampled 331-043
10:20 Sampled 331-048
10:44 Sampled 331-058
10:46 Drilling 332(CK)
11:30 Sampled 332-033

6/22/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: Boa

Date: 8/21/14
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

2:50 began drilling CC
3:07 Funny noise coming from Hole.
3:15 Sampled 330(CC)-038
3:32 Sampled 330-043
3:55 Sampled 330-048
4:22 Sampled 330-053 no parameters measured due to low flow
4:29 Sampled 330-058
Day Sampling Complete

CM

**Plans/Future Activities**

Signature/Date 8/21/14

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: CRITE
Project No.: FR1681
Contractors: Bear

Date: 8/21/14
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

6:25 arrived on site
6:35 Located Drill sites for the day
6:45 Drillers on site
7:36 begin drilling CB1327
7:58 Sampled 327-038
8:24 Sampled 327-043
8:47 Sampled 327-048
9:16 Sampled 327-053 Low flow - no parameters Measured
9:45 Sampled 327-058
10:00 Began drilling 328-[redacted] (CA)
10:28 Sampled 328-038
10:54 Sampled 328-043 Low flow - no parameters Measured
11:16 Sampled 328-048
11:41 Sampled 328-053
~~After~~ 12:00 pipe tryed 15 min break for heat.
12:37 Began Drilling 329(B2)

**Plans/Future Activities**

13:04 Sampled 329-038
13:10 Phase 1 lightning
13:26 Sampled 329-043
13:44 Sampled 329-048
14:07 Sampled 329-053
14:29 Sampled 329-058

Christopher Mathews 8/21/14
Signature/Date

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Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRTE
Project No.: FR11681
Contractors: Bear

Date: 8/20/14
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

10:50 Sampled 323(D) - 048
11:01 Sampled 323(D) - 058
11:15 Waiting for MOT to Clear lane
11:30 Begin drilling E
11:55 Sampled 324(E) - 038
12:20 Sampled 324(E) - 043
12:40 Sampled 324(E) - 048
13:03 Sampled 324(E) - 058
13:10 - 13:20 Shuttle MOT Contractor meeting location
13:30 Begin drilling (4th (325)
13:50 325-038 Sampled
14:12 325-043 Sampled
14:35 325-048 Sampled
14:46 Moved to 15 min break - everyone
Near heat extraction
15:26 326-038 Sampled

**Plans/Future Activities**

15:44 326-043 Sampled
16:11 Millers broke Barrel of screend unit (cant go deeper in this hole
1614 326-048 Sampled
1641 326-058 Sampled

8/20/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 2

Project: CRHE
Project No.: FR1681
Contractors: Bear

Date: 6/20/14
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

6:30 On Site: First boring DC 36-40, 41-45, 46-60
Second CY 36-40, 41-45, 46-50
third APG 36-40, 41-45, 46-50, 56-60
4th BD 36-40, 41-45, 46-50, 56-60
ES 36-40, 41-45, 46-50, 56-60
6:43 Drillers on site
BM 36-40, 41-45, 46-50, 56-60
7:19 begin drilling 322(C)
7:59 322-036 Sampled
8:21 322-043 Sampled
8:45 322-048 Sampled
9:06 322-058 Sampled
9:24 begin drilling 323(D)
9:55 Sampled 323-036
10:16 Sampled 323-043

**Plans/Future Activities**

CM

8/20/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRTF
Project No.: FR1681
Contractors: Beex

Date: 8/12/14
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

Miss labeld Bore hole FJAS G
321 Sampling Complete 17:16

CM

**Plans/Future Activities**

8/12/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1058.1
Contractors: Boa

Date: 8/19/14
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

12:21 Sampled 319-043
12:50 Sampled 319-048
13:10 Sampled 319-058
~~13:15~~ Drillers broke for 13:25 for 5 min
13:37 began drilling I-320
13:49 Sampled 320(II)-036
14:08 Sampled 320-043
14:29 Sampled 320-048
14:50 Sampled 320-058 Boring Complete
Moving to 321 (G) 36-40', 41-45', 46-50', 56-60'
1519 Begin drilling 321(G)
1537 trouble getting water to pump
1536 have to tript the pipe to check screened interval
1551 trouble getting rods to clear to screen interval
well not opening again
1600 321-038 Sampled

**Plans/Future Activities**

CM

8/19/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: Bear

Date: 8/19
Task No.:

**Work Performed**

Well Installation:
Soil Borings:
DPT: GW Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

7:00 on site
8:25 pulled first sample @ P-317 41-45
8:49 pulled 317 OC18 sample - no parameters collected dox to low Sbu
9:11 sampled 317-858
DE 31-35', 36-40' 41-45', 46'-50', 56-60'
CJ 31-35', 36-40, '41-45, '46-50, 56-60'
10:15 Went to Meet MOT - ~~Brake~~
10:55 truck stuck in ~~transit~~ - having to pull out with the drill rig.
10:10 Loading rig on trailer to move to Contractors load.
H & I = 36-40, 41-45, 46-50, 56-60
11:16 Begin Setup for I & H
11:45 @ 36-40 Rt b/s about to begin purging
11:57 sampled 036-319~~(I)~~(H)

**Plans/Future Activities**

CM

8/19/2014
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: Bear Drilling

Date: 9/22/14
Task No.: 36*1

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0645- Arrive @ badging office to meet Bear crew. Drill crew is inside getting badges
0710- Conduct initial Tailgate Safety meeting and discuss week ahead
0735- Call KSC Utility (Jeff McDowell) confirm that duty office needs to be called prior to drilling when in/near right of ways, but not in other locations. Rules regarding Critical Days apply to some areas as well
0835- Picked up sample vials from KB Labs. Will do one pickup @ end of day. I will keep samples on ice until lab receives
0855- Do walls of brush w/ Bear EB, DF not drillable due to standing water, FE in heavy brush
0910- Drilling starts @ AA/DPT 0340
0925- No productivity @ 31-35 ft BLS. Drillers getting check valve from vehicle south of work area. Valve was not in trucks. Finished depth by pulling GW available for geochem and then pulling as much GW as possible, using for sample & recirculating to collect more

**Plans/Future Activities**

1136- Complete AA/DPT 0340. Mob to CX/DPT 0341. Drillers mob to IDW area to decon
1140- Contact Lane Drennan, drillers do not have steam pressure washer for decon, just pressure washer. Lane says to have them rent one tomorrow, use regular pressure washer today
1232 Begin drilling at CX/DPT 0341

9/22/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHF
Project No.: FR1681
Contractors: Bear

Date: ~~10/14~~ MB 10/1/14
Task No.: 36 1

**Work Performed**

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other: Grouting open boreholes

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0730 - Arrive on site to meet Bear & finish grouting locations
0750 - Bear arrives, mob & grout
0840 - Grouting complete
0900 - Bear off site, Finishing IDW QC

**Plans/Future Activities**

10/1/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: FR1681 - CRHE
Project No.: FR1681
Contractors: Bear

Date: 9/30/14
Task No.: 36*T

**Work Performed**

Well Installation:
Soil Borings:
DPT:
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1429 - While inserting poly tubing w/ check valves, tubing would not go past certain point & reach the screen interval. It was unable to be removed. Pulled rods from 55 ft BLS & decommissioned portions that had mushroomed
1446 - Collect sample CRHE-IDW-~~19327~~ MB 198327
1500 - Collect Sample ~~ED~~ MB CRHE-IDW 198328
1305 - Drilling restarts @ EC/DPT0357
1545 - Complete EC/DPT0357. Talk w/ Lane. Done @ CRHE w/ drilling activities. Grout open locations & manage IDW. Tremie locations sampled today & EH. Can pour ED & EF. Will go w/ Brian to help w/ grout while Chris manages IDW
1626 - Phase II called while grouting ED. EH grouted via tremie prior to phase II. Weather says phase II should end by 1800 at the latest (as of 1650)
1745 - Contact Zone. Weather getting bad in wooded area, leave before grouting location & rob to decon area to manage IDW when phase II lifted
MB ~~06~~ 1845 - Phase II terminated. Manage IDW
1905 - Leave site

**Plans/Future Activities**

9/30/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: Bear (Chris & Brian)

Date: 9/30/14
Task No.: 36*1

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0645 - Arrive on site. Bear at decon area already. Begin YSI cal.
0706 - Mob to work area & finish cal there
0710 - Call Duty Officer to inform of drilling, next straight to voice mail. Will call back
0735 - Approx. 6"-8" standing water at drill location EG/DPT0355. Call Lane to discuss. Will pull rods, grout immediately via tremmie & move to EA/DPT0356 which is not located in standing water. Mob to get grout supplies
0815 - Grout supplies back at location. Begin to mob pull rods & grout
0825 - EG/DPT0355 grouted. Mob to EA/DPT0356
0830 - Drilling starts @ EA/DPT0356
1105 - Drilling complete @ EA/DPT0356. Will go check out area around BE while Chris mobs rig out of here to see if it is accessible following heavy rain yesterday
1115 - During visit to BE, Lane contacts me & informs that NASA RPM would like us to finish EG, mob back to EG
1136 - Call Lane, grout from earlier is fluid @ area around EG, and worried it will flow into drilling location. Call Jeff McDowell to see if we can move to a higher location, which is closer to utility (only one marked, line visible). Jeff says there are four utilities in right of way we are drilling in & can be out in in hour to locate.
1150 - Call Lane and tell him about utilities. Decides that we should move to EC/DPT0357. Begin mob ~~to~~ mb to location
1230 - Begin to hand auger. Run into rocky layer ~2ft. Use macro core ~~the~~ mb to move past impermeable layer, hand auger to 5ft BLS

**Plans/Future Activities**

9/30/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Contractors: Bear (Brian Starr & MB, Chris Carmichael)

Date: 4/29/14
Task No.: 36*1

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0650 - Arrive on site. Bear on site already. Calibrate YST while Bear preps to mob to wells

0730 - Begin mob to wells. Will go ahead to see if access road is possible for support vehicle. If not, will leave support vehicle in dry part of creek road, but that will make mobing for Bear more time consuming

0840 - Set up @ EH/DPT0353. Scoped out location EE on way to EH, new location under ~2" standing water. Relayed info to Lane Dorman. Also looked for debris mentioned in email + couldn't find it. Confirmed w/ Lane that we will skip collecting a sample @ 51-55 ft BLS

0945 - Screen broken as rods being pulled, on top portion unthreaded to other rods retrieved. Screen + casing unretrievable

1131 - Complete EH/DPT0353. Mob to finish EF/DPT0343.

1301 - Complete EF/DPT0343. Mob to ED/DPT0354. GPS DPT0353 in process

1315 ~~1305~~ - Begin drilling at ED/DPT0354.

1435 - Brian (Bear) rods while Chris MB ~~goes~~ goes to Bear screens

1606 - Finish ED/DPT0354. Mob to EG/DPT0355

**Plans/Future Activities**

1610 - Call duty office since EG/DPT0355 is in right of MB ~~west~~ way. OK to drill.

1630 - Drilling begins @ EG/DPT0355

1647 - Collect sample @ EG/DPT0355 from 31-35 ft BLS. Tells to Lane, Weather is moving in. Will leave rods in ground + mob to Bear area to handle IDW

1720 - Finish IDW + Bear pit management, Phase II walked.

1730 - Leave site

4/29/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Contractors: Bear

Date: 9/26/14
Task No.: 36*1

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0650- Arrive on site, same time as Bear
0700 - Call KSC Duty office regarding drilling on/near right of ways. OK to drill
0702 - Begin YSI cal
0750 - Begin drilling at CG/DPT0350. Unable to hand auger to 5 ft BLS, obstruction reached ~ 0.5 ft BLS (appears to be thick rock layer from soil coal). Use DPT rig to push through layer and then hand auger to 5 ftBLS.
0930 - KSC Utility on site. Remarks utilities around BN + approves alternate location to west incase BN cannot be drilled
1050 - Location CG/DPT0350 complete. Mob to BN/DPT0351
1102 - Jill contacts me to get Kevin to call her. Talk to Lane about drillers not work
1115 - Drillers able to set up at original BN location. Unable to hand auger initial 1 ft. Use bit and then hand auger to 5 ft BLS
1155 - Kevin leaves to meet Jeam company @ lodging office to collect NASA approved drums
1340 - Complete BN/DPT0351. Mob to CE/DPT0352 following discussion w/ Lane.
1400 - Drillers unable to hand auger past ~1 ft BLS. Use drill bit to push through depth + then hand augered to 5 ftBLS

**Plans/Future Activities**

1625 - Complete CE/DPT0352. Call Lane, does not want us to start another location since it would be open over weekend. Mob to manage IDW
1755 - IDW in drums. Sample CRHC-IDW 198326 collected
1800 - off site

9/26/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: Bear, TCPF

Date: 9/25/14
Task No.: 36*1

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1715 - Give GPS unit to Whitney Morrison
1735 - Complete BM/DPT0349. Will surface grout per Lane
1835 - Locations BF, AU, AV, AY, AS, EF, AA, CT, CX (DPT0340-0348) were tremie grouted by other Bear crew and BM was surface grouted
1840 - Leave site

**Plans/Future Activities**

9/25/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: Bear, Traffic Control Products of Florida (TCPF)

Date: 9/25/14
Task No.: 36*1

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0635- Meet Bear @ office to pick up drums. No drums have been delivered
0700- Arrive on site. Discuss drum situation. Will temporarily store IDW in buckets or temporary drums until approved drums are delivered today or tomorrow. Begin YSI cal while Bear demonstrates rods/puts together drum pit
0800- Talk w/ Lane about removing 51-55' BLS from sampling plan @ AY/0347
0805- Begin to GPS drilled locations in median area while Bear sets up location
0830- Begin drilling activities @ AY/0347
1040- Complete location AY/DPT0347. Mob to BF/DPT0348 on west shoulder & TCPF moves shoulder closure cones
1100- Drilling activities begin @ BF/DPT0348
1335- Location BF/DPT0348 Complete. GPS AY/0347 & BF/0348 & Mob to ET/0349. TCPF is at ET/0349 setting up lane closure
1415- Set up to begin @ ET/0349. Lane Dorman calls, informs that client does not want ET sampled. Will sample BM next. TCPF needs to move lane closure before drilling starts.

**Plans/Future Activities**

1450- MB ~~MOT~~ TCPF closes lane to work @ BM/0349
1457- Begin to push through asphalt w/ DPT rig @ BM/0349. Will hand auger to 5 ft BLS once through asphalt
1615- Lane informs that locations in the woods (AA, CI, CX) need to be transit granted & the open EF can be prior granted
1715- Bear crew from 393 is going to grant wooded locations per specs

9/25/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**

Page 1 of 1

Project: CRHE
Project No.: FR1681
Contractors:

Date: 9/24/14
Task No.: 36*1

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

0630- Arrive @ badging office to meet MOT employee (Rick)
0715- Rick w/ MOT company arrives @ badging office
0730- Call Duty Office about drilling in right of way, Duty Office gives all clear
0740- Rick mobs to set up road way/shoulder closures
0820- Arrive at Kennedy Parkway Drilling location. Rick has set up shoulder closure
0830- DPT rig unloaded. Bear is making trailer back to Decon area
0850- Drilling starts @ AS/DPT0344
1110- Drilling complete @ AS/DPT0344. Mobing to AV/DPT0345. Shoulder cones being removed from current location & moved to central median
1120- AV appears to have not been located by KSC. Called to confirm but no response
1140- Drilling starts @ AV/DPT0345
1230- Phase II announced
1255- Phase II terminated, mob back to site & continue drilling
1325- Call Jeff McDowell & confirm location AU is clear of utilities
1436- Complete AV/DPT0345. Mob to AV/DPT0346

**Plans/Future Activities**

1505- Begin drilling @ AU/DPT0346
1725- Location AU/DPT0346 complete. MOT begins to breakdown area, Bear does as well. Mob back to Decon area to manage IDW.
Collected samples IDW 197036 & IDW 195315
1815- Leaving site

9/24/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors:

Date: 9/23/14
Task No.: 36*1

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

and will collect sample, and then mob DPT rig back to down area for access tomorrow

~~0640~~ - 1740 - Collect 048.0 @ EF/0343. Pull rods & mob DPT rig back so MOT can start work first thing Wed. AM. Get car stuck during mob. Joe Bartlett gives me NASA paper

1840 - Dispose of IDW

1845 - Hand samples off to KB Labs. Off site for day

**Plans/Future Activities**

9/23/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: Bear Env.

Date: 9/23/14
Task No.: 36*1

## Work Performed

Well Installation:
Soil Borings:
DPT: Groundwater Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

## Observations/Issues of Concern

0630 - Arrive on site. Begin YSI calibration
0645 - Bear arrives on site w/ power steam cleaner as discussed yesterday
0715 - Dispose of IDW from yesterday while Kevin (Bear) goes to other Bear site for tubing
0800 - Mob back to woods & begin to pull screen on CX/DPT0341 @ 57-60 ft BLS
0812 - Sampling complete @ CX/DPT0341. Mob to CT/DPT0342
0815 - Lane Dorman calls. Reminds me that reverse flow is not mandatory per FL SOP & to use regular flow if it will be faster
0825 - Begin drilling @ CT/DPT0342
0930 - Phase II, Tie mob to Levan area
0940 - Phase II terminated, but back @ Levan area to Levan screens
1005 - Mobilize back to woods following Levan & restart drilling to 46-50 ft BLS @ CT
1101 - CT/DPT0342 Complete. Mob to EF/DPT0343
1245 - Phase II issued. Mob to Levan area to dispose of IDW when it's over
1305 - Phase II over. Dispose of IDW
1320 - Mob back to woods
1330 - Phase II called upon return to site

## Plans/Future Activities

1530 - Call MB Lane Dorman and discuss plan for day if Phase II lifted. Finish EF, mob out of woods & try to drill location in rail road area
1605 - Phase II lifted. Return to try and sample EF/343 @ 45-50, 55-60 ft BLS
1640 - End of tubing caught & GW not flowing @ 46-50' BLS. Pull rods, remove tubing & push back to depth
1655 - Phase II called. Sample not yet collected. Talked to Lane Dorman

9/23/14
Signature/Date

Geosyntec consultants

**DAILY FIELD REPORT**



Project: CRHE
Project No.: FR1681
Contractors: Bear

Date: 9/22/14
Task No.: 36*1

**Work Performed**

Well Installation:
Soil Borings:
DPT: Groundwater Sampling
Well Inventory:
Other:

Sampling Soil:
Sampling SW/Sediment:
Sampling Monitor Wells:
Sampling Hazardous Waste:
Sampling Drums:

**Observations/Issues of Concern**

1358 - Lane informs that 51-55 ft BLS should be collected @ CX/DPT0341

1505 - Phase II, stop delay @ CX/DPT0341. Rods @ 60 ft BLS. Talk to Lane, informs that 31-35 ft BLS should be collected @ all locations + 41-45 + 46-50 @ BE + BF, 36-40 + 46-50 @ AY. Also to place IDW in Drum 197036 first during disposal

1600 - Talk to Lane, weather does not appear to be relenting, call it for the day. Will drop off samples w/ KB labs. Meet Bear back here tomorrow between 0630 + 0645. They will pick up + steam cleaner tomorrow

1615 - Samples handed off to lab.

1630 - Off site.

**Plans/Future Activities**

9/22/14
Signature/Date

# CALIBRATION LOGS

# Water Quality Meter Calibration Form

**Site Name:** CRHE Area **Personnel:** Jan Barfus
**Location:** KSC FL
**Date:** 6/22/09

| Calibration Standards Lot Numbers and Expiration Date | | | | | |
|---|---|---|---|---|---|
| Standard | Lot / Exp. Date | Standard | Lot / Exp. Date | Standard | Lot / Exp. Date |
| AutoCal | 6445/07-24-2009 | | | | |
| pH 7 | P89-2360/10-3-09 | | | | |
| pH 10 | P89-2502/10-3-09 | | | | |
| ~~Cond 12.9~~ | | | | | |
| ORP 240 | 1203/11-2013 | | | | |

| Meter make/Model and SN: Horiba U-22 | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP | Cond. mS/cm | DO (Zero) mg/L | DO (mg/L) / Temp. |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | 4.21 | 6.95 | 10.06 | 225 | 4.72 | | — |
| Post-calibration Reading | 4.00 | 7.00 | 10.00 | — | 4.49 | | — |

| Meter make/Model and SN: | NTU 1.0 | NTU 10.0 | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | 0.80 | 9.7 | | | |
| Post-calibration Reading | 1.00 | 10.0 | | | |

| Meter make/Model and SN: | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP | Cond. µS/cm | DO (Zero) mg/L | DO (mg/L) / Temp. |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | | | |
| Post-calibration Reading | | | | | | | |

| Meter make/Model and SN: | NTU | NTU | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | |
| Post-calibration Reading | | | | | |

Jan Barfus 6/22/09
Signature/Date

# Water Quality Meter
# Calibration Form

**Site Name:** NASA CRHE
**Location:** KSC, FL
**Date:** 6/23/09

| Calibration Standards Lot Numbers and Expiration Date | | | |
|---|---|---|---|
| Standard | Lot / Exp. Date | Standard | Lot / Exp. Date |
| pH 7.0 | P892360 / 10-3-09 | | |
| pH 10.0 | P892502 / 10-3-09 | | |
| pH 4.0 | P887599 / 10-3-09 | | |
| Conductivity | 6796 / Exp 1-15-10 | | |
| ORP | 1203 / 11-2013 | | |

| Meter make/Model and SN: YSI 556 MPS SN-05D237346 | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP (mV) @ 22°C | Cond. (1413) uS/cm | DO (Zero) mg/L @ 25.0 mg/L → 22.33 | DO (mg/L) / Temp. |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | 4.02 | 6.98 | 10.09 | 237.8 | 1441 | 95.7 | |
| Post-calibration Reading | 4.00 | 7.00 | 10.00 | 231.5 | 1413 | 99.2% | 8.51 mg/L |

| Meter make/Model and SN: Lamotte 2020 SN 2622-1632 | 10.0 NTU | 1.0 NTU | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | 10.0 | 1.0 | | | |
| Post-calibration Reading | — | — | | | |

| Meter make/Model and SN: | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP (mV) | Cond. (_____) | DO (Zero) mg/L | DO (mg/L) / Temp. |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | | | |
| Post-calibration Reading | | | | | | | |

| Meter make/Model and SN: | NTU | NTU | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | |
| Post-calibration Reading | | | | | |

6/23/09
Personnel Signature/Date

# Water Quality Meter
## Calibration Form

**Site Name:** NASA CHRE
**Location:** KSC, FL
**Date:** 6/24/09

| Calibration Standards Lot Numbers and Expiration Date | | | |
|---|---|---|---|
| *Standard* | Lot / Exp. Date | Standard | Lot / Exp. Date |
| pH 7.0 | P892360 / 10-3-09 | | |
| pH 10.0 | P892502 / 10-3-09 | | |
| pH 4.0 | 6445 / 7-24-09 | | |
| CONDUCT. @ 4.49 | " | | |
| ORP | 1203 / 11-2013 | | |

| ***Meter make/Model and SN:*** YSI 556 MPS SN-05D23734 | *pH 4 (standard units)* | *pH 7 (standard units)* | *pH 10 (standard units)* | *ORP (mV) @ 24°C* | *Cond. (4.49 ~5k)* | *DO (Zero) mg/L 755.8 mmHg* | *DO (mg/L) / Temp.* → 23.80°C |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | 4.20 | 7.05 | 9.97 | 226.8 | 4.45 | 104.4 | |
| Post-calibration Reading | 4.03 | 7.00 | 10.00 | 232.0 | 4.49 | 99.4 | 8.42 mS/C |

| ***Meter make/Model and SN:*** LaMotte 2020 JN2622-1602 | *10.0 NTU* | *1.0 NTU* | *NTU* | *NTU* | *Comments* |
|---|---|---|---|---|---|
| Pre-calibration Reading | 10.0 | 0.95 ~~1.0~~ | | | |
| Post-calibration Reading | — | NA ~~0.95~~ | | | |

| ***Meter make/Model and SN:*** | *pH 4 (standard units)* | *pH 7 (standard units)* | *pH 10 (standard units)* | *ORP (mV)* | *Cond. (_____)* | *DO (Zero) mg/L* | *DO (mg/L) / Temp.* |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | | | |
| Post-calibration Reading | | | | | | | |

| ***Meter make/Model and SN:*** | *NTU* | *NTU* | *NTU* | *NTU* | *Comments* |
|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | |
| Post-calibration Reading | | | | | |

Personnel Signature/Date

# Water Quality Meter
## Calibration Form

**Site Name:** NASA CHRE
**Location:** KSC, FL
**Date:** 6/25/09

| Calibration Standards Lot Numbers and Expiration Date | | | |
|---|---|---|---|
| *Standard* | Lot / Exp. Date | Standard | Lot / Exp. Date |
| pH 7.0 | P89 2360 / 10-3-09 | | |
| pH 10.0 | P89 2502 / 10-3-09 | | |
| pH 4.0 | L445 / 7-29-09 | | |
| Conduct. | @ 4.49 mS/cm " | | |
| ORP | C203 / 11-2013 | | |

SN 05023733 AK

| ***Meter make/Model and SN:*** YSI 556 MPS | *pH 4 (standard units)* | *pH 7 (standard units)* | *pH 10 (standard units)* | *ORP (mV)* @~23°C | *Cond. (4.49) mS/cm* | *DO (Zero) mg/L* 0% @ 758 | *DO (mg/L) / Temp.* Sensor: 22.7°C |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | 4.19 | 6.92 | 10.04 | 4.35 | 231.4 | 88.7 | |
| Post-calibration Reading | 4.03 | 7.00 | 10.00 | 4.49 | 229.6 | 99.8 = 8.60 mg/L | |

SN 2622-1602

| ***Meter make/Model and SN:*** LaMotte 2020 | *10.0 NTU* | *1.0 NTU* | *NTU* | *NTU* | *Comments* |
|---|---|---|---|---|---|
| Pre-calibration Reading | 10.0 | 1.0 | | | |
| Post-calibration Reading | — | — | | | |

| ***Meter make/Model and SN:*** | *pH 4 (standard units)* | *pH 7 (standard units)* | *pH 10 (standard units)* | *ORP (mV)* | *Cond. (_____)* | *DO (Zero) mg/L* | *DO (mg/L) / Temp.* |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | | | |
| Post-calibration Reading | | | | | | | |

| ***Meter make/Model and SN:*** | *NTU* | *NTU* | *NTU* | *NTU* | *Comments* |
|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | |
| Post-calibration Reading | | | | | |

Personnel Signature/Date

# Water Quality Meter
## Calibration Form

**Site Name:** NASA CURE
**Location:** KSC, FL
**Date:** 6/26/09

| Calibration Standards Lot Numbers and Expiration Date | | | |
|---|---|---|---|
| Standard | Lot / Exp. Date | Standard | Lot / Exp. Date |
| pH 7.0 | 1892360 / 10-3-09 | | |
| pH 10.0 | 1892502 / 10-3-09 | | |
| pH 4.0 | 6445 / 7-24-09 | | |
| CONDUCT. | @ 4.49 mS/cm " | | |
| ORP | 1203 / 11-2013 | | |

SN 03023973 4k

| Meter make/Model and SN: YSI 556 MPS | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP (mV) @ ~23°C | Cond. (mS/cm) @ 4.49 | DO (Zero) mg/L @ 758.9 mmHg | DO (mg/L) / Temp. |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | 4.13 | 7.00 | 10.09 | 227.5 | 4.53 | 117.4 | |
| Post-calibration Reading | 4.02 | — | 10.00 | 229.5 | 4.49 | 99.9 | 8.65 mg/L |

SN 2622-1602

| Meter make/Model and SN: LAMOTTE 2020 | 10.0 NTU | 1.0 NTU | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | 9.9 | 1.00 | | | |
| Post-calibration Reading | — | — | | | |

| Meter make/Model and SN: | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP (mV) | Cond. (_____) | DO (Zero) mg/L | DO (mg/L) / Temp. |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | | | |
| Post-calibration Reading | | | | | | | |

| Meter make/Model and SN: | NTU | NTU | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | |
| Post-calibration Reading | | | | | |

Personnel Signature/Date

# Water Quality Meter Calibration Form

**Site Name:** CRHE Area **Personnel:** JRB
**Location:** KSC FL
**Date:** 7/16/09

| Calibration Standards Lot Numbers and Expiration Date | | | | | |
|---|---|---|---|---|---|
| Standard | Lot / Exp. Date | Standard | Lot / Exp. Date | Standard | Lot / Exp. Date |
| pH 4 | P887599/10-3-2009 | | | | |
| pH 7 | P892360/10-3-2009 | | | | |
| pH 10 | P892503/10-3-2009 | | | | |
| Cond. 1413 | P891036/ July 2009 | | | | |
| ORP 240 | 1203/11-2013 | | | | |

| Meter make/Model and SN: YSI 556 | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP | Cond. µS/cm | DO (Zero) mg/L | DO (mg/L) / Temp. |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | 3.92 | 6.99 | 10.06 | 237.1 | 1.441 | — | 7.92 |
| Post-calibration Reading | 4.00 | 7.00 | 10.01 | 240.0 | 1.388 | — | 8.48 |

| Meter make/Model and SN: | NTU | NTU | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | |
| Post-calibration Reading | | | | | |

| Meter make/Model and SN: | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP | Cond. µS/cm | DO (Zero) mg/L | DO (mg/L) / Temp. |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | | | |
| Post-calibration Reading | | | | | | | |

| Meter make/Model and SN: | NTU | NTU | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | |
| Post-calibration Reading | | | | | |

Janet Barfus 7/16/09
Signature/Date

# Water Quality Meter Calibration Form

**Site Name:** CWRE **Personnel:** K DAPRATO

**Location:** MSC FL

**Date:** 7/17/09

| Calibration Standards Lot Numbers and Expiration Date | | | | | |
|---|---|---|---|---|---|
| Standard | Lot / Exp. Date | Standard | Lot / Exp. Date | Standard | Lot / Exp. Date |
| pH=7 | P888160 / 2-20-2010 | | | | |
| pH=4 | P887599 / 10-03-2009 | | | | |
| pH=10 | P892502 / 10-03-2009 | | | | |
| 1413 µS/cm | P891026 / July 2009 | | | | |
| 240 mV | 1203 / 4-2013 | | | | |

| Meter make/Model and SN: (SOJ) BAL YSI 556 | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP | Cond. µS/cm | DO (Zero) mg/L | DO (mg/L) / Temp. | |
|---|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | 4.04 | 7.12 | 9.88 | 241.5 | 1,263 | | 9.22 | 22.04 |
| Post-calibration Reading | 4.00 | 7.00 | 9.99 | 240 | 1,413 | | 8.74 | 22.06 |

| Meter make/Model and SN: | NTU | NTU | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | |
| Post-calibration Reading | | | | | |

| Meter make/Model and SN: | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP | Cond. µS/cm | DO (Zero) mg/L | DO (mg/L) / Temp. |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | | | |
| Post-calibration Reading | | | | | | | |

| Meter make/Model and SN: | NTU | NTU | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | |
| Post-calibration Reading | | | | | |

KC CWF 7/17/09
Signature/Date

# Water Quality Meter
# Calibration Form

**Site Name:** KSC - CRHE **Personnel:** ALEX RIVERA
**Location:** CAPE CANAVERAL, FL
**Date:** 8/4/09

| Calibration Standards Lot Numbers and Expiration Date | | | | | |
|---|---|---|---|---|---|
| Standard | Lot / Exp. Date | Standard | Lot / Exp. Date | Standard | Lot / Exp. Date |
| 7.0 | AURICAL 6918/03-10 | | | | |
| 4.0 | AURICAL 6943/03-10 | | | | |
| ORP | VITAL 1316/01-14 | | | | |
| COND. | ESI 7130/5-10 | | | | |
| | | | | | |

| Meter make/Model and SN: YSI 556 07C2069 AF | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP 240mV | Cond. µS/cm (1413) | DO (Zero) mg/L | DO (mg/L) / Temp. |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | 3.97 | 7.10 | NA | 237.2 | 1426 | 113.3 | @ 27.6 |
| Post-calibration Reading | 4.0 | 7.00 | NA | 240.0 | 1413 | 100.0 | 7.03 mg/L |

| Meter make/Model and SN: LaMotte 2020e #ME 13228 | 1.0 NTU | 10 NTU | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | 1.06 | 11.3 | | | |
| Post-calibration Reading | — | 9.93 | | | |

| Meter make/Model and SN: | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP | Cond. µS/cm | DO (Zero) mg/L | DO (mg/L) / Temp. |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | | | |
| Post-calibration Reading | | | | | | | |

| Meter make/Model and SN: | NTU | NTU | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | |
| Post-calibration Reading | | | | | |

[signature] 8/4/09
Signature/Date

# Water Quality Meter
## Calibration Form

**Site Name:** KSC - CRHE **Personnel:** ALEX RIVERA
**Location:** CAPE CANAVERAL, FL
**Date:** 8/5/09

| Calibration Standards Lot Numbers and Expiration Date | | | | | |
|---|---|---|---|---|---|
| Standard | Lot / Exp. Date | Standard | Lot / Exp. Date | Standard | Lot / Exp. Date |
| 7.0 | AURICAL 6918/03-10 | | | | |
| 4.0 | AURICAL 6983/03-10 | | | | |
| ORP | VITAL 1316/01-14 | | | | |
| COND. | FSI 7130/5-10 | | | | |
| | | | | | |

| Meter make/Model and SN: YSI 556 07C2007AF | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP 240mV | Cond. µS/cm (1413) | DO (Zero) mg/L | DO (mg/L) / Temp. |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | 4.13 | 6.87 | NA | 244.4 | 1323 | 101.4 | @ 24.7° C |
| Post-calibration Reading | 4.00 | 7.00 | NA | 240.0 | 1413 | 100.0 | 8.31 |

| Meter make/Model and SN: LaMotte 2020e #ME 13228 | 1.0 NTU | 100 NTU | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | 0.64 | 9.31 | | | |
| Post-calibration Reading | 0.92 | 9.89 | | | |

| Meter make/Model and SN: | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP | Cond. µS/cm | DO (Zero) mg/L | DO (mg/L) / Temp. |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | | | |
| Post-calibration Reading | | | | | | | |

| Meter make/Model and SN: | NTU | NTU | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | |
| Post-calibration Reading | | | | | |

8/5/09
Signature/Date

# Water Quality Meter Calibration Form

Site Name: CRHE Area
Location: KSC, FL
Date: 8/6/09

Personnel: Jan Barfus

| Calibration Standards Lot Numbers and Expiration Date | | | | | |
|---|---|---|---|---|---|
| Standard | Lot / Exp. Date | Standard | Lot / Exp. Date | Standard | Lot / Exp. Date |
| pH 4 | P887599/10-3-2009 | | | | |
| pH 7 | P888160/~~12-3-2010~~ | | | | |
| pH 10 | P892502/10-3-2009 | | | | |
| Cond 1413 | 6796/1-15-2010 | | | | |
| ORP 240 | 1279/12-2013 | | | | |

YSI 556
05D2373AK

| Meter make/Model and SN: YSI 556 | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP | Cond µS/cm | DO (Zero) mg/L | DO (mg/L) / Temp. |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | 3.88 | 7.38 | 9.40 | 238 | 1.235 | — | 9.95 T=21.6°C |
| Post-calibration Reading | 4.00 | 7.00 | 9.88 | 240 | 1.335 | — | 8.81 |

| Meter make/Model and SN: | NTU | NTU | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | |
| Post-calibration Reading | | | | | |

| Meter make/Model and SN: | pH 4 (standard units) | pH 7 (standard units) | pH 10 (standard units) | ORP | Cond µS/cm | DO (Zero) mg/L | DO (mg/L) / Temp. |
|---|---|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | | | |
| Post-calibration Reading | | | | | | | |

| Meter make/Model and SN: | NTU | NTU | NTU | NTU | Comments |
|---|---|---|---|---|---|
| Pre-calibration Reading | | | | | |
| Post-calibration Reading | | | | | |

Jan Barfus 8/6/09
Signature/Date

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR/6681  Field Personnel: Meghan Ritter

Water Quality Meter - Model/Serial #:  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 1/25/10 | 6:20 | 22.7 | 1.725 | 8.67->8.59 | 102.3->100.3 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 1/25/10 | 6:20 | 1.413 | 6969 | 3/2/10 | 1.423->1.414 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 1/25/10 | ~~4~~ 6:20 | 4 | 6943 | 3/10 | 4.20->4.01 | (P) F |
| CAL ICV CCV | | 1/25/10 | ~~7~~ | 7 | 28100821 | 9/10 | 7.02->7.00 | (P) F |
| CAL ICV CCV | | 1/25/10 | ~~10~~ | 10 | 2808147 | 1/10 | 10.09->10.01 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 1/25/10 | 6:20 | 240 | 1279 | 12/2013 | 235.7->240.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. **See Table FS 2200-2 on the back of this form**

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Comments:

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7, add a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR16681  Field Personnel: Meghan Ritter

Water Quality Meter - Model/Serial #:  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 1/26/10 | 0730 | temperature never got high enough to calibrate | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 1/26/10 | 0730 | 1.413 | 74446 | 10-2010 | 1.360→1.40 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 1/26/10 | 0730 | 4.0 | 2804313 | 04-2010 | 3.89→3.99 | P F |
| CAL ICV CCV | | 1/26/10 | 0730 | 7.0 | 2815886 | 12-2010 | 7.16→7.02 | P F |
| CAL ICV CCV | | 1/26/10 | 0730 | 10.0 | 2190440 | 12-2010 | 10.04→10.01 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 1/26/10 | 0730 | 240 | 1203 | 11-2013 | 247.5 →240.1 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Comments: _____

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR1681  Field Personnel: Meghan Ritter

Water Quality Meter - Model/Serial #:  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 1/27/10 | 0615 | 22.31 | ~~8.53~~ 8.530 | 8.51→8.53 | 96.1→96.2 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 1/27/10 | 0615 | 1.413 | 7446 | 10-2010 | ~~1.501~~ 1.497→1.495 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 1/27/10 | 0615 | 4.0 | 28049313 | 04-2010 | 4.14→3.99 | P F |
| CAL ICV CCV | | 1/27/10 | 0615 | 7.0 | 28015506 | 12-2010 | 6.90→7.00 | P F |
| CAL ICV CCV | | 1/27/10 | 0615 | 10.0 | 19064410 | 12-2010 | 10.05→10.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 1/27/10 | 0615 | 240 | 1203 | 11-2013 | 227→240 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR16981  Field Personnel: Meghan Ritter

Water Quality Meter - Model/Serial #:

Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 1/28/10 | 6:30 | 21.26 | 8.63 | 8.868→ | 97.9→ | (P) F |
| CAL ICV CCV | | | | | | 8.86 | 100.1 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 1/28/10 | 6:30 | 1.413 | 7446 | 10-2010 | 1.550→1.511 | P (F) |
| CAL ICV CCV | | | | 1.413 | 7446 | 10-2010 | 1.500→1.413 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 1/28/10 | 6:30 | 4.0 | 28043B | 04-2010 | 4.02→4.00 | (P) F |
| CAL ICV CCV | | 1/28/10 | 6:30 | 7.0 | 28158A6 | 12-2010 | 6.91→7.00 | (P) F |
| CAL ICV CCV | | 1/29/10 | 6:30 | 10.0 | 19060040 | 12-2010 | 10.18→10.03 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 1/28/10 | 6:30 | 240 | 1203 | 11-2013 | 231.5→240.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Comments:

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings: always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

6/23/2009

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR16831  Field Personnel: Meghan Ritter

Water Quality Meter - Model/Serial #:

Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 1/29/10 | 630 | 21.69 | 8.644 | 8.58→ | 97.8→ | (P) F |
| CAL ICV (CCV) | | " | 1635 | 22.50 | 8.460 | 8.64 | 98.10 | P F |
| CAL ICV CCV | | | | | | 8.65 | 100.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 1/29/10 | 630 | 1.413 | 7446 | 10-2010 | 1.388→ | (P) F |
| CAL ICV (CCV) | | " | 1625 | 1.413 | 7446 | " | 1.419 | |
| CAL ICV CCV | | | | | | | 1.414 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 1/29/10 | 630 | 4.0 | 2804313 | 04-2010 | 4.02→ | (P) F |
| (CAL) (ICV) CCV | | 1/29/10 | 630 | 7.0 | 2815586 | 12-2010 | 3.99 | P F |
| (CAL) (ICV) CCV | | 1/29/10 | 630 | 10.0 | 19006640 | 12-2010 | 6.89→7.00 | (P) F |
| CAL ICV (CCV) | | " | 1615 | 4.0 | Same | | →10.13→10.04 | P F |
| CAL ICV (CCV) | | " | 1618 | 7.0 | as | | 4.14 | (P) F |
| CAL ICV (CCV) | | " | 1620 | 10.0 | above | | 6.93 | (P) F |
| | | | | | | | 10.00 | F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 1/29/10 | 630 | 240 | 1203 | 11-2013 | 238.9→ | (P) F |
| CAL ICV (CCV) | | " | 1630 | " | " | " | 241.1 | P F |
| CAL ICV CCV | | | | | | | 235.7 | (P) F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments:

Geosyntec consultants

6/23/2009

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: Contractors Rd CRHE  Project #: FR1681  Field Personnel: NRS

Water Quality Meter - Model/Serial #: YSI 556 MPS / 09F100231  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 2/1/10 | 0645 | 18.59 | 9.352 | 8.22/7.39 | 87.8/100.8 | (P) F |
| CAL ICV (CCV) | | " | 1745 | 20.74 | 8.968 | 8.84 | 98.6 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 2/1/10 | 0645 | 1.413 | 6909 | 3/2/10 | 1.440/1.413 | (P) F |
| CAL ICV (CCV) | | " | 1738 | " | " | " | 1.491 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 2/1/10 | 0645 | 4.0 | 28-4313 | 4/10 | 4.06/4.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | 7.0 | 2810091 | 9/10 | 6.96/7.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | 10.0 | 1906690 | 12/10 | 10.01/10.00 | (P) F |
| CAL ICV (CCV) | | " | 1735 | 4.0 | Same as | above | 4.03 | (P) F |
| CAL ICV (CCV) | | " | " | 7.0 | | | 7.01 | (P) F |
| CAL ICV (CCV) | | " | " | 10.0 | " | " | 9.94 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 2/1/10 | 0645 | 240 @ 25 | 1203 | 11/10 | 247.7/241.0 | (P) F |
| CAL ICV (CCV) | | " | 1740 | " | " | 4 | 237.4 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | Acceptance Criteria: +/- 10% | | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | Acceptance Criteria: +/- 8% | | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | Acceptance Criteria: +/- 6.5% | | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR1681  Field Personnel: JRB

Water Quality Meter - Model/Serial #: YSI 556 MPS / 09F100231  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 2/2/10 | 0655 | 21.20 | 8.880 | 8.48-8.80 | 99.1 | (P) F |
| CAL ICV (CCV) | | " | 1750 | 22.72 | 8.627 | 8.55 | 99.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 2/2/10 | 0648 | 1.413 | 6909 | 3/2/10 | 1.435-1.413 | (P) F |
| CAL ICV (CCV) | | " | 1742 | " | " | " | 1.372 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 2/2/10 | 0645 | 4.0 | 2804313 | 4/10 | 4.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | 7.0 | 2810081 | 9/10 | 6.96-7.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | 10.0 | 1906640 | 12/10 | 9.96-10.00 | (P) F |
| CAL ICV (CCV) | | " | 1740 | 4.0 | Same | | 4.07 | (P) F |
| CAL ICV (CCV) | | " | " | 7.0 | as | | 7.01 | (P) F |
| CAL ICV (CCV) | | " | " | 10.0 | above | | 9.97 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 2/2/10 | 0650 | 240@25 | 1203 | 11/10 | 236-240 | (P) F |
| CAL ICV (CCV) | | " | 1744 | " | " | 4 | 236.7 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings, always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR1681  Field Personnel: JRB

Water Quality Meter - Model/Serial #:

Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 2/3/10 | 0645 | 20.10 | 9.074 | 9.25→9.07 | 101.7→100.1 | (P) F |
| CAL ICV (CCV) | | " | 1615 | 22.10 | 8.799 | 8.64 | 99.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 2/3/10 | 0638 | 1.413 | 6909 | 3/2/10 | 1.398→1.413 | (P) F |
| CAL ICV (CCV) | | " | 1604 | " | " | " | 1.437 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 2/3/10 | 0635 | 4.0 | 28043I3 | 4/10 | 4.07→4.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | 7.0 | 28100081 | 9/10 | 6.94→7.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | 10.0 | 1906640 | 12/10 | 9.96→9.99 | (P) F |
| CAL ICV (CCV) | | " | 1600 | 4.0 | Same | | 4.02 | (P) F |
| CAL ICV (CCV) | | " | " | 7.0 | as | | 7.05 | (P) F |
| CAL ICV (CCV) | | " | " | 10.0 | above | | 9.98 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 2/3/10 | 0640 | 240@25 | 1203 | 11/10 | 243.5→240.0 | (P) F |
| CAL ICV (CCV) | | " | 1612 | " | " | " | 237.4 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings: always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments:

Geosyntec consultants

6/23/2009

## Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE - Contractors Rd  Project #: FR1690  Field Personnel: MRS

Water Quality Meter - Model/Serial #: YSI 556 MPS / 05D2373AK  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 3/2/10 | 0705 | 20.58 | 8.885 | 7.13/8.77 | 101.6/100.1 | (P) F |
| CAL ICV (CCV) | | ↓ | 1715 | 22.78 | 8.611 | 8.77 | 101.9 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 3/2/10 | 0705 | 1.413 | 7283 | 7/13/10 | 1.481/1.413 | (P) F |
| CAL ICV (CCV) | | ↓ | 1715 | ↓ | ↓ | ↓ | 1.393 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 3/2/10 | 0705 | 4.0 | 2804313 | 4/10 | 4.04/4.00 | (P) F |
| (CAL) (ICV) CCV | | ↓ | ↓ | 7.0 | 2810081 | 9/10 | 6.96/7.00 | (P) F |
| (CAL) (ICV) CCV | | | | 10.0 | 1906640 | 12/13 | 9.99/10.00 | (P) F |
| CAL ICV (CCV) | | | 1715 | 4.0 | ↓ | ↓ | 4.00 | (P) F |
| CAL ICV CCV | | | ↓ | 7.0 | | | 6.96 | (P) F |
| CAL ICV CCV | | | | 10.0 | | | 7.91 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 3/2/10 | 0705 | 240 @ 25 | 1203 | 4/13 | 244.5/240.2 | (P) F |
| CAL ICV (CCV) | | ↓ | 1715 | ↓ | ↓ | ↓ | 238.2 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Comments:

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

## Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CHRE - Contractors RI  Project #: FR1681  Field Personnel: NRS

Water Quality Meter - Model/Serial #: YSI 556 MPS / 05D 2273 AK  Turbidimeter - Model/Serial #

### Dissolved Oxygen

DEP SOP FT 1500 | Acceptance Criteria: +/-0.3mg/L

| | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| (CAL) (ICV) CCV | 2/22/10 | 0640 | 22.39 | 8.677 | 9.04/8.68 | 104.3/100.2 | (P) F |
| CAL ICV (CCV) | ↓ | 1750 | 23.67 | 8.466 | 10.30 | 121.7 | P (F) |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |

### Specific Conductance

DEP SOP FT 1200 | Acceptance Criteria: +/- 5%

| | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| (CAL) (ICV) CCV | 2/22/10 | 0640 | 1.413 | 7283 | 7/13/10 | 1.423/1.417 | (P) F |
| CAL ICV (CCV) | ↓ | 1750 | ↓ | ↓ | ↓ | 1.341 | P (F) |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |

### pH

DEP SOP FT 1100 | Acceptance Criteria: +/-0.2 SU

| | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| (CAL) (ICV) CCV | 2/22/10 | 0646 | 4.0 | 280313 | 04/10 | 3.93/4.00 | (P) F |
| (CAL) (ICV) CCV | ↓ | ↓ | 7.0 | 28/0081 | 09/10 | 7.07/7.00 | (P) F |
| (CAL) (ICV) CCV | ↓ | ↓ | 10.0 | 1906640 | 12/10 | 9.93/9.98 | (P) F |
| CAL ICV (CCV) | ↓ | 1750 | 4.0 | ↓ | ↓ | 4.06 | (P) F |
| CAL ICV (CCV) | ↓ | ↓ | 7.0 | ↓ | ↓ | 7.01 | (P) F |
| CAL ICV (CCV) | ↓ | ↓ | 10.0 | ↓ | ↓ | 9.94 | (P) F |

### ORP

SOP N/A | Geosyntec Acceptance Criteria: +/- 5%

| | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| (CAL) (ICV) CCV | 2/22/10 | 0640 | 240@25 | 1203 | 11/13 | 246.7/240.0 | (P) F |
| CAL ICV (CCV) | ↓ | 1750 | ↓ | ↓ | ↓ | 237.7 | (P) F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

### 0.1 - 10 NTU Std ____NTU

Acceptance Criteria: +/- 10%

| | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

### 11 - 40 NTU Std ____NTU

Acceptance Criteria: +/- 8%

| | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

### 41 - 100 NTU Std ____NTU

Acceptance Criteria: +/- 6.5%

| | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

### >100 NTU Std ____NTU

Acceptance Criteria: +/- 5%

| | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Comments: DO & Specific Conductance Failed CCV

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: ERHE  Project #: FR1681  Field Personnel: NRS

Water Quality Meter - Model/Serial #: YSI 556 MPS/ 05D2873 AC  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 2/23/10 | 0700 | 21.2 | 7.761 | 8.76/8.76 | 100.1/99.7 | (P) F |
| CAL ICV (CCV) | | ↓ | 1805 | 23.1 | 8.67 | 8.31 | 97.4 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 2/23/10 | 0700 | 1.413 | 7.283 | 7/13/10 | 1.373/1.413 | (P) F |
| CAL ICV (CCV) | | ↓ | 1805 | ↓ | ↓ | ↓ | 1.405 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 2/23/10 | 0700 | 4.0 | 1864313 | 04/10 | 3.99/4.00 | (P) F |
| (CAL) (ICV) CCV | | | ↓ | 7.0 | 2810081 | 09/10 | 7.01/7.00 | (P) F |
| (CAL) (ICV) CCV | | | ↓ | 10.0 | 1906640 | 10/10 | 9.86/9.89 | (P) F |
| CAL ICV (CCV) | | | 1805 | 4.0 | | | 4.07 | (P) F |
| CAL ICV (CCV) | | | ↓ | 7.0 | | | 7.06 | (P) F |
| CAL ICV (CCV) | | ↓ | ↓ | 10.0 | | | 9.97 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 2/23/10 | 0700 | 240 @ 25 | 1303 | 11/13 | 241.3/240.3 | (P) F |
| CAL ICV (CCV) | | ↓ | 1805 | ↓ | ↓ | ↓ | 235.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Comments:

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: LRHE - Contractors Rd  Project #: FR1681  Field Personnel: NRS

Water Quality Meter - Model/Serial #: YSI 556 MPS / 05D2373AK  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 2/24/10 | 0705 | 21.28 | 8.963 | 4.02/8.86 | 101.8/99.2 | (P) F |
| CAL ICV CCV | | ↓ | 1730 | 22.87 | 8.595 | 9.30 | 108.2 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 2/24/10 | 0705 | 1.413 | 7283 | 7/13/10 | 1.471/1.413 | (P) F |
| CAL ICV CCV | | ↓ | 1730 | ↓ | ↓ | ↓ | 1.410 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 2/24/10 | 0705 | 4.0 | 2804313 | 04/10 | 4.04/4.00 | (P) F |
| (CAL) (ICV) CCV | | ↓ | ↓ | 7.0 | 2810491 | 09/10 | 6.96/7.00 | (P) F |
| (CAL) (ICV) CCV | | | | 10.0 | 1706690 | 12/10 | 9.99/10.00 | (P) F |
| CAL ICV CCV | | | 1730 | 4.0 | | | 3.95 | (P) F |
| CAL ICV CCV | | | ↓ | 7.0 | | | 7.05 | (P) F |
| CAL ICV CCV | | ↓ | ↓ | 10.0 | ↓ | ↓ | 10.00 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 2/24/10 | 0705 | 240 @ 25 | 1203 | 4/13 | 241.1/240.0 | (P) F |
| CAL ICV CCV | | ↓ | 1730 | ↓ | ↓ | ↓ | 238.9 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Comments: DO Failed CCV

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

## Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE - Contractors RI  Project #: FR1681  Field Personnel: NRS

Water Quality Meter - Model/Serial #: YSI 556 MPS / 05D2737AK  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 2/28/10 | 0705 | 20.48 | 7.021 | 7.69/7.01 | 107.4/100.3 | (P) F |
| CAL ICV (CCV) | | ↓ | 1800 | 20.70 | 8.732 | 8.92 | 99.9 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 2/25/10 | 0705 | 1.413 | 7283 | 7/13/10 | 1.474/1.414 | (P) F |
| CAL ICV (CCV) | | ↓ | 1800 | ↓ | ↓ | ↓ | 4347 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 2/25/10 | 0705 | 4.0 | 8P04313 | 4/10 | 3.97/4.00 | (P) F |
| (CAL) (ICV) CCV | | ↓ | ↓ | 7.0 | 28100981 | 09/10 | 7.12/7.00 | (P) F |
| (CAL) (ICV) CCV | | | | 10.0 | 6905640 | 12/10 | 9.81/9.98 | (P) F |
| CAL ICV (CCV) | | | 1800 | 4.0 | | | 4.04 | P F |
| CAL ICV (CCV) | | | ↓ | 7.0 | | | 7.01 | P F |
| CAL ICV (CCV) | | ↓ | ↓ | 10.0 | ↓ | ↓ | 9.96 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 2/25/10 | 0705 | 240 @ 25 | 1203 | 4/13 | 240.9/240.2 | (P) F |
| CAL ICV (CCV) | | ↓ | 1800 | ↓ | ↓ | ↓ | 242.5 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: Specific Conductance failed CCV

Geosyntec consultants

6/23/2009

## Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRTE - Contractors Rd  Project #: FR1681  Field Personnel: Angel Martin

Water Quality Meter - Model/Serial #: YSI 05D2373 AK  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 2-26-10 | 0620 | 20.53 | 9.003 | 9.66->8.99 | 107.4->99.1 | (P) F |
| CAL ICV (CCV) | | 2-26-10 | 1742 | 20.82 | 8.980 | 9.81 | 108.8 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 2-26-10 | 0625 | 1.413 | 7288 | 7-13-10 | 1.428->1.414 | (P) F |
| (CAL) (ICV) (CCV) | | 2-26-10 | 1745 | 1.413 | 7288 | 7-13-10 | 1.235 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 2-26-10 | 628 | 4.0 | 2804313 | 4-2010 | 4.20->3.98 | (P) F |
| (CAL) (ICV) CCV | | 2-26-10 | 626 | 7.0 | 2810081 | 9-2010 | 6.82->7.00 | (P) F |
| (CAL) (ICV) CCV | | 2-26-10 | 630 | 10.0 | 1906640 | 12-2010 | 10.10->10.02 | (P) F |
| CAL ICV (CCV) | | 2-26-10 | 1748 | 7.0 | 2804313 | 4-2010 | 7.08 | (P) F |
| CAL ICV (CCV) | | 2-26-10 | 1750 | 7.0 | 2810081 | 9-2010 | 7.03 | (P) F |
| CAL ICV (CCV) | | 2-26-10 | 1752 | 10.0 | 1906640 | 12-2010 | 9.96 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 2-26-10 | 633 | 240 | 1203 | 11-13 | 243->240 | (P) F |
| CAL ICV (CCV) | | 2-26-10 | 1755 | 240 | 1203 | 11-13 | 238.9 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: Specific Conductance Failed CCV

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: LRHF Contractors Road  Project #: FR1681  Field Personnel: NRS

Water Quality Meter - Model/Serial #: YSI 556 MPS / 05D 23733AC  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 3/1/10 | 0705 | 20.67 | 8.968 | 7.87/8.93 | 67.6/79.9 | (P) F |
| CAL ICV CCV | | ↓ | 1747 | 23.31 | 8.530 | 8.75 | 102.6 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 3/1/10 | 0705 | 1.413 | 7283 | 7/13/10 | 1.344/1.413 | (P) F |
| CAL ICV CCV | | ↓ | ~~0545~~ 1748 | ↓ | ↓ | ↓ | 1373 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 3/1/10 | 0705 | 4.0 | 0804313 | 4/10 | 3.85/4.00 | (P) F |
| (CAL) (ICV) CCV | | | | 7.0 | 0810781 | 9/10 | 7.10/7.00 | (P) F |
| (CAL) (ICV) CCV | | | | 10.0 | 1906640 | 12/10 | 9.75/9.99 | (P) F |
| CAL ICV CCV | | | ~~0545~~ 1746 | 4.0 | | | 4.07 | (P) F |
| CAL ICV CCV | | | | 7.0 | | | 6.97 | (P) F |
| CAL ICV CCV | | | | 10.0 | | | 9.73 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 3/1/10 | 0705 | 240 @ 25 | 1203 | 4/13 | 241.2/242.1 | (P) F |
| CAL ICV CCV | | ↓ | 1745 | ↓ | ↓ | ↓ | 237.3 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Comments:

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR1681  Field Personnel: Jan Barfus

Water Quality Meter - Model/Serial #: YSI 556/05D2373AK  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 6/14/10 | 0645 | 22.92 | 8.595 | 8.22→8.60 | 95.7→100.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/14/10 | 0635 | 1.413 | 801111 | 06-2010 | 1.532→1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 6/14/10 | 0630 | pH4 | 7696 | 2/3/11 | 3.90→4.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | pH7 | 7229 | 8/15/10 | 7.18→7.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | pH10 | 7150 | 8/20/10 | 9.88→9.98 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/14/10 | 0640 | 240@25°C | 1630 | 06/2014 | 237.9→240.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Comments:

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

6/23/2009

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR1681  Field Personnel: Jan Barfus

Water Quality Meter - Model/Serial #: YSI 556/05D237AK  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 6/15/10 | 0700 | 22.97 | 8.578 | 7.69→8.58 | 88.8→99.9 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/15/10 | 0650 | 1.413 | 80111 | 06-2010 | 1.507→1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 6/15/10 | 0645 | pH4 | 7696 | 2/3/11 | 4.09→4.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | pH7 | 7229 | 8/15/10 | 6.99→7.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | pH10 | 7150 | 8/30/10 | 9.95→9.99 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/15/10 | 0655 | 240@25°C | 1636 | 06/2014 | 240.9→240.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

Comments:

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

6/23/2009

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR1681  Field Personnel: Jan Barfus

Water Quality Meter - Model/Serial #: YSI 556/05D2373AK  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 6/16/10 | 700 | 22.60 | 8.644 | 11.6→8.64 | 135.2→100.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/16/10 | 0655 | 1.413 | 801111 | 06-2010 | 1.36→1.412 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 6/16/10 | 0645 | pH 4 | 7696 | 2/3/11 | 4.18→4.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | pH 7 | 7229 | 8/15/10 | 6.89→7.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | pH 10 | 7150 | 8/20/10 | 10.15→10.02 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/16/10 | 0650 | 240 @ 25°C | 8 1630 | 06-2014 | 236.8→240.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

Comments:

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

6/23/2009

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR1681  Field Personnel: Jan Barfus

Water Quality Meter - Model/Serial #: YSI 556/05D2373AK  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 6/17/10 | 0700 | 23.49 | 8.498 | 8.83→8.56 | 103.8→99.9 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/17/10 | 0655 | 1.413 | 801111 | 06-2010 | 1.402→1.412 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 6/17/10 | 0645 | pH 4 | 7696 | 2/3/11 | 3.93→4.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | pH 7 | 7229 | 8/18/10 | 7.05→7.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | pH 10 | 7150 | 8/20/10 | 10.02→10.00 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/17/10 | 0650 | 240@25°C | 1630 | 06/2014 | 239.0→240.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

Comments:

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

6/23/2009

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR1681  Field Personnel: Jan Barfus

Water Quality Meter - Model/Serial #: YSI 556/05D2373AK  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (CV) CCV | | 6/18/10 | 0640 | 23.36 | 8.514 | 8.29→8.57 | 97.3→100.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (CV) CCV | | 6/18/10 | 0630 | 1.413 | 801111 | 06-2010 | 1.426→1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 6/18/10 | 0625 | pH4 | 7696 | 2/3/11 | 4.03→4.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | pH7 | 7229 | 8/15/10 | 6.81→7.00 | (P) F |
| (CAL) (CV) CCV | | " | " | pH10 | 7150 | 8/20/10 | 10.19→10.03 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/18/10 | 0635 | 240@25°C | 1630 | 06/2014 | 238.4→240.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

Comments:

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

6/23/2009

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE  Project #: FR1681  Field Personnel: Jan Barfus

Water Quality Meter - Model/Serial #: YSI 556/05D2373AK  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 6/21/10 | 0625 | 23.12 | 8.562 | 7.82→8.56 | 91.4→100.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/21/10 | 0620 | 1.413 | 801111 | 06-2010 | 1.665→1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 6/21/10 | 0615 | pH4 | 7696 | 2/3/11 | 3.78→4.00 | (P) F |
| (CAL) (ICV) CCV | | " | 0615 | pH7 | 7229 | 8/15/10 | 7.09→7.00 | (P) F |
| (CAL) (ICV) CCV | | " | 0615 | pH10 | 7156 | 8/20/10 | 9.94→9.99 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/21/10 | 0618 | 240@25°C | 1630 | 06/2014 | 245.2→240.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments:

Geosyntec consultants

6/23/2009

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR1681  Field Personnel: Jan Barfus

Water Quality Meter - Model/Serial #: YSI 556 / 05D2373AK  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 6/22/10 | 0645 | 23.52 | 8.218 | 7.87→8.17 | 92.5→96.2 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/22/10 | 0640 | 1.413 | 801111 | 06-2010 | 1.423→1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 6/22/10 | 0630 | pH4 | 7696 | 2/3/11 | 4.19→4.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | pH7 | 7229 | 5/15/10 | 6.84→7.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | pH10 | 7150 | 5/20/10 | 9.98→10.00 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/22/10 | 0635 | 240@25°C | 1630 | 06/2014 | 238.3→240.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments:

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: NASA - CRHE  Project #: FR1681  Field Personnel: J. Mc Kinnon

Water Quality Meter - Model/Serial #: YSI 556 MB  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL (ICV) CCV | | 8.2.10 | 0648 | 24.42 | 8.36 | | 10.57 | P (F) |
| (CAL) ICV CCV | | 8.2.10 | 0651 | 25.09 ~~24.43~~ | ~~8.05~~ 8.236 | | 8.05 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 8.2.10 | 0656 | 1.413 | 8057 | 6/07/11 | 0.700 | P (F) |
| (CAL) ICV CCV | | 8.2.10 | 0659 | 1.413 | 8057 | 6/07/11 | 1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL (ICV) CCV | | 8.2.10 | 0701 | 4.0 | 7696 | 02/3/11 | 3.96 | (P) F |
| CAL (ICV) CCV | | 8.2.10 | 0704 | 7.0 | 2810081 | 9-2010 | 6.99 | (P) F |
| CAL (ICV) CCV | | 8.2.10 | 0705 | 10.0 | 2810081 | 10-2010 | 10.00 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 8.2.10 | 0707 | 240@25° | 1630 | 05/2014 | 245.02 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

Comments:

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

6/23/2009

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: NASA- CRHE  Project #: FR1681  Field Personnel: J. McKinnon

Water Quality Meter - Model/Serial #: YSI 556 MPS  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL (ICV) CCV | | 8.3.10 | 0725 | 27.37 | 7.912 | 8.23 | 110.7 | P (F) |
| (CAL) ICV CCV | | 8.3.10 | 0728 | 27.39 | 7.912 | 7.91 | 100.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 8.3.10 | 0732 | 1.413 | 8057 | 06/07/2011 | 1.297 | P (F) |
| (CAL) ICV CCV | | 8.3.10 | 0734 | 1.413 | 8057 | 06/07/2011 | 1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL (ICV) CCV | | 8.3.10 | 0735 | 4.0 | 7696 | 02/3/11 | 4.06 | (P) F |
| CAL (ICV) CCV | | 8.3.10 | 0737 | 7.00 | 2810081 | 9-2010 | 7.06 | (P) F |
| CAL (ICV) CCV | | 8.3.10 | 0738 | 10.00 | 2904590 | 10-2010 | 10.02 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 8.3.10 | 0740 | 240 @ 25°C | 1636 | 05/2014 | 236.2 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

Comments:

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings: always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

6/23/2009

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: FR1681 NASA-CRHE  Project #: FR1681  Field Personnel: T. McKinnon

Water Quality Meter - Model/Serial #: YSI 556 MPS  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | Acceptance Criteria: +/-0.3mg/L | | | |
| CAL (ICV) CCV | | 8.4.10 | 0720 | 28.23 | 7.80 | | 8.68 | P (F) |
| (CAL) ICV CCV | | 8.4.10 | 0721 | 28.23 | 7.80 | | 7.80 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 8.4.10 | 0723 | 1.413 | 8057 | 06/07/2011 | 2.068 | P (F) |
| (CAL) ICV CCV | | 8.4.10 | 0725 | 1.413 | 8057 | 06/07/2011 | 1.425 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL (ICV) CCV | | 8.4.10 | 0726 | 4.0 | 7696 | 02/3/11 | 4.09 | (P) F |
| CAL (ICV) CCV | | 8.4.10 | 0729 | 7.00 | 2810081 | 9-2010 | 7.02 | (P) F |
| CAL (ICV) CCV | | 8.4.10 | 0731 | 10.00 | 2904590 | OCT 2010 | 10.00 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 8.4.10 | 0732 | 240 @ 25 mV | 1630 | 05/2014 | 238.4 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

Comments:

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

6/23/2009

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: NASA - CRHE  Project #: FR1681  Field Personnel: J. McKinnon

Water Quality Meter - Model/Serial #: YSI 556 MPS  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | Acceptance Criteria: +/-0.3mg/L | | | |
| CAL (ICV) CCV | | 8.5.10 | 0726 | 26.99 | 7.968 | 8.89 | 111.4 | P (F) |
| (CAL) ICV CCV | | 8.5.10 | 0727 | 27.03 | 7.968 | 7.97 | 98.9 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 8.5.10 | 0729 | 1.413* | 8057 | 06/07/2010 | 1.851 | P (F) |
| (CAL) ICV CCV | | 8.5.10 | 0730 | 1.413 | 8057 | 06/07/2010 | 1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL (ICV) CCV | | 8.5.10 | 0731 | 4.0 | 7696 | 02/3/11 | 4.06 | (P) F |
| CAL (ICV) CCV | | 8.5.10 | 0733 | 10.00 | 2904590 | OCT 2010 | 9.95 | (P) F |
| CAL (ICV) CCV | | 8.5.10 | 0734 | 7.00 | 2810081 | 9-2010 | 7.10 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 8.5.10 | 0935 | 240@25.8°C | 1630 | 05/2011 | 237.9 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

Comments:

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: NASA - CRHE  Project #: FR1681  Field Personnel: J. McKinnon

Water Quality Meter - Model/Serial #: YSI 556 MPS  Turbidimeter - Model/Serial #

### Dissolved Oxygen

DEP SOP FT 1500 | Acceptance Criteria: +/-0.3mg/L

| | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| CAL (ICV) CCV | 8.6.10 | 0711 | 27.88 | 7.842 | 13.50 | 13.50 157.7 | P (F) |
| CAL ICV CCV | 8.6.10 | 0713 | 27.88 | 7.842 | 7.75 | 9.98 | (P) F |
| CAL (ICV) CCV | 8.6.10 | 0809 | 26.64 | 8.026 | 75.2 | 5.75 | P (F) |
| CAL ICV CCV | 8.6.10 | 0810 | 27.06 | 8.026 | | | P F |

### Specific Conductance

DEP SOP FT 1200 | Acceptance Criteria: +/- 5%

| | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| CAL (ICV) CCV | 8.6.10 | 0715 | 1.413 | 8057 | 06/07/2010 | 1.532 | P (F) |
| CAL ICV CCV | 8.6.10 | 0716 | 1.413 | 8057 | 06/07/2010 | 1.413 | (P) F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |

### pH

DEP SOP FT 1100 | Acceptance Criteria: +/-0.2 SU

| | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| CAL (ICV) CCV | 8.6.10 | 0718 | 4.0 | 7696 | 02/3/11 | 4.06 | (P) F |
| CAL (ICV) CCV | 8.6.10 | 0720 | 7.00 | 2810081 | 09-2010 | 7.01 | (P) F |
| CAL (ICV) CCV | 8.6.10 | 0722 | 10.00 | 2904590 | OCT-2010 | 10.00 | (P) F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |

### ORP

SOP N/A | Geosyntec Acceptance Criteria: +/- 5%

| | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| CAL (ICV) CCV | 8.6.10 | 0726 | 240@25°C | 1630 | 05/2014 | 237.9 | (P) F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

### Turbidimeter

Acceptance Criteria: +/- 10%

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

Acceptance Criteria: +/- 8%

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

Acceptance Criteria: +/- 6.5%

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

Acceptance Criteria: +/- 5%

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

Comments: Replaced D.O. membrane at 0808
D.O. keeps decreasing.

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings: always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

6/23/2009

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR1681  Field Personnel: Jan Barfus

Water Quality Meter - Model/Serial #: YSI 556 / 04K16980AC  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 8/9/10 | 0630 | 23.38 | 8.514 | 6.85→8.51 | 79.3→98.1 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (CV) CCV | | 8/9/10 | 0620 | 1.413 | 8057 | 6/9/11 | 1.352→1.413 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 8/9/10 | 0610 | 4.0 | 7696 | 2/3/11 | 4.03→4.00 | P F |
| (CAL) (ICV) CCV | | 〃 | 〃 | 7.0 | 7229 | 5/16/10 | 7.10→7.00 | P F |
| (CAL) (ICV) CCV | | 〃 | 〃 | 10.0 | 7150 | 8/20/10 | 9.93→9.99 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 8/9/10 | 0625 | 240@25°C | 1630 | 05/2014 | 245.9→240.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments:

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE Project #: FR1681 Field Personnel: Jan Barfus

Water Quality Meter - Model/Serial #: YSI 556 / 04K18980 AC Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 8/10/10 | 0645 | 23.23 | 8.546 | 8.21→8.53 | 96.1→99.9 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 8/10/10 | 0635 | 1.413 | 8057 | 6/7/11 | 1.436→1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 8/10/10 | 0630 | 4.0 | 7696 | 5/3/11 | 4.06→4.00 | (P) F |
| (CAL) (ICV) CCV | | 11 | 11 | 7.0 | 7229 | 8/15/10 | 6.95→7.00 | (P) F |
| (CAL) (ICV) CCV | | 11 | 11 | 10.0 | 7158 | 8/20/10 | 10.01→10.00 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 8/10/10 | 0640 | 240@25C | 1630 | 05/2014 | 239.2→240.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No) Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

Comments:

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

6/23/2009

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRITE  Project #: FR1681  Field Personnel: Jan Barfus

Water Quality Meter - Model/Serial #: YSI 556 / 04K18980AC  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 8/11/10 | 0630 | 24.8 | 8.294 | 9.73→8.29 | 117.4→100.2 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 8/11/10 | 0620 | 1.413 | 8057 | 6/7/11 | 1.358→1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 8/11/10 | 0615 | 4.0 | 7696 | 2/3/11 | 3.98→4.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | 7.0 | 7229 | 8/15/10 | 7.02→7.00 | (P) F |
| (CAL) (ICV) CCV | | " | " | 10.0 | 7150 | 8/20/10 | 9.90→9.98 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 8/11/10 | 0625 | 240@25C | 1630 | 05/2014 | 238.5→240.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

Comments:

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

6/23/2009

Geosyntec sultants

# Water Quality Instrument Calibration Form

Project/Site: CHRE Project #: FR1681 Field Personnel: JLA

Water Quality Meter - Model/Serial #: YSI556 08A100738 Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 10/11/10 | 0700 | 23.1 | 8.562 | 8.85→8.55 | 99.6 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 10/11/10 | 0646 | 1.413 | 7807 | 3/2011 | 1.553→1.493 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 10/4/10 | 0650 | 4 | 2003526 | 3/2012 | 4.15→4.0 | P F |
| CAL ICV CCV | | 10/11/10 | 0652 | 7 | ~~2006065~~ JB 2005605 | 5/2012 | 6.87→7.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | 10/4/10 | 0655 | 10 | AD-9265-2 | 12/16 | 9.95→10.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 10/4/10 | 0658 | 240±25 | 2459 | 6/2015 | 241.3→240 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Comments:

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHF  Project #: FR1681  Field Personnel: JLA

Water Quality Meter - Model/Serial #: YSI 556 08A100738  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 10/12/10 | 0715 | 21.3 | 8.863 | 9.04 | 98.8 100.2 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 10/12/10 | 0700 | 1.413 | 7806 | 3/2011 | 1.318 1.413 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 10/12/10 | 0705 | 4 | 2909313 | 8/2011 | 4.38 4 | P F |
| CAL ICV CCV | | 10/12/10 | 0708 | 7 | 2009605 | 5/2012 | 6.97 7.0 | P F |
| CAL ICV CCV | | 10/12/10 | 0710 | 10 | 100 2055 | 7/2011 | 10.12 10 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 10/12/10 | 0717 | 240 @25 | 2282 | 3/2015 | 242.8 234.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If para fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments:

Geosyntec consultants

/23/2009

Geosyntec Consultants

# Water Quality Instrument Calibration Form

Project/Site: CRHE / FR11681 Project #: FR11681 Field Personnel: JLA

Water Quality Meter - Model/Serial #: YSI 556 08A 100738 Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) ICV CCV | | 10/13/10 | 0651 | 23.4 | 8.514 | 8.49-8.51 | 100.4 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) ICV CCV | | 10/13/10 | 0630 | 1.413 | 7806 | 3/2011 | 1.484-1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) ICV CCV | | 10/13/10 | 0632 | 4 | 2909313 | 8/2011 | 4.12-4.0 | (P) F |
| (CAL) ICV CCV | | 10/13/10 | 0635 | 7 | 2005605 | 5/2012 | 6.98-7.0 | (P) F |
| (CAL) ICV CCV | | 10/13/10 | 0638 | 10 | 1002035 | 7/2011 | 10.18-10.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) ICV CCV | | 10/13/10 | 0642 | 240@25 | 2282 | 3/2015 | 240-240.7 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Comments:

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRTE  Project #: FR1681  Field Personnel: SLA

Water Quality Meter - Model/Serial #: YSI 556 08A100738  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 10/14/10 | 0652 | 21.6 | 8.812 | 9.12→8.81 | 99.6 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 10/14/10 | 0637 | 1.413 | 7806 | 3/2011 | 1.399→1.416 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 10/14/10 | 0639 | 4 | 2909313 | 8/2011 | 4.12→4.00 | (P) F |
| (CAL) (ICV) CCV | | 10/14/10 | 0641 | 7 | 2005605 | 5/2012 | 6.70→7.00 | (P) F |
| (CAL) (ICV) CCV | | 10/14/10 | 0645 | 10 | 1002035 | 7/2011 | 10.22→10.03 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 10/14/10 | 0646 | 240@25 | 2282 | 3/2015 | 241.8→240.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

Comments:

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If par fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

3/23/2009

## Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CAHE  Project #: FA1681  Field Personnel: JLA

Water Quality Meter - Model/Serial #: YSI 556 08A100738  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 10/15/10 | 0648 | 16.31 | 9.808 | 10.49→9.81 | 99.9% | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 10/15/10 | 0632 | 1.413 | 7806 | 3/2011 | 1.420→1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 10/15/10 | 0634 | 4 | 2909313 | 8/2011 | 4.44→4.0 | (P) F |
| (CAL) (ICV) CCV | | 10/15/10 | 0636 | 7 | 2005605 | 5/2012 | 6.55→7.0 | (P) F |
| (CAL) (ICV) CCV | | 10/15/10 | 0641 | 10 | 1002035 | 7/2011 | 10.52→10.03 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 10/15/10 | 0643 | 240 @ 25 | 2282 | 3/2015 | 244.1→240.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

Comments: pH 7 calibrated out of range

CAL - Initial Calibration

ICV - Initial Callbration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If para ails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

/23/2009

**Geosynte nsultants**
**Instrument Calibration Form**

Project/Site: Contractors Road  Project #: FR1681  Field Personnel: Derik Stratton

Water Quality Meter - Model/Serial #: YSI 556MPS 09G101376  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp °C | Saturation mg/L (Table 2200-2 or 1500-1) | Reading mg/L | Reading % | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 10-19 | 0803 | 21.36 | 8.846 | 9.23-8.85 | 104.2-100.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard mS/cm | Lot # | Exp. Date | Reading mS/cm | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | 10-19 | 0641 | 1.413 | 8809 | 03-12 | 1.418-1.413 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Buffer pH | Lot # | Exp. Date | Reading SU | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/-0.2 SU | |
| CAL ICV CCV | | 10-19 | 0630 | 4.00 | 2002034 | 01-12 | 4.08-4.00 | P F |
| CAL ICV CCV | | 10-19 | 0633 | 7.0 | 2002032 | 01-12 | 6.88-7.00 | P F |
| CAL ICV CCV | | 10-19 | 0638 | 10.0 | 2101326 | 07-12 | 10.16-10.03 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | ORP | 10-19 | 0659 | 240@25 | 2244 | 03-15 | 240.4-240.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| 0.1 - 10 NTU | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |

| 11 - 40 NTU | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |

| 41 - 100 NTU | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |

| >100 NTU | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Comments:

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

Geosyntec consultants

Version 1 (2009-06-16)

**Geosynte nsultants**
**Instrument Calibration Form**

Project/Site: Contractors Road ~~Wilson Corner~~ DS  Project #: FR1681  Field Personnel: Derik Stratton

Water Quality Meter - Model/Serial #: YSI 556 MPS 09G101376  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp °C | Saturation mg/L (Table 2200-2 or 1500-1) | Reading mg/L | Reading % | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 10-20 | 0736 | 18.89 | 9.295 | 9.45 - 9.30 | 101.7 - 100.2 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard mS/cm | Lot # | Exp. Date | Reading mS/cm | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | 10-20 | 0652 | 1.413 | 8809 | 03-2012 | 1.431-1.413 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Buffer pH | Lot # | Exp. Date | Reading SU | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/-0.2 SU | |
| CAL ICV CCV | | 10-20 | 0643 | 4.0 | 2002034 | 01-2012 | 4.07 - 4.00 | P F |
| CAL ICV CCV | | 10-20 | 0647 | 7.0 | 2002012 | 01-2012 | 6.84 - 7.00 | P F |
| CAL ICV CCV | | 10-20 | 0650 | 10.0 | 2101326 | 07-2012 | 10.27 - 10.04 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | ORP | 10-20 | 0705 | 240@25 | 02244 | 03-2015 | 247.6 - 240.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| 0.1 - 10 NTU | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |

| 11 - 40 NTU | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |

| 41 - 100 NTU | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |

| >100 NTU | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Comments:

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

Geosyntec consultants

**Geosynte nsultants**
**Instrument Calibration Form**

Project/Site: Contractor's Road  Project #: FR1681  Field Personnel: Derik Stratton

Water Quality Meter - Model/Serial #: YSI 556MPS 09G101376  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp °C | Saturation mg/L (Table 2200-2 or 1500-1) | Reading mg/L | Reading % | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 10-21 | 0736 | ~~17.81~~ 18.10 OS | ~~4.126~~ 9.448 | 8.78-9.45 | 92.9-100.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard mS/cm | Lot # | Exp. Date | Reading mS/cm | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 10-21 | 0644 | 1.413 | 8809 | 03-12 | 1.410-1.413 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Buffer pH | Lot # | Exp. Date | Reading SU | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 10-21 | 0639 | 4.0 | 2002034 | 01-12 | 3.76-4.00 | P F |
| CAL ICV CCV | | 10-21 | 0643 | 7.0 | 2002012 | 01-12 | 7.15-7.00 | P F |
| CAL ICV CCV | | 10-21 | 0646 | 10.0 | 2101326 | 07-12 | 10.02-10.00 | P F |
| CAL ICV CCV | | | | | | | | P F |
| ~~CAL ICV CCV~~ | | | | | | | | P F |
| CAL ICV CCV | ORP | 10-21 | 0657 | 240@25 | 2244 | 03-15 | 242.5-240.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| 0.1 - 10 NTU | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |

| 11 - 40 NTU | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |

| 41 - 100 NTU | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |

| >100 NTU | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Comments:

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

Geosyntec consultants

Version 1 (2009-06-16)

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE - NASA  Project #: FR1681  Field Personnel: J. McKinnon

Water Quality Meter - Model/Serial #: –  Turbidimeter - Model/Serial # Hach 2100P

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std 5 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL (ICV) CCV | | 4.36 | P (F) |
| CAL ICV CCV | | 4.36 | P (F) |
| CAL ICV CCV | | 4.36 | P (F) |
| CAL ICV CCV | | 4.36 | P F |

| 11 - 40 NTU Std ___ NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std 50 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL (ICV) CCV | 43.3 | 43.3 | P (F) |
| CAL ICV CCV | | 43.3 | P (F) |
| CAL ICV CCV | | 43.3 | P (F) |
| CAL ICV CCV | | 43.3 | P (F) |
| CAL ICV CCV | | 43.3 | P (F) |
| CAL ICV CCV | | 43.3 | P F |

| >100 NTU Std 500 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL (ICV) CCV | | 554 | P (F) |
| CAL ICV CCV | | 554 | P (F) |
| CAL ICV CCV | | 554 | P (F) |
| CAL ICV CCV | | 554 | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Comments: Hach 2100P does not support field calibration.

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: NAIA - CRHE  Project #: FR1681  Field Personnel: A. RIVERA

Water Quality Meter - Model/Serial #: YSI / SN 02H0167AE  Turbidimeter - Model/Serial # HACH / 11070C0 / 0673

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV (CCV) | | 1/9/12 | 0852 | 19.4 | 9.202 | 9.25 | 100.8 | (P) F |
| CAL ICV (CCV) | | 1/10/12 | 0720 | 15.8 | 9.912 | 9.85 | 100.3 | (P) F |
| CAL ICV (CCV) | | 1/11/12 | 0721 | 20.2 | 9.056 | 8.99 | 99.3 | (P) F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 1/9/12 | 0845 | 0.500 | 117-500-E | 03/13 | 0.515 | (P) F |
| CAL ICV (CCV) | | 1/10/12 | 0715 | 0.500 | 117-500-E | 03/13 | 0.506 | (P) F |
| (CAL) ICV (CCV) | | 1/10/12 | 0843 | 0.500 | 117-500-E | 03/13 | 5584 | P (F) |
| (CAL) ICV CCV | | 1/10/12 | 0845 | 0.500 | 117-500-E | 03/13 | 0.505 | (P) F |
| CAL ICV (CCV) | | 1/10/12 | 0716 | 0.500 | 117-500-E | 03/13 | 0.487 | (P) F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) ICV (CCV) | | 1/9/12 | 0840 | 7.00 | 105-E | 04/13 | 7.12 | (P) F |
| CAL ICV (CCV) | | 1/9/12 | 0842 | 4.01 | 104-E | 04/13 | 4.07 | (P) F |
| CAL ICV (CCV) | *0710 | 1/10/12 | *~~0840~~ | 7.00 | 105-E | 04/13 | 7.09 | (P) F |
| CAL ICV (CCV) | | 1/10/12 | 0712 | 4.01 | 104-E | 04/13 | 4.16 | (P) F |
| CAL ICV (CCV) | | 1/11/12 | 0710 | 7.00 | 105-E | 04/13 | 7.14 | (P) F |
| CAL ICV (CCV) | | 1/11/12 | 0713 | 4.01 | 104-E | 04/13 | 4.19 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 1/9/12 | 0848 | ~235.0 | 10D100400 | 04/12 | 252.4 | (P) F |
| CAL ICV (CCV) | | 1/10/12 | 0718 | ~235.0 | 10D100400 | 04/12 | 239.2 | (P) F |
| CAL ICV (CCV) | | 1/11/12 | 0718 | 235.0 | 10D100400 | 04/12 | 228.2 | (P) F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV (CCV) | 1/9/12 | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std 546 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV (CCV) | 1/9/12 | 558 | (P) F |
| CAL ICV (CCV) | 1/10/12 | 536 | (P) F |
| CAL ICV (CCV) | 1/11/12 | 548 | (P) F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments:

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: NASA - CRTE  Project #: FR1681  Field Personnel: A. R IVERA

Water Quality Meter - Model/Serial #: YSI / SN 02H0167AE  Turbidimeter - Model/Serial # HACH / 11070C010673

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV (CCV) | | 1/12/12 | 0802 | 18.00 | 9.44 | 9.51 | 100.5 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV (CCV) | | 1/12/12 | 0752 | 0.500 | 117-500-E | 03/13 | 0.660 | P (F) |
| (CAL) ICV CCV | | 1/12/12 | 0755 | 0.500 | 117-500-E | 03/13 | 0.500 | (P) F |
| CAL (ICV) CCV | | 1/12/12 | 0757 | 0.500 | 117-500-E | 03/13 | 0.504 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV (CCV) | | 1/12/12 | 0746 | 7.00 | 105-E | 4/13 | 7.13 | (P) F |
| CAL ICV (CCV) | | 1/12/12 | 0749 | 4.01 | 104-E | 4/13 | 4.19 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV (CCV) | | 1/12/12 | 0800 | 235 | 10D1004400 | 04/12 | 220.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std 546 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV (CCV) | 1/12/12 | 549 | (P) F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec consultants

# Instrument Calibration Form

Project/Site: FR 1681 - CRHE  Date: 2-7-12  Field Personnel: Cody Smith (CS)

Water Quality Meter - Model/Serial #: YSI 556 MPS  Turbidimeter - Model/Serial # N/A

| Dissolved Oxygen | DEP SOP FT 1500 | Initials | Time | Temp °C | Saturation mg/L (Tbl 2200-2) | Saturation % (Tbl 2200-2) | Reading mg/L or % | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | CS | 07:13 | 21.4 | 8.846 | | 8.81 - 8.84 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Initials | Time | Standard µS/cm | Lot # | Exp. Date | Reading µS/cm | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | CS | 07:25 | 1000 | | | 1114 - 1000 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Initials | Time | Standard SU | Lot # | Exp. Date | Reading SU | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | CS | 06:10 | 4.01 | | | 4.19 - 4.01 | P F |
| CAL ICV CCV | | CS | 06:24 | 7.01 | | | 6.88 - 7.01 | P F |
| CAL ICV CCV | | CS | 06:58 | 10.00 | | | 10.14 - 10.03 | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | Initials | Time | Standard mV | Lot # | Exp. Date | Reading mV | Pass or Fail |
|---|---|---|---|---|---|---|---|
| | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0 NTU | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 2% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV (CS) | | P F |

| 1 NTU (N/A) | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 2% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |

| 10 NTU | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 2% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |

| 100 NTU | NTU Reading | Pass or Fail |
|---|---|---|
| | Acceptance Criteria: +/- 2% | |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |
| CAL ICV CCV | | P F |

CAL - Calibrate
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

0179 ↑ GPS

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRITE  Project #: F12  Field Personnel: Cody Smith (CS)

Water Quality Meter - Model/Serial #: YSI 556 MPS  Turbidimeter - Model/Serial # N/A

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 2-8-12 | 6:45 | 21.1 | 8.598 | 20%-10% | 6.97-8.83 | P F |
| CAL ICV CCV | | 2-8-12 | 18:05 | 22.7 | 8.627 | -10% | 7.82 8.63 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 2-8-12 | 6:42 | 1,413 | 8809 | 3/12 | 1,501-1,413 | P F |
| CAL ICV CCV | | 2-8-12 | 17:51 | 1,413 | 8809 | 3/12 | 1,415-1,413 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 2-8-12 | 6:30 | 4.00 | 0110969 | 11/30/12 | 4.30-4.00 | P F |
| CAL ICV CCV | | 2-8-12 | 6:35 | 7.00 | 1081860 | 8/30/13 | 6.75-7.00 | P F |
| CAL ICV CCV | | 2-8-12 | 6:39 | 10.00 | 2101326 | 7/12 | 10.41-10.00 | P F |
| CAL ICV CCV | | 2-8-12 | 17:40 | 4.00 | 0110969 | 11/30/12 | 4.05-4.00 | P F |
| CAL ICV CCV | | 2-8-12 | 17:43 | 7.00 | 1081860 | 8/30/13 | 6.75-7.00 | P F |
| CAL ICV CCV | | 2-8-12 | 17:48 | 10.00 | 2101326 | 7/12 | 10.45-10.00 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 2-8-12 | 06:44 | 229 | 1061713 | 6/30/12 | 237.3-229.0 | P F |
| CAL ICV CCV | | 2-8-12 | 17:55 | 229 | 1061713 | 6/30/12 | 226.8-229.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes / No  Disolved Oxygen membrane Changed? Yes / No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV (S) | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

Comments:

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

6/23/2009

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: FR1681 - CRHE  Project #: FR1681  Field Personnel: Cody Smith (CS)

Water Quality Meter - Model/Serial #: YSI 556 MPS  Turbidimeter - Model/Serial # N/A

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| ~~CAL ICV~~ CCV | | 2-9-12 | 18:45 | 22.17 | 8.710 | 3.30-8.70 | 37.8%-100.0% | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| ~~CAL ICV~~ CCV | | 2-9-12 | 18:35 | 1,413 | 8809 | 3/12 | 1,430-1,413 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| ~~CAL ICV CCV~~ | | 2-9-12 | 18:23 | 4.00 | 0110969 | 11/30/12 | 3.96-4.00 | P F |
| ~~CAL ICV CCV~~ | | 2-9-12 | 18:27 | 7.00 | 1091860 | 8/30/13 | 6.67-7.00 | P F |
| ~~CAL ICV CCV~~ | | 2-9-12 | 18:31 | 10.00 | 2101326 | 7/12 | 10.59-10.08 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| ~~CAL ICV CCV~~ | | 2-9-12 | 18:38 | 229 | 1061713 | 6/30/12 | 230.7-229.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | N/A | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments:

Geosyntec consultants

6/23/2009

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHG2 Project #: ~~F18~~ FR1651 Field Personnel: D. Sizemore

Water Quality Meter - Model/Serial #: YSI 556 Turbidimeter - Model/Serial # Hach 2100 Q

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 3/19/12 | 1621 | 25.81 | 8.143 | R&3-8.14 | 100.2 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 3/19/12 | 1622 | 1.413 | 9773 | 12/12 | 1.723-1.419 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 3/19/12 | 1624 | 4 | 2106053 | 3/13 | 4.37-4.03 | P F |
| CAL ICV CCV | | ↓ | 1623 | 7 | 2106104 | 8/13 | 7.13-7.02 | P F |
| CAL ICV CCV | | ↓ | 1625 | 10 | 2013666 | 7/12 | 10.02-10.02 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 3/19/12 | 1626 | 240@25 | 3354 | 6/16 | 232.0-239.1 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std 10 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | 3/19/12 | 1 | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std 20 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | 3/19/12 | 19.01-20.0 | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____ NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____ NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments:

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRMR  Project #: FR1681  Field Personnel: D. Silamore

Water Quality Meter - Model/Serial #: YSI 556  Turbidimeter - Model/Serial # HACH 2100Q 21090

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 3/20/12 | 649 | 20.39 | 9.021 | 9.45-9.03 | 100.4 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 3/20/12 | 649 | 1.413 | 9.373 | 12/12 | 1.323-1.419 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 3/20/12 | 653 | 4 | 2106053 | 5/13 | 4.11-4.00 | P F |
| CAL ICV CCV | | ↓ | 652 | 7 | 2109104 | 8/13 | 7.23-7.01 | P F |
| CAL ICV CCV | | ↓ | 655 | 10 | 2107366 | 7/12 | 10.09-10.02 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 3/20/12 | 702 | 240 @ 25 | 3354 | 6/16 | 240.0-240.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std 1 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | 3/20 | 1.0 | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std 20 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | 3/20 | 19.6-20.0 | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___ NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___ NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CPHE / FR1681 Project #: FR1681 Field Personnel: L. Petty (Geosyntec)

Water Quality Meter - Model/Serial #: Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) ICV CCV | | 3/19/12 | 0930 | 20.62 | 8.985 | 8.921 | 100.03 | (P) F |
| CAL (ICV) (CCV) | | 3/20/12 | 0750 | 22.22 | 8.710 | 8.825 | 100.01 | (P) F |
| (CAL) ICV CCV | | ↓ | ↓ | 22.22 | 8.710 | 8.776 | 100.04 | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) ICV CCV | | 3/19/12 | 0900 | 1.413 | 9084 | 7-12-12 | 1.438 | (P) F |
| CAL (ICV) (CCV) | | 3/20/12 | 0740 | 1.413 | | | 1.362 | (P) F |
| (CAL) ICV CCV | | ↓ | 0745 | | | | 1.372 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) ICV CCV | | 3-19-12 | 0907 | 4.00 | 21010053 | 5-2013 | 4.158 | P (F) |
| (CAL) ICV CCV | | ↓ | ↓ | 7.00 | 21001037 | 12-12 | 6.946 | (P) F |
| (CAL) ICV CCV | | ↓ | ↓ | 10.00 | 21013666 | 7-2012 | 9.945 | (P) F |
| (CAL) ICV CCV | | ↓ | ↓ | 7.00 | 21001037 | 12-2012 | 7.03 | (P) F |
| CAL (ICV) (CCV) | | 3-20-12 | 0750 | 7.00 | 21001037 | 12-2012 | 7.09 | (P) F |
| (CAL) ICV CCV | | ↓ | ↓ | ~~10.00~~ | ↓ | ↓ | 7.00 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) ICV CCV | | ~~3-19-12~~ | 0900 | 240 | 2981 | 01-2016 | 229 | P (F) |
| (CAL) ICV CCV | | 3-19-12 | 0905 | 240 | 2981 | 01-16 | 241.5 | (P) F |
| CAL (ICV) (CCV) | | 3-20-12 | 0745 | ↓ | ↓ | ↓ | 223.0 | P F |
| (CAL) ICV CCV | | ↓ | 0747 | ↓ | ↓ | ↓ | 240.1 | P F |

Specific Conductance Probe Cleaned? Yes (No) Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std 1 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| (CAL) ICV CCV | 3-20-12 | 0.72 | (P) F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std 20 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | 3-20-12 | 20.1 | (P) F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std 100 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | 3-20-12 | 95 | (P) F |
| CAL ICV CCV | 3-20-12 | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std 800 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | 3-20-12 | 816 | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments:

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: KSC NASA  Project #: FR1681  Field Personnel: L Petty / Geosyntec

Water Quality Meter - Model/Serial #:  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | Acceptance Criteria: +/-0.3mg/L | | | |
| CAL (ICV) (CCV) | | 3-21-12 | 0600 | 20.0 | 9.092 | 9.321 | 100.5 | P F |
| CAL ICV CCV | | ↓ | ↓ | 20.5 | 9.092 | 9.320 | 100.4 | P F |
| CAL (ICV) (CCV) | | 3-22-12 | 0500 | 21.1 | 9.074 | 9.052 | 100.2 | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL (ICV) (CCV) | | 3-21-12 | 0600 | 1.413 | 9084 | 7-12-12 | 1.383 | P F |
| CAL (ICV) CCV | | ↓ | ↓ | ↓ | ↓ | ↓ | 1.407 | P F |
| CAL (ICV) (CCV) | | 3-22-12 | 0500 | 1.413 | 9084 | 7-12-12 | 1.392 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL (ICV) (CCV) | | 3-20-12 | 0750 | 4.00 | 2040053 | 05-2013 | 4.19 | P F |
| CAL ICV CCV | | ↓ | ↓ | ↓ | ↓ | ↓ | 3.99 | P F |
| CAL ICV CCV | | ↓ | ↓ | 10.00 | 2101346 | 7-2012 | 9.91 | P F |
| CAL ICV CCV | | ↓ | ↓ | 10.00 | ↓ | ↓ | 9.98 | P F |
| CAL (ICV) (CCV) | | 3-21-12 | 0600 | 7.00 | 2101037 | 12-12 | 6.94 | P F |
| CAL (ICV) (CCV) | | ↓ | ↓ | 4.00 | 2040253 | 5-2013 | 3.0 | P F |
| (ICV) (CCV) | | | | 10.00 | 2101346 | 7-2012 | 9.98 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL (ICV) (CCV) | | 3-21-12 | 0600 | 240 | 2981 | 1-2016 | 240.1 | P F |
| CAL (ICV) CCV | | ↓ | ↓ | ↓ | ↓ | ↓ | 240.0 | P F |
| CAL ICV CCV | | 3-22-12 | 0500 | 240 | 2981 | 1-2016 | 239.1 | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std 7 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL (ICV) (CCV) | 3-21-12 | 0.58 | P F |
| CAL ICV CCV | 3-21-12 | 0.58 | P F |
| CAL (ICV) (CCV) | 3-22-12 | 0.60 | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std 20 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL (ICV) (CCV) | | 21.4 | P F |
| CAL ICV CCV | | | P F |
| CAL (ICV) (CCV) | 3-21-12 | 21.4 | P F |
| CAL ICV CCV | 3-21-12 | 20.8 | P F |
| CAL (ICV) (CCV) | 3-22-12 | 20.1 | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std 100 NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8.5% | |
| CAL (ICV) (CCV) | 3-21-12 | 101 | P F |
| CAL ICV CCV | 3-21-12 | 101 | P F |
| CAL (ICV) (CCV) | 3-22-12 | 100 | P F |
| CAL (ICV) CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | |

| >100 NTU Std ___ NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL (ICV) (CCV) | 3-21-12 | 809 | P F |
| CAL ICV CCV | 3-21-12 | 812 | P F |
| CAL (ICV) (CCV) | 3-22-12 | 827 | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

Comments:

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification
Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

6/23/2009

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: KSC - CRAFT  Project #: 321681  Field Personnel: Petty / Geosyntec

Water Quality Meter - Model/Serial #:

Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/-0.2 SU | |
| CAL ICV CCV | | 3-22-12 | 0800 | 10.00 | 2101366 | 7-2012 | 9.96 | P F |
| CAL ICV CCV | | ↓ | ↓ | 7.00 | 2101027 | | 7.02 | P F |
| CAL ICV CCV | | | | 4.00 | 2106053 | | 3.98 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Geosyntec Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec consultants

6/23/2009

**Geosyntec Consultants**

**Water Quality Instrument Calibration Form**

Project/Site: CRHE  Project #:  Field Personnel: M. Stackhouse

Water Quality Meter - Model/Serial #: 4SI556MPS 10M100152  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | Acceptance Criteria: +/-0.2mg/L | | | |
| CAL (ICV) CCV | | 10/1/12 | 1740 | 28.24 | 7.00 / 11.73 | 7.73 | 99.9 | P F |
| CAL ICV (CCV) | | 10/2/12 | 1830 | 25.5 | 8.188 | 8.15 | 99.5 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 10/1/12 | 1755 | 1.413 | 9569 | 3/27/2013 | 1.429 / 1.413 | P F |
| CAL (ICV) CCV | | 10/2/12 | 1842 | " | " | " | 1.410 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL (ICV) CCV | | 10/1/12 | 1746 | 4.00 | 2110380 | Sep 2013 | 3.96 / 4.00 | P F |
| CAL (ICV) CCV | | ↓ | ↓ | 7.00 | 2105403 | 04-2013 | 0.99 / 7.02 | P F |
| CAL (ICV) CCV | | ↓ | ↓ | 10.0 | 2111265 | Apl 2013 | 9.95 / 10.02 | P F |
| CAL ICV (CCV) | | 10/2/12 | 1836 | 4.00 | 2110380 | Sep 2013 | 4.11 | P F |
| CAL ICV (CCV) | | ↓ | ↓ | 7.00 | 2105403 | 04-2013 | 7.18 | P F |
| CAL ICV (CCV) | | ↓ | ↓ | 10.00 | 2111265 | Apl 2013 | 10.15 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) ICV CCV | | 10/1/12 | 1759 | 240 | 3717 | 11-2016 | 240.8 / 240.0 | P F |
| (CAL) ICV (CCV) | | 10/2/12 | 1846 | " | " | " | 238.8 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

Comments:

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE  Project #: FR1681  Field Personnel: M. Stackhouse

Water Quality Meter - Model/Serial #: 45I 556MPS 10M100152  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) ICV (CCV) | | 10/3/12 | 2032 | 24.32 | 8.371 | 8.35 | 99.8 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 10/3/12 | 2038 | 1.413 | 9569 | 3/27/2013 | ~~1.46~~ 1.390 | (P) (P) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) ICV (CCV) | | 10/3/12 | 2042 | 4.00 | 2110380 | Sep 2013 | 4.14 | (P) F |
| (CAL) ICV (CCV) | | ↓ | ↓ | 7.00 | 2105403 | Jul-2013 | ~~7.08~~ 7.07 | (P) F |
| (CAL) ICV (CCV) | | | | 10.0 | 2111265 | Apl 2013 | 10.17 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 10/3/12 | 2058 | 240 | 3717 | 11-2016 | ~~253~~ 249 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

Comments:

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification
Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CHRL  Project #FR  Field Personnel: Rachel Donahue

Water Quality Meter - Model/Serial #: YSI 556 MPS / 10M100152  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 10/5/12 | 620 | 24.25 | 8.317 | 9.27→8.30 | 111→99.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 10/5/12 | 705 | 1.413 | 9373 | 12/20/12 | 1.830→1.418 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 10/5/12 | 932 | 7.0 | 10910960 | 8/30/13 | 7.24→7.00 | P F |
| CAL ICV CCV | | ↓ | ↓ | 4.0 | 22022647 | 4-2014 | 4.31→4.00 | P F |
| CAL ICV CCV | | ↓ | ↓ | 10.0 | 0122799 | 12/30/12 | 9.86→9.99 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 10/5/12 | 717 | 240 @ 25 | 3159 | 3/2016 | 240.0→240.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Comments: _____

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site CRHE | Project # FR1681 | Field Personnel Crystal Towns

Water Quality Meter - Model/Serial # YSI 556 MPS / 10C100199 | Turbidimeter - Model/Serial # NA

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL (ICV) CCV | | 3/18/13 | 0828 | 20.7 | 8.968 | 8.96 | 99.8 | P F |
| CAL ICV (CCV) | | 3/18/13 | 1050 | 24.3 | 8.371 | 8.34/8.36 | 99.8/100.2 | P F |
| CAL ICV CCV | | 3/19/13 | 1521 | 20.2 | 7.800 | 8.03/100.2 | 103.1/7.80 | P F |
| CAL ICV (CCV) | | 3/20/13 | 1617 | 22.5 | 8.660 | 8.49/8.65 | 101.2/99.9 | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 3/18/13 | 0903 | 1.413 | 10115 | 1/14/14 | 1.411 | P F |
| CAL ICV (CCV) | | 3/18/13 | 1851 | 1.413 | " | " | 1.265/1.412 | P F |
| CAL ICV (CCV) | | 3/19/13 | 1523 | 1.413 | " | " | 1.825/1.413 | P F |
| CAL ICV (CCV) | | 3/20/13 | 1618 | 1.413 | " | " | 1.320/1.413 | P F |
| CAL ICV (CCV) | | 3/21/13 | 1732 | 1.413 | " | " | 1.460/1.413 | P F |
| CAL ICV (CCV) | | 3/22/13 | 1635 | 1.413 | " | " | 1.274 | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL (ICV) CCV | | 3/18/13 | 0859 | 4.0 | 2210176 | 9/14 | 4.00 | P F |
| CAL (ICV) CCV | | " | 0900 | 7.0 | 1209172 | 9/14 | 7.00 | P F |
| CAL (ICV) CCV | | " | 0901 | 10.0 | 2207302 | 1/14 | 10.00 | P F |
| CAL ICV (CCV) | | 3/18/13 | 1852 | 4.0 | 2210176 | 9/14 | 4.23/4.00 | P F |
| CAL ICV (CCV) | | " | 1857 | 7.0 | 1209172 | 9/14 | 6.86/7.00 | P F |
| CAL ICV (CCV) | | " | 1859 | 10.0 | 2207302 | 1/14 | 10.08/10.00 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 3/18/13 | 0904 | 240 | 4761 | 7/17 | 240.1 | P F |
| CAL ICV (CCV) | | 3/18/13 | 1901 | 240 | " | " | 233.3/240.0 | P F |
| CAL ICV (CCV) | | 3/19/13 | 1529 | 240 | " | " | 231.0/240.0 | P F |
| CAL ICV (CCV) | | 3/20/13 | | 240 | " | " | 231.0/240.0 | P F |

Specific Conductance Probe Cleaned? Yes (No) | Dissolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1 See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7 and a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE | Project #: FR-1681 | Field Personnel: Crystal Towns

Water Quality Meter - Model/Serial #: YSI 556 MPS / 10C100199 | Turbidimeter - Model/Serial #: NA

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV (CCV) | | 3/21/13 | 1623 | 19.3 | 2.229 | 8.35/9.22 | 90.1/99.8 | (P) F |
| CAL ICV (CCV) | | 3/22/13 | 1628 | 23.7 | 8.466 | 9.34 | 110.2 | P (F) |
| CAL ICV CCV | | 3/25/13 | 0725 | 18.8 | 9.314 | 9.31 | 99.6 | (P) F |
| CAL ICV (CCV) | | 3/25/13 | 1601 | 26.5 | 8.040 | 5.08/8.06 | 63.3/100.0 | (P) (F) |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| ~~CAL ICV CCV~~ | | ~~3/22/13~~ | ~~36~~ | ~~1.413~~ | ~~10115~~ | ~~1/14/14~~ | | P F |
| CAL ICV CCV | | 3/25/13 | 0733 | 1.413 | 10115 | 1/14/14 | 1.413 | (P) F |
| CAL ICV (CCV) | | 3/25/13 | 1604 | 1.413 | 10115 | 1/14/14 | 1.623/1.413 | (P) F |
| CAL ICV CCV | | 3/26/13 | 1709 | 1.413 | 10115 | 1/14/14 | 1.210/1.413 | (P) F |
| CAL ICV (CCV) | | 3/27/13 | 1906 | 1.413 | 10115 | 1/14/14 | 1.105/1.414 | (P) F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV (CCV) | | 3/19/13 | 1524 | 4.0 | 2210176 | 9/14 | 4.02/4.00 | (P) F |
| CAL ICV (CCV) | | " | 1526 | 7.0 | 1209172 | 9/14 | 6.91/7.00 | (P) F |
| CAL ICV (CCV) | | " | 1527 | 10.0 | 2207302 | 9/14 | 10.02/10.00 | (P) F |
| CAL ICV (CCV) | | 3/26/13 | 1620 | 4.0 | 2210176 | 9/14 | 4.05/4.00 | (P) F |
| CAL ICV (CCV) | | " | 1621 | 7.0 | 1209172 | 9/14 | 6.94/7.00 | (P) F |
| CAL ICV (CCV) | | " | 1622 | 10.0 | 2207302 | 9/14 | 10.12/10.00 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV (CCV) | | 3/21/13 | 1738 | 240 | 4761 | 7/17 | 258.0/240.0 | (P) (F) |
| CAL ICV (CCV) | | 3/22/13 | 1642 | 240 | 4761 | 7/17 | 221.3 | P (F) |
| CAL ICV CCV | | 3/25/13 | 0741 | 240 | 4761 | 7/17 | 240.1 | (P) F |
| CAL ICV (CCV) | | 3/25/13 | 1616 | 240 | 4761 | 7/17 | 223.2/240.0 | (P) (F) |

Specific Conductance Probe Cleaned? Yes (No) | Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings. Always start with pH 7 and a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE | Project #: FR16681 | Field Personnel: Crystal Towns

Water Quality Meter - Model/Serial #: YSI 556 MPS / 10C100199 | Turbidmeter - Model/Serial #: NA

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV (CCV) | | 3/26/13 | 1707 | 17.2 | 9.625 | 9.80/9.62 | 102.0/100.0 | (P) F |
| (CAL) ICV CCV | | 3/27/13 | 1904 | 19.60 | 9.165 | 9.23/9.17 | 101.5/100.2 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 3/26/13 | 0734 | 4.0 | 2210176 | 9/14 | 4.00 | (P) F |
| CAL ICV CCV | | " | 0737 | 7.0 | 1209172 | 9/14 | 7.01 | (P) F |
| CAL ICV CCV | | " | 0738 | 10.0 | 2201302 | 9/14 | | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV (CCV) | | 3/21/13 | 1733 | 4.0 | 2210176 | 9/14 | 4.04/4.00 | (P) F |
| CAL ICV (CCV) | | " | 1736 | 7.0 | 1209172 | 9/14 | 6.82/7.00 | (P) F |
| CAL ICV (CCV) | | " | 1739 | 10.0 | 2201302 | 9/14 | 10.31/10.00 | (P) (F) |
| CAL ICV (CCV) | | 3/22/13 | 1637 | 4.0 | 2210176 | 9/14 | 4.09 | (P) F |
| CAL ICV (CCV) | | " | 1638 | 7.0 | 1209172 | 9/14 | 6.86 | (P) F |
| CAL ICV (CCV) | | " | 1640 | 10.0 | 2201302 | 9/14 | 9.97 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 3/26/13 | 1721 | 240 | 4761 | 7/17 | 258.0/240.1 | (P) (F) |
| (CAL) ICV (CCV) | | 3/27/13 | 1916 | 240 | 4761 | 7/17 | 244.3/240 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No) | Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings. always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE | Project #: FR1681 | Field Personnel: Crystal Towns

Water Quality Meter - Model/Serial #: YSI 556 MPS / 10C100199 | Turbidimeter - Model/Serial #: NA

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV (CCV) | | 3/21/13 | 1623 | 19.3 | 9.229 | 8.35/8.22 | 90.1/89.8 | P F |
| CAL ICV (CCV) | | 3/22/13 | 1628 | 23.7 | 8.466 | 9.34 | 110.2 | P F |
| CAL ICV CCV | | 3/25/13 | 0725 | 18.8 | 9.314 | 9.31 | 99.6 | P F |
| CAL ICV (CCV) | | 3/25/13 | 1601 | 26.5 | 8.040 | 5.08/8.06 | 63.3/100.8 | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| ~~CAL ICV CCV~~ | | ~~3/22/13~~ | ~~36~~ | ~~1.413~~ | ~~10115~~ | ~~1/14/14~~ | | P F |
| CAL ICV CCV | | 3/25/13 | 0733 | 1.413 | 10115 | 1/14/14 | 1.413 | P F |
| CAL ICV (CCV) | | 3/25/13 | 1604 | 1.413 | 10115 | 1/14/14 | 1.623/1.413 | P F |
| CAL ICV CCV | | 3/26/13 | 1709 | 1.413 | 10115 | 1/14/14 | 1.210/1.413 | P F |
| CAL ICV (CCV) | | 3/27/13 | 1906 | 1.413 | 10115 | 1/14/14 | 1.105/1.414 | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV (CCV) | | 3/19/13 | 1524 | 4.0 | 2210176 | 9/14 | 4.02/4.00 | P F |
| CAL ICV (CCV) | | " | 1526 | 7.0 | 1209172 | 9/14 | 6.91/7.00 | P F |
| CAL ICV (CCV) | | " | 1527 | 10.0 | 2201302 | 9/14 | 10.02/10.00 | P F |
| CAL ICV (CCV) | | 3/26/13 | 1620 | 4.0 | 2210176 | 9/14 | 4.05/4.00 | P F |
| CAL ICV (CCV) | | " | 1621 | 7.0 | 1209172 | 9/14 | 6.94/7.00 | P F |
| CAL ICV (CCV) | | " | 1622 | 10.0 | 2201302 | 9/14 | 10.12/10.00 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV (CCV) | | 3/21/13 | 1738 | 240 | 4761 | 7/17 | 258.0/240.0 | P F |
| CAL ICV (CCV) | | 3/22/13 | 1642 | 240 | 4761 | 7/17 | 221.3 | P F |
| CAL ICV CCV | | 3/25/13 | 0741 | 240 | 4761 | 7/17 | 240.1 | P F |
| CAL ICV (CCV) | | 3/25/13 | 1616 | 240 | 4761 | 7/17 | 223.2/240.0 | P F |

Specific Conductance Probe Cleaned? Yes (No) | Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings - always start with pH 7 and a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append a sample results with a "J" qualifier

Comments

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE | Project #: FR1681 | Field Personnel: Crystal Toons

Water Quality Meter - Model/Serial #: YSI 556 MPS / 10C100199 | Turbidimeter - Model/Serial #: NA

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 3/26/13 | 1707 | 17.2 | 9.625 | 9.80/9.62 | 102.0/100.0 | P F |
| CAL ICV CCV | | 3/27/13 | 1904 | 19.60 | 9.165 | 9.23/9.17 | 101.5/100.1 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 3/26/13 | 0936 | 4.0 | 221076 | 9/14 | 4.06 | P F |
| CAL ICV CCV | | " | 0937 | 7.0 | 1209172 | 9/14 | 9.01 | P F |
| CAL ICV CCV | | " | 0938 | 10.0 | 2207302 | 9/14 | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 3/21/13 | 1733 | 4.0 | 221076 | 9/14 | 4.04/4.00 | P F |
| CAL ICV CCV | | " | 1736 | 7.0 | 1209172 | 9/14 | 6.82/7.00 | P F |
| CAL ICV CCV | | " | 1739 | 10.0 | 2207302 | 9/14 | 10.31/10.00 | P F |
| CAL ICV CCV | | 3/22/13 | 1637 | 4.0 | 221076 | 9/14 | 4.09 | P F |
| CAL ICV CCV | | " | 1638 | 7.0 | 1209172 | 9/14 | 6.86 | P F |
| CAL ICV CCV | | " | 1640 | 10.0 | 2207302 | 9/14 | 9.97 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 3/26/13 | 1721 | 240 | 4761 | 7/17 | 258.0/240.0 | P F |
| CAL ICV CCV | | 3/27/13 | 1916 | 240 | 4761 | 7/17 | 244.3/240.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

Specific Conductance Probe Cleaned? Yes / No | Dissolved Oxygen membrane Changed? Yes / No

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification
Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings: always start with pH 7 and add a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE  Project #: FR1681  Field Personnel: Crystal Towns

Water Quality Meter - Model/Serial #: YSI 556 MPS / 10C100199  Turbidimeter - Model/Serial #: N/A

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 3/26/13 | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 3/25/13 | 0956 | 4.0 | 22/0176 | 9/14 | 4.00 | P F |
| CAL ICV CCV | | " | 0737 | 7.0 | 1209172 | 9/14 | 7.01 | P F |
| CAL ICV CCV | | " | 0736 | 10.0 | 2207302 | 9/14 | 10.00 | P F |
| CAL ICV CCV | | 3/25/13 | 1610 | 4.0 | 22/0176 | 9/14 | 4.27/4.00 | P F |
| CAL ICV CCV | | " | 1612 | 7.0 | 1209172 | 9/14 | 6.55/7.00 | P F |
| CAL ICV CCV | | " | 1614 | 10.0 | 2207302 | 9/14 | 10.60/10.00 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria +/- 5% | | |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes / No  Disolved Oxygen membrane Changed? Yes / No

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings, always start with pH 7 and a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a 'J' qualifier

Comments

Geosyntec Consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE  Project #: FR1681  Field Personnel: Crystal Towns

Water Quality Meter - Model/Serial #: YSI 556 MPS / 10C100199  Turbidimeter - Model/Serial #: NA

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 3/26/13 | 1112 | 4.0 | 2210176 | 9/14 | 4.85/4.01 | P F |
| CAL ICV CCV | | " | 1115 | 7.0 | 1209172 | 9/14 | 5.93/7.00 | P F |
| CAL ICV CCV | | " | 1116 | 10.0 | 2207302 | 9/14 | 12.14/10.00 | P F |
| CAL ICV CCV | | 3/27/13 | 1908 | 4.0 | 2210176 | 9/14 | 4.00/4.00 | P F |
| CAL ICV CCV | | " | 1911 | 7.0 | 1209172 | " | 6.38/7.00 | P F |
| CAL ICV CCV | | " | 1914 | 10.0 | 2207302 | " | 10.67/10.04 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Comments

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings. always start with pH 7 and a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE  Project #: FR1681  Field Personnel: Claire Osborn

Water Quality Meter - Model/Serial #: 556 MPS / 10C100199  Turbidimeter - Model/Serial #: —

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) ICV (CCV) | | 3/28/13 | 1845 | 26.78 | 7.997 | 7.06 / 7.98 | 88.2 / 100 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 3/28/13 | 1843 | 1.413 | 10115 | 1/14/14 | 2.109 / 1.378 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) ICV (CCV) | | 3/28/13 | 1850 | pH7 | 1209172 | 9/2014 | 6.68 / 7.01 | P (F) |
| (CAL) ICV (CCV) | | | 1852 | pH4 | 1210176 | 9/2014 | 4.38 / 3.99 | P (F) |
| (CAL) ICV (CCV) | | | 1858 | pH10 | 2207302 | 1/2014 | 10.16 / 10.0 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | 240@25 | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 3/28/13 | 1840 | 239 @ 30.5 | 4761 | 7/2017 | 160.7 / 223.9 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Dissolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification
Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7, add a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: combined CCV & CAL @ one time. Knew when completed ccv on 3/29/13 it would be w/i 24 hours

all parameters passed CAL. pH & ORP failed CCV.

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR1681  Field Personnel: Claire Osborn

Water Quality Meter - Model/Serial #: 556 MPS/10C100199  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV (CCV) | | 3/29/13 | 1520 | 24.60 | 8.325 | 7.88 | 94.8 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV (CCV) | | 3/29/13 | 1515 | 1.413 | 10115 | 1/14/2017 | 1.415 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV (CCV) | | 3/29/13 | 1500 | pH4 | 2210176 | 9/2014 | 4.37 | P (F) |
| CAL ICV (CCV) | | 1 | 1505 | pH7 | 1209172 | 9/2014 | 7.05 | (P) F |
| CAL ICV (CCV) | | 1 | 1507 | pH10 | 2207302 | 9/2014 | 10.39 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV (CCV) | | 3/29/13 | 1510 | 220 @ 25 | 4761 | 7/2017 | 206.1 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments:

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE  Project #: FR1681  Field Personnel: Christel Schultz

Water Quality Meter - Model/Serial #: YSI 556 MPS S/N 03B0715AC  Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 04/01/13 | 07:40 | 21.6 | 8.812 | 8.67/8.85 | 98.4/100 | (P) F |
| (CAL) ICV (CCV) | | 04/01/13 | 18:22 | 24.2 | 8.350 | 8.20/8.39 | 99.5/100.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 04/01/13 | 07:33 | 1.413 | 10023 | 11/12/13 | 1.398/1.413 | (P) F |
| (CAL) ICV (CCV) | | 04/01/13 | 18:14 | 1.413 | 10023 | 11/12/13 | 1.426/1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 04/01/13 | 07:25 | 7.00 | 2208038 | 07/14 | 6.97/7.00 | (P) F |
| (CAL) (ICV) CCV | | 04/01/13 | 07:27 | 4.00 | 2210176 | 09/14 | 4.09/4.00 | (P) F |
| (CAL) (ICV) CCV | | 04/01/13 | 07:30 | 10.00 | 2207302 | 01/14 | 9.91/10.00 | (P) F |
| CAL ICV (CCV) | | 04/01/13 | 18:04 | 7.00 | 2208038 | 07/14 | 7.16 | (P) F |
| (CAL) ICV (CCV) | | 04/01/13 | 18:06 | 4.00 | 2210176 | 09/14 | 3.84/4.00 | P (F) |
| (CAL) ICV (CCV) | | 04/01/13 | 18:08 | 10.00 | 2207302 | 01/14 | 9.74/10.00 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 04/01/13 | 07:36 | 240@25 | 4761 | 07/17 | 236.7/240.1 | (P) F |
| (CAL) ICV (CCV) | | 04/01/13 | 18:17 | 240@25 | 4761 | 07/17 | 237.1/240 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Dissolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1 - See Table FS 2200-2 on the back of this form

ICAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (i.e., if readings are in the 400's a 447 mS/cm standard or 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings (i.e., start with pH 7 and add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria, then append sample results with an 'J' qualifier

Comments: _____

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE | Project #: FR1681 | Field Personnel: Christel Schultz

Water Quality Meter - Model/Serial #: YSI 556 MPS SN03B0715AC | Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 04/02/13 | 0728 | 21.4 | 8.246 | 9.43/8.85 | 106/100 | (P) F |
| (CAL) ICV (CCV) | | 04/02/13 | 1812 | 26.3 | 8.070 | 7.471 | 92.6/100.2 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV (CCV)[1] | | 04/02/13 | 0722 | 1.413 | 10023 | 11/12/13 | 1423 | (P) F |
| (CAL) (ICV) CCV | | 04/02/13 | 1805 | 1.413 | 10023 | 11/12/13 | 1.470/1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV (CCV) | | 04/02/13 | 0715 | 7.00 | 2208038 | 07/14 | 7.04 | (P) F |
| CAL ICV (CCV) | | 04/02/13 | 0717 | 4.00 | 220176 | 04/14 | 4.08 | (P) F |
| CAL ICV (CCV) | | 04/02/13 | 0719 | 10.00 | 2207302 | 01/14 | 9.98 | (P) F |
| (CAL) (ICV) CCV | | 04/02/13 | 1758 | 7.00 | 2208038 | 07/14 | 7.11/6.99 | (P) F |
| (CAL) (ICV) CCV | | 04/02/13 | 1800 | 4.00 | 220176 | 04/14 | 4.02/4.01 | (P) F |
| (CAL) (ICV) CCV | | 04/02/13 | 1802 | 10.00 | 2207302 | 01/14 | 9.95/9.99 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV (CCV) | | 04/02/13 | 0725 | 240 @ 25 | 4761 | 07/17 | 243/240 | (P) F |
| (CAL) (ICV) CCV | | 04/02/13 | 1807 | 240 @ 25 | 4761 | 07/17 | 246.0/240.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No) | Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See **Table FS 2200-2** on the back of this form.

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Allow at least one hour for dissolved oxygen sensor to equilibrate during air calibration.
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless starting with DI water, then one standard or 0.1 mS/cm is acceptable).
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7 and add a third calibration point if needed (i.e. pH > 7).
If you have failed to calibrate within SOP acceptance criteria then append a sample results with a "J" qualifier.

Comments: _____

Geosyntec consultants

WQ Cal Form (Version 1)

6/23/2009

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE | Project #: FR1681 | Field Personnel: Christel Schultz

Water Quality Meter - Model/Serial #: YSI 556 MPS S/N 13B0715AC | Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV (CCV) | | 04/03/13 | 0722 | 21.4 | 8.846 | 8.61 | 97.3 | (P) F |
| CAL ICV (CCV) | | 04/03/13 | 1717 | 25.6 | 8.173 | 8.11 | 99.2 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV (CCV) | | 04/03/13 | 0717 | 1.413 | 10023 | 11/12/13 | 1.421 | (P) F |
| CAL ICV (CCV) | | 04/03/13 | 1709 | 1.413 | 10023 | 11/12/13 | 1.389 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV (CCV) | | 04/03/13 | 0710 | 7.00 | 2208038 | 07/14 | 7.01 | (P) F |
| CAL ICV (CCV) | | 04/03/13 | 0712 | 4.00 | 2210176 | 09/14 | 3.97 | (P) F |
| CAL ICV (CCV) | | 04/03/13 | 0714 | 10.00 | 2201302 | 01/14 | 9.96 | (P) F |
| CAL ICV (CCV) | | 04/03/13 | 1702 | 7.00 | 2208038 | 07/14 | 7.05 | (P) F |
| CAL ICV (CCV) | | 04/03/13 | 1704 | 4.00 | 2210176 | 09/14 | 3.94 | (P) F |
| CAL ICV (CCV) | | 04/03/13 | 1706 | 10.00 | 2201302 | 01/14 | 9.97 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV (CCV) | | 04/03/13 | 0719 | 240@25 | 4761 | 07/17 | 237.6 | (P) F |
| CAL ICV (CCV) | | 04/03/13 | 1713 | 240@25 | 4761 | 07/17 | 246.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

Specific Conductance Probe Cleaned? Yes (No) | Disolved Oxygen membrane Changed? Yes (No)

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings. Always start with pH 7 and a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE | Project #: FR1681 | Field Personnel: Christal Schultz

Water Quality Meter - Model/Serial #: YSI 556 MPS S/N 03B0715AC | Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) ICV (CCV) | | 04/04/13 | 0736 | 22.7 | 8.627 | 9.15/8.63 | 106.0/99.9 | P (F) |
| CAL ICV (CCV) | | 04/04/13 | 1637 | 24.5 | 8.340 | 8.11 | 93.2 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/- 5% | |
| CAL ICV (CCV) | | 04/04/13 | 0729 | 1.413 | 10023 | 11/12/13 | 1.394 | (P) F |
| CAL ICV (CCV) | | 04/04/13 | 1629 | 1.413 | 10023 | 11/12/13 | 1.387 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/-0.2 SU | |
| CAL ICV (CCV) | | 04/04/13 | 0722 | 7.00 | 2208038 | 07/14 | 7.02 | (P) F |
| CAL ICV (CCV) | | 04/04/13 | 0724 | 4.00 | 2210176 | 09/14 | 3.99 | (P) F |
| CAL ICV (CCV) | | 04/04/13 | 0726 | 10.00 | 2207302 | 01/14 | 9.94 | (P) F |
| CAL ICV (CCV) | | 04/04/13 | 1622 | 7.00 | 2208038 | 07/14 | 7.07 | (P) F |
| CAL ICV (CCV) | | 04/04/13 | 1624 | 4.00 | 2210176 | 09/14 | 4.04 | (P) F |
| CAL ICV (CCV) | | 04/04/13 | 1626 | 10.00 | 2207302 | 01/14 | 9.97 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV (CCV) | | 04/04/13 | 0732 (EA) | 240@25 | 4761 | 07/17 | 234.9 | (P) F |
| CAL ICV (CCV) | | 04/04/13 | 1633 | 240@25 | 4761 | 07/17 | 234.7 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No) | Dissolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | | Acceptance Criteria: +/- 10% |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | | Acceptance Criteria: +/- 8% |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | | Acceptance Criteria: +/- 6.5% |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | | Acceptance Criteria: +/- 5% |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Comments:

Allow adequate time for the dissolved oxygen sensor to equilibrate during all calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings. Always start with pH 7 and a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE | Project #: FR1681 | Field Personnel: Christ/Schlatter

Water Quality Meter - Model/Serial #: YSI 556 MPS S/N 03B0715C | Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV (CCV) | | 04/05/13 | 0811 | 22.1 | 9.074 | 9.16 | 103.9 | P F |
| CAL ICV (CCV) | | 04/08/13 | | 24.2 | 8.357 | 8.102 | 96.6 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV (CCV) | | 04/05/13 | 0806 | 1.413 | 10023 | 11/12/13 | 1.416 | P F |
| CAL ICV (CCV) | | 04/05/13 | 1619 | 1.413 | 10023 | 11/12/13 | 1.421 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0 2 SU | | |
| CAL ICV (CCV) | | 04/05/13 | 0758 | 7.00 | 2208038 | 07/14 | 7.00 | P F |
| CAL ICV (CCV) | | 04/05/13 | 0801 | 4.00 | 2210176 | 09/14 | 3.96 | P F |
| CAL ICV (CCV) | | 04/05/13 | 0803 | 10.00 | 2207302 | 01/14 | 10.01 | P F |
| CAL ICV (CCV) | | 04/05/13 | 1613 | 7.00 | 2208038 | 07/14 | 7.02 | P F |
| CAL ICV (CCV) | | 04/05/13 | 1615 | 4.00 | 2210176 | 09/14 | 4.01 | P F |
| CAL ICV (CCV) | | 04/05/13 | 1617 | 10.00 | 2207302 | 01/14 | 9.98 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 04/05/13 | 0808 | 240.25 | 4761 | 07/17 | 255.3 / 240 | P (F) |
| CAL ICV (CCV) | | 04/05/13 | 1622 | 240.25 | 4761 | 07/17 | 244.7 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

Specific Conductance Probe Cleaned? Yes (No) | Dissolved Oxygen membrane Changed? Yes (No)

1. See Table FS 2200-2 on the back of this form

Comments:

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification
Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings always start with pH 7 add a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE  Project #: FR1681  Field Personnel: Claire Osborn

Water Quality Meter - Model/Serial #: 06C2653  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL (ICV) CCV | | 5/20/13 | 820 | 24.58 | 8.325 | 8.26 | 99.4 | (P) F |
| CAL (ICV) (CCV) | | 5/21/13 | 740 | 22.99 | 8.578 | 8.77 | 102.3 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/- 5% | |
| CAL (ICV) CCV | | 5/20/13 | 806 | 1.0 | C256713 | 11/13 | 1.014 | (P) F |
| (CAL) (ICV) (CCV) | | 5/21/13 | 738 | 1.0 | ↓ | ↓ | 1.042/1.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/-0.2 SU | |
| CAL (ICV) CCV | | 5/20/13 | 800 | 7 | C358930 | 8/28/14 | 7.06 | (P) F |
| CAL (ICV) CCV | | 5/21/13 | 801 | 4 | C255426 | 2/27/15 | 4.14 | (P) F |
| CAL (ICV) CCV | | 5/20/13 | 802 | 10 | C256018 | 10/3/14 | 9.83 | (P) F |
| CAL (ICV) (CCV) | | 5/21/13 | 730 | 4 | | | 4.18 | (P) F |
| CAL (ICV) (CCV) | | ↓ | 732 | 7 | see above | | 7.00 | (P) F |
| CAL ICV (CCV) | | ↓ | 734 | 10 | | | 9.88 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 5/20/13 | 804 | ~~230.6~~ 230.7 ~~25.3~~ 25.15 | C359470 | 11/29/13 | ~~223.7~~ 233.5 | (P) F |
| CAL (ICV) (CCV) | | 5/21/13 | 736 | 22.89, 233.9 | ↓ | ↓ | 237.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHF  Project #: FR1687  Field Personnel: Claire Osborn

Water Quality Meter - Model/Serial #: 06C2653  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL (ICV) (CCV) | | 5/24/13 | 720 | 22.7 | 8.627 | 9.40 → 8.58 | | (P) F |
| CAL ICV CCV | | 1 | 1635 | 24.9 | 8.279 | 8.18 | 98.81 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL (ICV) (CCV) | | 5/24/13 | 713 | 1.000 | C256713 | 11/13 | 1.004 | (P) F |
| CAL ICV CCV | | 1 | 1630 | 1 | 1 | 1 | 1.007 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL (ICV) (CCV) | | 5/24/13 | 705 | pH 4 | C255426 | 8/28/14 | 4.12 | (P) F |
| CAL (ICV) (CCV) | | 1 | 708 | pH 7 | C358930 | 3/27/15 | 6.92 | (P) F |
| CAL (ICV) (CCV) | | | 710 | pH 10 | C256078 | 10/3/14 | 9.90 | (P) F |
| CAL ICV (CCV) | | 5/24/13 | 1622 | pH 4 | | see above | 4.05 | (P) F |
| CAL ICV (CCV) | | 1 | 1624 | pH 7 | | | 6.93 | (P) F |
| CAL ICV (CCV) | | | 1626 | pH 10 | | | 9.95 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 5/24/13 | 712 | 234.8 @ 22.12°C | C359440 | 11/28/13 | 233.7 | (P) F |
| CAL (ICV) (CCV) | | 1 | 1628 | 236.8 | 1 | 1 | 233.1 | (P) F |
| CAL ICV (CCV) | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments

Geosyntec Consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CLHF  Project #: FA1681  Field Personnel: Claire Osborn

Water Quality Meter - Model/Serial #: 06C2653  Turbidimeter - Model/Serial #: 06C2653

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 5/23/13 | 734 | 20.91 | ~~8.932~~ 20.91 | 8.94 | 100.1 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 5/23/13 | 730 | 1.0 | C256713 | 11/13 | 0.995 | P F |
| CAL ICV CCV | | | | | | | 1.005 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 5/23 | 720 | 4 | C255426 | 2/27/15 | 4.70/4.02 | P F |
| CAL ICV CCV | | | 722 | 7 | C358130 | 2/27/15 | 7.10/7.00 | P F |
| CAL ICV CCV | | 1 | 725 | 10 | 2A6213 | 7/2014 | 9.84/10.00 | P F |
| CAL ICV CCV | | | | 4 | | above | 4.19 | P F |
| CAL ICV CCV | | | | 7 | see | | 6.91 | P F |
| CAL ICV CCV | | | | 10 | | | 9.95 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 5/23/13 | 728 | 24.2 ~~232.0~~ 25.2 ~~230.1~~ | C359440 | 11/28/13 | 233.1 | P F |
| CAL ICV CCV | | | | | 1 | 1 | 230.9 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Comments:

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE/KSC  Project #: FR1681/25*2  Field Personnel: Crystal Towns

Water Quality Meter - Model/Serial #: YSI 556MPS / SN 07J101410  Turbidimeter - Model/Serial #: N/A

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL (ICV) CCV | | 6/3/13 | 0754 | 24.0 | 8.418 | 8.42 | 99.5 | P F |
| CAL ICV (CCV) | | 6/4/13 | 0705 | 25.8 | 8.143 | 5.33/8.14 | 66.1/100.0 | P F |
| CAL ICV (CCV) | | 6/4/13 | 1755 | 27.2 | 7.940 | 7.70/7.94 | 90.2/100.1 | P F |
| CAL ICV (CCV) | | 6/5/13 | 1122 | 26.9 | 7.983 | 7.10 | 84.3 | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 6/3/13 | 0756 | 1.413 | 10239 | 3/20/14 | 1.414 | P F |
| CAL ICV (CCV) | | 6/4/13 | 0708 | 1.413 | 10239 | 3/20/14 | 1.440/1.413 | P F |
| CAL ICV (CCV) | | 6/4/13 | 1759 | 1.413 | 10239 | 3/20/14 | 1.462/1.413 | P F |
| CAL ICV (CCV) | | 6/5/13 | 1124 | 1.413 | 10239 | 3/20/14 | 1.457 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL (ICV) CCV | | 6/3/13 | 0758 | 7 | 2301297 | 12/2014 | 7.00 | P F |
| CAL (ICV) CCV | | " | 0800 | 4 | 2302179 | 02/2015 | 3.99 | P F |
| CAL (ICV) CCV | | " | 0801 | 10 | 2211689 | 05/2014 | 10.00 | P F |
| CAL ICV (CCV) | | 6/4/13 | 0709 | 7 | 2301297 | 12/2014 | 7.04/7.00 | P F |
| CAL ICV (CCV) | | " | 0711 | 4 | 2302179 | 02/2015 | 4.16/3.98 | P F |
| CAL ICV (CCV) | | " | 0714 | 10 | 2301297 | 05/20 14 | 10.04/10.01 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 6/3/13 | 0807 | 240 | 4761 | 07/2017 | 240.0 | P F |
| CAL ICV (CCV) | | 6/4/13 | 0715 | 240 | 4761 | 07/2017 | 233.3/240.3 | P F |
| CAL ICV (CCV) | | 6/4/13 | 1807 | 240 | 4761 | 07/2017 | 238.4/240.1 | P F |
| CAL ICV (CCV) | | 6/5/13 | 1139 | 240 | 4761 | 07/2017 | 242.8 | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE / KSC  Project #: FR1681255  Field Personnel: Crystal Towns

Water Quality Meter - Model/Serial #: YSI 556MPS / SN 07J101410  Turbidimeter - Model/Serial #: N/A

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/-0.2 SU | |
| CAL ICV CCV | | 6/4/13 | 1802 | 7 | 2301297 | 12/2014 | 7.08/7.00 | P F |
| CAL ICV CCV | | " | 1804 | 4 | 2302179 | 02/2015 | 4.13/4.01 | P F |
| CAL ICV CCV | | " | 1805 | 10 | 2211639 | 05/2014 | 10.11/10.00 | P F |
| CAL ICV CCV | | 6/5/13 | 1132 | 7 | 2301297 | 12/2014 | 7.11 | P F |
| CAL ICV CCV | | " | 1135 | 4 | 2302179 | 02/2015 | 4.01 | P F |
| CAL ICV CCV | | " | 1136 | 10 | 2211639 | 05/2014 | 10.23 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Geosyntec Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings always start with pH 7 add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec consultants

Geosyntec
consultants

# Water Quality Instrument Calibration Form

Project/Site: CARF  Project #: FR1691  Field Personnel: Rachel Donahue

Water Quality Meter - Model/Serial#: 451 556 MPS/05023713 KK  Turbidimeter - Model/Serial#: Hach 2100Q/10110C006399

| Dissolved Oxygen (FDEP SOP FT 1500) | Date | Time | Temp (°C) | Saturation (mg/L)* | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| | | | | | Acceptance Criteria:+/-0.3 mg/L | | |
| CAL ICV CCV | 7-11-13 | 810 | 20.98 | 8.950 | 7.65 8.95 | 85.4 99.8 | P F |
| CAL ICV CCV | 7-12-13 | 755 | 20.40 | 9.021 | 9.64 | 106.9 | P F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |

| Specific Conductance (FDEP SOP FT 1200) | Date | Time | Standard Lot # | Standard Exp. Date | Standard (mS/cm) | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| Specific Conductance Probe Cleaned? Yes (No) | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | 7-11-13 | 855 | 10239 | 3-2014 | 1.413 | 1.413 1.413 | P F |
| CAL ICV CCV | 7-12-13 | 831 | 10239 | 3-2014 | 1.413 | 1.420 | P F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |

| pH (FDEP SOP FT 1100) | Date | Time | Standard Lot # | Standard Exp. Date | Standard (SU) | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| | | | | | Acceptance Criteria: +/- 0.2 SU | | |
| CAL ICV CCV | 7-11-13 | 826 | 2202287 | 04-2014 | 4.0 | 3.99 4.00 | P F |
| CAL ICV CCV | ↓ | ↓ | 2304619 | 03-2015 | 10.0 | 10.15 10.00 | P F |
| CAL ICV CCV | ↓ | ↓ | 2264659 | 03-2015 | 7.0 | 7.06 7.00 | P F |
| CAL ICV CCV | 7-12-13 | 810 | 2202287 | 04-2014 | 4.0 | 4.07 | P F |
| CAL ICV CCV | ↓ | ↓ | 2304619 | 03-2015 | 10.0 | 9.94 | P F |
| CAL ICV CCV | ↓ | ↓ | 2304659 | 03-2015 | 7.0 | 7.19 | P F |

| ORP (FDEP SOP N/A) | Date | Time | Standard Lot # | Standard Exp. Date | Standard (mV @ Temp °C) | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| Dissolved Oxygen Membrane Changed? Yes (No) | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | 7-11-13 | 901 | 5245 | 11/2017 | 240@25 | 232-248 | P F |
| CAL ICV CCV | 7-12-13 | 822 | 5245 | 11/2017 | 240@25 | 233.1 | P F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |

| Turbidity 0.1-10 NTU | Date | Standard (NTU) | Reading (NTU) | Pass or Fail |
|---|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | | |
| CAL ICV CCV | 7-11-13 | 10 | 9.93 | P F |
| CAL ICV CCV | 7-12-13 | 10 | 9.58 | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |

| Turbidity 11-40 NTU | Date | Standard (NTU) | Reading (NTU) | Pass or Fail |
|---|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | | |
| CAL ICV CCV | 7-11-13 | 20 | 20.5 | P F |
| CAL ICV CCV | 7-12-13 | 20 | 20.4 | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |

| Turbidity 41-100 NTU | Date | Standard (NTU) | Reading (NTU) | Pass or Fail |
|---|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | | |
| CAL ICV CCV | 7-11-13 | 100 | 98.6 | P F |
| CAL ICV CCV | 7-12-13 | 100 | 101 | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |

| Turbidity >100 NTU | Date | Standard (NTU) | Reading (NTU) | Pass or Fail |
|---|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | 7-11-13 | 800 | 775 | P F |
| CAL ICV CCV | 7-12-13 | 800 | 776 | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |

Notes:

CAL = Initial Calibration
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
* See Table FS 2200-2 on the back of this form

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings <0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if neede
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

**Geosyntec Consultants**

# Water Quality Instrument Calibration Form

Project/Site: CRHE | Project #: FR1681 | Field Personnel: Christel Schultz

Water Quality Meter - Model/Serial #: WTW 556 MPS #13D101776 | Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) ICV (CCV) | | 05/29/14 | 7:17 | 25.6 | 8.73 | 10.07/8.17 | 123.2/100.1 | P F |
| CAL ICV (CCV) | | 05/29/14 | 18:38 | 29.4 | 7.638 | 6.38 | 83.8 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 05/29/14 | 7:06 | 1.413 | 10601 | 09/20/14 | 1.408/1.413 | (P) F |
| CAL ICV (CCV) | | 05/29/14 | 18:32 | 1.413 | 10601 | 09/20/14 | 1535 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) ICV (CCV) | | 05/29/14 | 6:57 | 7.00 | 2312885 | 12/15 | 7.23/7.00 | (P) F |
| (CAL) ICV (CCV) | | 05/29/14 | 7:01 | 4.00 | 2310A78 | 10/15 | 4.02/4.00 | (P) F |
| (CAL) ICV (CCV) | | 05/29/14 | 7:04 | 10.00 | 2312574 | 05/15 | 9.83/10.00 | (P) F |
| CAL ICV (CCV) | | 05/29/14 | 18:22 | 7.00 | 2312885 | 12/15 | 7.16 | (P) F |
| CAL ICV (CCV) | | 05/29/14 | 18:24 | 4.00 | 2310A78 | 10/15 | 4.11 | (P) F |
| CAL ICV (CCV) | | 05/29/14 | 18:27 | 10.00 | 2312574 | 05/15 | 9.87 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 05/29/14 | 7:09 | 240.0 | 6448 | 07/18 | 236.0/240.0 | (P) F |
| CAL ICV (CCV) | | 05/29/14 | 18:34 | 240.0 | 6448 | 07/18 | 232.2 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

Specific Conductance Probe Cleaned? Yes (No) | Disolved Oxygen membrane Changed? Yes (No)

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings always start with pH 7 add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec consultants

**Geosyntec Consultants**

# Water Quality Instrument Calibration Form

Project/Site: CRHE  Project #: FR1681  Field Personnel: Mike Buechan

Water Quality Meter - Model/Serial #: YSI 556 11J102412  Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 6/12/14 | 0646 | 22.2 | 8.710 | 11.51/6.46 | 132.0/74.3 | P (F) |
| (CAL) (ICV) CCV | | ↓ | 0652 | 22.3 | 8.693 | 6.31/8.47 | 72.6/99.8 | (P) F |
| CAL ICV (CCV) | | 6/12/14 | 1754 | 28.1 | 7.814 | 6.86 | 87.7 | P (F) |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/12/14 | 0707 | 1.413 | 10875 | 3/10/2015 | 1.332/1.413 | (P) F |
| CAL ICV (CCV) | | ↓ | 1806 | ↓ | ↓ | ↓ | 1.506 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 6/12/14 | 0655 | 4.0 | 2310A98 | 10/2015 | 4.03/4.00 | (P) F |
| (CAL) (ICV) CCV | | ↓ | 0658 | 7.0 | 2403637 | 02/2016 | 7.00/7.00 | (P) F |
| (CAL) (ICV) CCV | | | 0701 | 10.0 | 2312574 | 05/2015 | 10.00/10.00 | (P) F |
| CAL ICV (CCV) | | 6/12/14 | 1800 | 4.0 | 2310A98 | 10/2015 | 4.02 | (P) F |
| CAL ICV (CCV) | | | 1802 | 7.0 | 2403637 | 02/2016 | 6.99 | (P) F |
| CAL ICV (CCV) | | ↓ | 1804 | 10.0 | 2312574 | 10/2015 | 9.91 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/12/14 | 0712 | 240.0 | 7065 | 11/2018 | 246.0/240.0 | (P) F |
| CAL ICV (CCV) | | ↓ | 1812 | 240.0 | 7065 | 11/2018 | 228.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings. always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec Consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE | Project #: FR1681 | Field Personnel: Mike Burcham

Water Quality Meter - Model/Serial #: YSI 556 MPS 11J102412 | Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) ICV CCV | | 6/11/14 | 0656 | 25.6 | 8.173 | 8.25/8.16 | 100.5/99.7 | (P) F |
| CAL ICV (CCV) | | ↓ | 2005 | 24.69 | 8.309 | 7.28 | 87.5 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/11/14 | 0709 | 1.413 | 10375 | 3/10/2015 | 1.345/1.413 | (P) F |
| CAL ICV (CCV) | | ↓ | 1951 | ↓ | ↓ | ↓ | 1.456 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 6/11/14 | 0700 | 4.0 | 2310A78 | 10/2015 | 3.96/4.00 | (P) F |
| (CAL) (ICV) CCV | | ↓ | 0702 | 7.0 | 2403637 | 02/2016 | 7.05/7.00 | (P) F |
| (CAL) (ICV) CCV | | | 0704 | 10.0 | 2312574 | 05/2015 | 9.95/9.99 | (P) F |
| CAL ICV (CCV) | | | 1951 | 4.0 | 2310A78 | | 4.17 | (P) F |
| CAL ICV (CCV) | | | 1953 | 7.0 | 2403637 | | 7.05 | (P) F |
| CAL ICV (CCV) | | | 1956 | 10.0 | 2312574 | | 10.01 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/11/14 | 0712 | 240.0 | 7065 | 11/2018 | 240.1/240.0 | (P) F |
| CAL ICV (CCV) | | ↓ | 2001 | ↓ | ↓ | ↓ | 236.4 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

Specific Conductance Probe Cleaned? Yes (No) | Disolved Oxygen membrane Changed? Yes (No)

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Comments:

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings, always start with pH 7, add a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE  Project #: FR1681  Field Personnel: Mike Burcham

Water Quality Meter - Model/Serial #: YSI 556MPS 11J102412  Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 6/10/14 | 0650 | 25.7 | 8.158 | 9.21/8.13 | 112.5/99.5 | (P) F |
| CAL ICV (CCV) | | ↓ | 1858 | 31.2 | 7.404 | 6.22 | 83.8 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/10/14 | 0701 | 1.413 | 10875 | 3/10/2015 | 1.405/1.413 | (P) F |
| CAL ICV (CCV) | | ↓ | 1907 | 1.413 | 10875 | 3/10/2015 | 1.496 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 6/10/14 | 0653 | 4.0 | 2310A78 | 10/2015 | 4.05/4.00 | (P) F |
| (CAL) (ICV) CCV | | ↓ | 0656 | 7.0 | 2403637 | 02/2016 | 7.01/7.00 | (P) F |
| (CAL) (ICV) CCV | | | 0659 | 10.0 | 2312574 | 05/2015 | 9.95/9.99 | (P) F |
| CAL ICV (CCV) | | 6/10/14 mb | 1401 | 4.0 | 2310A78 | 10/2015 | 4.10 | (P) F |
| CAL ICV (CCV) | | ↓ | 1403 | 7.0 | 2403637 | 02/2016 | 7.05 | (P) F |
| CAL ICV (CCV) | | | 1404 | 10.0 | mb 2312574 | 05/2015 | mb 9.98 9.98 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 6/10/14 | 0705 | 240.0 | 7065 | 11/2018 | 239.8/240.0 | (P) F |
| CAL ICV (CCV) | | ↓ | 1910 | 240.0 | 7065 | 11/2018 | 231.5 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings always start with pH 7 add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments:

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE  Project #: FR1681  Field Personnel: Mike Burchum

Water Quality Meter - Model/Serial #: YSI - 556 MPS 11J102412  Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 6/9/14 | 0752 | 26.4 | 8.055 | 6.67/8.05 | 82.3/99.9 | (P) F |
| CAL ICV (CCV) | | ↓ | 1840 | 32.00 | 7.31 | 6.02 | 82.3 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/9/14 | 0737 | 1.413 | 10875 | 3/10/2015 | 1.480/1.515 | P (F) |
| CAL (ICV) CCV | | | 0738 | ↓ | ↓ | ↓ MB | 1.514/1.515 | P (P) |
| CAL (ICV) CCV | | | 0746 | | | | ~~1.507~~/1.505 | (P) F |
| CAL ICV (CCV) | | ↓ | 1849 | 1.413 | 10875 | 3/10/2015 | 1.504 1.413 | P (P) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 6/9/14 | ~~0715~~ 0727 | 4.0 | 2310A78 | Oct-2015 | ~~3.58~~ MB* | (P) F |
| CAL (ICV) CCV | | ↓ | MB 0727 0731 | 7.0 | 2403637 | 02/2016 | ~~6.49~~ MB* | (P) F |
| CAL (ICV) CCV | | | ~~0730~~ 0733 | 10.0 | 2312574 | 05-2015 | * | (P) F |
| CAL ICV (CCV) | | | 1842 | 4.0 | 2310A78 | 10/2015 | 4.09 | (P) F |
| CAL ICV (CCV) | | ↓ | 1845 | 7.0 | 2403637 | 02/2016 | 7.04 | (P) F |
| CAL ICV (CCV) | | | 1847 | 10.0 | 2312574 | 05/2015 | 9.98 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/9/14 | 0742 | 240.0 | 7065 | 11/2018 | 235.8/240.0 | (P) F |
| CAL ICV (CCV) | | ↓ | 1852 | ↓ | ↓ | ↓ | 233.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ___ NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___ NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___ NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___ NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings always start with pH 7, add a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: * Initial reading + Cal values for pH: 4.0 - 3.84/4.00
7.0 - 7.13/7.80  10.0 - 9.95/9.99
Specific Conductance was initially calibrated incorrectly. See field notes.

Geosyntec consultants

**Geosyntec Consultants**

**Water Quality Instrument Calibration Form**

Project/Site: CRHE | Project #: FR1681 | Field Personnel: Christal Schultz

Water Quality Meter - Model/Serial #: YSI 556 MPS 11J02412 | Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) ICV (CCV) | | 06/06/14 | 07:14 | 24.2 | 8.387 | 10.22/8.39 | 121.9/100.0 | (P) F |
| CAL ICV (CCV) | | ↓ | 1700 | ~~25.3~~ | ~~7.55~~ MB | 5.55 | 80% | P (F) |
| CAL ICV CCV | | | | | 6.821* | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/- 5% | |
| (CAL) ICV (CCV) | | 06/06/14 | 07:23 | 1.413 | 10875 | 03/10/15 | 1.482/1.413 | (P) F |
| CAL ICV (CCV) | | ↓ | 1710 | 1.413 | 10875 | 03/10/15 | 1.401 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/-0.2 SU | |
| (CAL) ICV (CCV) | | 06/06/14 | 07:15 | 7.00 | 2403637 | 02/16 | 7.05/7.00 | (P) F |
| (CAL) ICV (CCV) | | 06/06/14 | 07:17 | 4.00 | 2310A78 | 10/15 | 4.20/4.00 | (P) F |
| (CAL) ICV (CCV) | | 06/06/14 | 07:19 | 10.00 | 2312574 | 05/15 | 10.12/10.02 | (P) F |
| CAL ICV (CCV) | | ↓ | 1702 | 4.00 | 2310A78 | 10/15 | 3.85 | (P) F |
| CAL ICV (CCV) | | ↓ | 1705 | 7.00 | 2403637 | 02/16 | 6.96 | (P) F |
| CAL ICV (CCV) | | ↓ | 1708 | 10.00 | 2312574 | 05/15 | 9.99 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Geosyntec Acceptance Criteria: +/- 5% | |
| (CAL) ICV (CCV) | | 06/06/14 | 07:27 | 240.0 | 7065 | 11/18 | 237.4/240.0 | (P) F |
| CAL ICV (CCV) | | ↓ | 1714 | 240.0 | 7065 | 11/18 | 228.4 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

Specific Conductance Probe Cleaned? Yes (No) | Disolved Oxygen membrane Changed? Yes (No)

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: * DO saturation during CCV estimated using linear relationship from 20.2 to 20.9 °C

Geosyntec consultants

## Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE | Project #: FR1681 | Field Personnel: Christel Schultz

Water Quality Meter - Model/Serial #: YSI 556 MPS # 11L102412 | Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 06/05/14 | 07:16 | 24.6 | 8.325 | 8.92/8.52 | 107.2/100.0 | P F |
| CAL ICV CCV | | 06/05/14 | 17:02 | 30.8 | 7.456 | 7.87 | 105.6 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 06/05/14 | 07:26 | 1.413 | 10875 | 03/10/15 | 1.423/1.413 | P F |
| CAL ICV CCV | | 06/05/14 | 17:12 | 1.413 | 10875 | 03/10/15 | 1.428 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 06/05/14 | 07:19 | 7.00 | 2403637 | 02/16 | 7.00/7.00 | P F |
| CAL ICV CCV | | 06/05/14 | 07:21 | 4.00 | 2310A78 | 10/15 | 3.96/4.00 | P F |
| CAL ICV CCV | | 06/05/14 | 07:23 | 10.00 | 2312574 | 05/15 | 9.94/9.99 | P F |
| CAL ICV CCV | | 06/05/14 | 17:05 | 7.00 | 2403637 | 02/16 | 6.97 | P F |
| CAL ICV CCV | | 06/05/14 | 17:07 | 4.00 | 2310A78 | 10/15 | 3.92 | P F |
| CAL ICV CCV | | 06/05/14 | 17:10 | 10.00 | 2312574 | 05/15 | 9.71 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 06/05/14 | 07:28 | 240.0 | 7065 | 11/18 | 226.0/240.0 | P F |
| CAL ICV CCV | | 06/05/14 | 17:15 | 240.0 | 7065 | 11/18 | 236.1 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No) | Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings, always start with pH 7 and a third calibration point if needed (i.e. pH < 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a 'J' qualifier

Comments: _____

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE | Project #: FR1681 | Field Personnel: Christel Schultz

Water Quality Meter - Model/Serial #: YSI 556 MPS #13D101776 | Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 06/04/14 | 07:02 | 21.3 | 8.863 | 8.69/8.86 | 99.1/99.9 | P F |
| CAL ICV CCV | | 06/04/14 | 17:34 | 28.6 | 7.745 | 7.45 | 96.2 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 06/04/14 | 07:18 | 1.413 | 10601 | 09/20/14 | 1.373/1.413 | P F |
| CAL ICV CCV | | 06/04/14 | 17:43 | 1.413 | 10601 | 09/20/14 | 1474 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL ICV CCV | | 06/04/14 | 07:06 | 7.00 | 2312885 | 12/15 | 7.30/7.00 | P F |
| CAL ICV CCV | | 06/04/14 | 07:09 | 4.00 | 2310A78 | 10/15 | 4.15/3.95 | P F |
| CAL ICV CCV | | 06/04/14 | 07:16 | 10.00 | 2312574 | 05/15 | 9.75/10.00 | P F |
| CAL ICV CCV | | 06/04/14 | 17:36 | 7.00 | 2312885 | 12/15 | 7.19 | P F |
| CAL ICV CCV | | 06/04/14 | 17:38 | 4.00 | 2310A78 | 10/15 | 3.90 | P F |
| CAL ICV CCV | | 06/04/14 | 17:40 | 10.00 | 2312574 | 05/15 | 9.91 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 06/04/14 | 07:20 | 240.0 | 6448 | 07/18 | 246.0/240.0 | P F |
| CAL ICV CCV | | 06/04/14 | 17:45 | 240.0 | 6448 | 07/18 | 244.7 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No) | Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings. always start with pH 7, add a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments:

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE | Project #: FR1681 | Field Personnel: Christel Schultz

Water Quality Meter - Model/Serial #: YSI 556 MPS #13D101776 | Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) ICV (CCV) | | 06/03/14 | 07:01 | 24.7 | 8.309 | 8.49/8.30 | 102.3/100. | (P) F |
| CAL ICV (CCV) | | 06/03/14 | 17:21 | 26.5 | 8.040 | 8.52 | 81.0 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 06/03/14 | 07:19 | 1.413 | 10601 | 09/20/14 | 1.428/1.413 | (P) F |
| CAL ICV (CCV) | | 06/03/14 | 17:37 | 1.413 | 10601 | 09/20/14 | 1.428 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) ICV (CCV) | | 06/03/14 | 07:08 | 7.00 | 2312885 | 12/15 | (7) ~~7.15~~ 7.11/7.00 | P F |
| (CAL) ICV (CCV) | | 06/03/14 | 07:12 | 4.00 | 2310A78 | 10/15 | 3.84/3.99 | (P) F |
| (CAL) ICV (CCV) | | 06/03/14 | 07:16 | 10.00 | 2312574 | 05/15 | 10.01/10.00 | (P) F |
| CAL ICV (CCV) | | 06/03/14 | 17:22 | 7.00 | 2312885 | 12/15 | 6.94 | (P) F |
| CAL ICV (CCV) | | 06/03/14 | 17:26 | 4.00 | 2310A78 | 10/15 | 4.13 | (P) F |
| CAL ICV (CCV) | | 06/03/14 | 17:32 | 10.00 | 2312574 | 05/15 | 9.85 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 06/03/14 | 07:22 | 240.0 | 6448 | 07/18 | 238.8/240.0 | (P) F |
| (CAL) ICV (CCV) | | 06/03/14 | 17:39 | 240.0 | 6448 | 07/18 | 237.6 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No) | Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings always start with pH 7 add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments:

Geosyntec consultants

## Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CRHE | Project #: FR1681 | Field Personnel: Christel Schultz

Water Quality Meter - Model/Serial #: YSI 556 MPS #13D101776 | Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) ICV (CCV) | | 06/02/14 | 07:09 | 25.1 | 8.248 | 8.34/8.24 | 101.2/99.9 | (P) F |
| CAL ICV (CCV) | | 06/02/14 | 16:45 | 25.8 | 8.143 | 7.16 | 87.9 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 06/02/14 | 07:21 | 1.413 | 10601 | 09/20/14 | 1.431/1.443 | (P) F |
| CAL ICV (CCV) | | 06/02/14 | 17:04 | 1.413 | 10601 | 09/20/14 | 1.477 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) ICV (CCV) | | 06/02/14 | 07:13 | 7.00 | 2312885 | 12/15 | 7.20/7.00 | (P) F |
| (CAL) ICV (CCV) | | 06/02/14 | 07:16 | 4.00 | 2310A78 | 10/15 | 4.06/4.00 | (P) F |
| (CAL) ICV (CCV) | | 06/02/14 | 07:19 | 10.00 | 2312574 | 05/15 | 9.57/10.0 | (P) F |
| CAL ICV (CCV) | | 06/02/14 | 16:50 | 7.00 | 2312885 | 12/15 | 7.15 | (P) F |
| CAL ICV (CCV) | | 06/02/14 | 16:54 | 4.00 | 2310A78 | 10/15 | 3.98 | (P) F |
| CAL ICV (CCV) | | 06/02/14 | 16:58 | 10.00 | 2312574 | 05/15 | 9.99 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 06/02/14 | 07:22 | 240.0 | 6448 | 07/18 | 238.1/240.0 | (P) F |
| CAL ICV (CCV) | | 06/02/14 | 17:10 | 240.0 | 6448 | 07/18 | 238.9 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No) | Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings. always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec consultants

**Geosyntec Consultants**

**Water Quality Instrument Calibration Form**

Project/Site: CRHE  Project #: FR1681  Field Personnel: Christel Schulte

Water Quality Meter - Model/Serial #: YSI 556 MPS #13D101776  Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) ICV (CCV) | | 05/30/14 | 07:05 | 23.7 | 8.466 | 7.62/8.46 | 90.0/100.0 | (P) F |
| CAL ICV (CCV) | | 05/30/14 | 16:56 | 29.0 | 7.691 | 7.16 | 93.2 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 05/30/14 | 07:14 | 1.413 | 10601 | 09/20/14 | 1.394/1.412 | (P) F |
| CAL ICV (CCV) | | 05/30/14 | 17:05 | 1.413 | 10601 | 09/20/14 | 1.481 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) ICV (CCV) | | 05/30/14 | 07:06 | 7.00 | 2312885 | 12/15 | 7.20/7.00 | (P) F |
| (CAL) ICV (CCV) | | 05/30/14 | 07:08 | 4.00 | 2310A78 | 10/15 | 4.06/4.00 | (P) F |
| (CAL) ICV (CCV) | | 05/30/14 | 07:11 | 10.00 | 2312574 | 05/15 | 9.91/9.99 | (P) F |
| CAL ICV (CCV) | | 05/30/14 | 16:58 | 7.00 | 2312885 | 12/15 | 7.20 | (P) F |
| CAL ICV (CCV) | | 05/30/14 | 17:00 | 4.00 | 2310A78 | 10/15 | 4.08 | (P) F |
| CAL ICV (CCV) | | 05/30/14 | 17:02 | 10.00 | 2312574 | 05/15 | 9.91 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 05/30/14 | 07:17 | 240.0 | 6448 | 07/18 | 241.9/240.0 | (P) F |
| (CAL) ICV (CCV) | | 05/30/14 | 17:08 | 240.0 | 6448 | 07/18 | 229.8 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No[1])  Dissolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CBHE  Project #: FR1681  Field Personnel: Mike Bu...

Water Quality Meter - Model/Serial #: YSI 556 MPS  12E 100521  Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | 8.848 | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 6/13/14 | 0705 | 21.07 | ~~7.928~~ mb | 9.50/8.85 | 107/99.8 | (P) F |
| CAL ICV (CCV) | | 6/13/14 | 1746 | 29.30 | 7.651 | 6.87 | 84.7 | P (F) |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/13/14 | 0650 | 1.413 | 10601 | 9/20/2014 | 1.422/1.413 | (P) F |
| CAL ICV (CCV) | | 6/13/14 | 1752 | 1.413 | 10601 | 9/20/2014 | 1.392 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 6/13/14 | 0640 | 4.0 | 2310A78 | 10/2015 | 4.07/4.00 | (P) F |
| (CAL) (ICV) CCV | | ↓ | 0643 | 7.0 | 2312885 | 12/2015 | 7.05/7.00 | (P) F |
| (CAL) (ICV) CCV | | ↓ | 0646 | 10.0 | 2312574 | 05/2015 | 9.86/9.98 | (P) F |
| CAL ICV (CCV) | | 6/13/14 | 1750 | 4.0 | 2310A78 | 10/2015 | 4.07 | (P) F |
| CAL ICV (CCV) | | ↓ | 1753 | 7.0 | 2312885 | 12/2015 | 6.92 | (P) F |
| CAL ICV (CCV) | | ↓ | 1755 | 10.0 | 2312574 | 05/2015 | 9.78 | P (F) |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 6/13/14 | 0657 | 240.0 | 6448 | 07/2018 | 246.0/240.0 | (P) F |
| CAL ICV (CCV) | | 6/13/14 | 1800 | 240.0 | 6448 | 07/2018 | 234.4 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes No  Disolved Oxygen membrane Changed? Yes No

| 0.1 - 10 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ____NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification

Comments:

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7, add a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec consultants

# Geosyntec Consultants
## Water Quality Instrument Calibration Form

Project/Site: CBHE  Project #: FR1691  Field Personnel: M. Burham

Water Quality Meter - Model/Serial #: YSI 556 MPS 06E545A6  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL (ICV) CCV | | 9/29/14 | 07:06 | 25.70 | 8.158 | 8.04/8.16 | 98.5/100.0 | P F |
| CAL ICV (CCV) | | 9/30/14 | 0654 | 23.17 | 8.546 | 8.30/8.54 | 101.7/99.9 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 9/29/14 | 0723 | 1.413 | C468184 | 2/28/15 | 1.403/1.413 | P F |
| CAL ICV (CCV) | | 9/30/14 | 0735 | 1.413 | C468184 | 2/28/15 | 1.402/1.413 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| CAL (ICV) CCV | | 9/29/14 | 0711 | 4.0 | C469196 | 4/4/16 | 3.97/4.00 | P F |
| CAL (ICV) CCV | | ↓ | 0714 | 7.0 | C466928 | 1/9/16 | 7.06/7.00 | P F |
| CAL (ICV) CCV | | ↓ | 0719 | 10.0 | C256282 | 10/9/14 | 9.75/9.96 | P F |
| CAL ICV (CCV) | | 9/30/14 | 0657 | 4.0 | C469196 | 4/4/16 | 3.98/4.00 | P F |
| CAL ICV (CCV) | | ↓ | 0701 | 7.0 | C466928 | 1/9/16 | 7.11/7.00 | P F |
| CAL ICV (CCV) | | ↓ | 0705 | 10.0 | C256280 | 10/9/14 | 9.85/9.97 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL (ICV) CCV | | 9/29/14 | 0729 | 240@25 | 7168 | 12/2018 | 239.6/240.0 | P F |
| CAL ICV (CCV) | | 9/30/14 | 0710 | 240@25 | 7168 | 12/2018 | 244.1/240.0 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE/FR1681 Project #: FR1681 Field Personnel: M. Buchan

Water Quality Meter - Model/Serial #: YSI 556 MPS 065595 AG Turbidimeter - Model/Serial # N/A

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) (ICV) CCV | | 9/22/14 | 0952 | 26.74 | 8.012 | 7.58/7.99 | mB/99.8% | (P) F |
| (CAL) ICV (CCV) | | 9/23/14 | 0640 | 22.29 | 8.643 | 9.05/8.69 | 104.1/100.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 9/22/14 | 0810 | 1.413 | C468184 | 2/28/2015 | 1.392/1.413 | (P) F |
| (CAL) ICV (CCV) | | 9/23/14 | 0659 | 1.413 | C468184 | 2/28/2015 | 1.403/1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) (ICV) CCV | | 9/22/14 | 0756 | 4.0 | C469196 | 4/4/16 | 4.02/4.00 | (P) F |
| (CAL) (ICV) CCV | | ↓ | 0800 | 7.0 | C466920 | 1/9/16 | 7.13/7.00 | (P) F |
| (CAL) (CCV) CCV | | ↓ | 0805 | 10.0 | C256280 | 10/09/14 | 9.76/9.95 | (P) F |
| CAL ICV (CCV) | | 9/23/14 | 0645 | 4.0 | C469186 | 4/4/14 | 3.96/4.00 | (P) F |
| CAL ICV (CCV) | | ↓ | 0650 | 7.0 | C466920 | 1/9/16 | 7.12/7.00 | (P) F |
| CAL ICV (CCV) | | ↓ | 0654 | 10.0 | C256280 | 10/09/14 | 9.80/9.96 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) (ICV) CCV | | 9/22/14 | 0814 | 240.0 @ 25 | 7168 | 12/2018 | 233.5/240.0 | (P) F |
| (CAL) ICV (CCV) | | 9/23/14 | 0703 | 240.0 @ 25 | 7168 | 12/2018 | 245.6/240.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No) Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE  Project #: FR1681  Field Personnel: M. Burcham

Water Quality Meter - Model/Serial #: YSI 556 MPS 05595 AG  Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) ICV (CCV) | | 9/24/14 | 0653 | 24.46 | 8.340 | 8.22/8.34 | 184/99.9 | (P) F |
| (CAL) ICV (CCV) | | 9/25/15 | | ~~22.63~~ MB | ~~8.482~~ | | | P F |
| CAL ICV CCV | | 9/25/15 | 0715 | 23.3 | 8.434 | 8.35/8.43 | 189/99.9 | (P) F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 9/24/14 | 0750 | 1.413 | C468184 | 2/28/2015 | 1.404/1.413 | (P) F |
| (CAL) ICV (CCV) | | 9/25/14 | 0732 | 1.413 | C468184 | 2/28/2015 | 1.424/1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) ICV (CCV) | | 9/24/14 | 0700 | 4.0 | C469196 | 9/9/16 | 3.97/4.00 | (P) F |
| (CAL) ICV (CCV) | | ↓ | 0704 | 7.0 | C466920 | 1/9/16 | 7.08/7.00 | (P) F |
| (CAL) ICV (CCV) | | ↓ | 0708 MB | 10.0 | C256280 | 10/09/14 | 9.74/9.96 | (P) F |
| (CAL) ICV (CCV) | | 9/25/14 | 0720 | 4.0 | C469196 | 9/9/16 | 3.97/4.00 | (P) F |
| (CAL) ICV (CCV) | | ↓ | 0723 | 7.0 | C466920 | 1/9/16 | 7.11/7.00 | (P) F |
| (CAL) ICV (CCV) | | ↓ | 0727 | 10.0 | C256280 | 10/09/14 | 9.80/9.96 | (P) F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 9/24/14 | 0754 | 240@25 | 7168 | 12/2018 | 237.3/240.1 | (P) F |
| (CAL) ICV (CCV) | | 9/25/14 | 0738 | 240@25 | 7168 | 12/2018 | 239.0/240.1 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings always start with pH 7, add a third calibration point if needed (i.e, pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments

Geosyntec consultants

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRITE Project #: FR1681 Field Personnel: M. Burham

Water Quality Meter - Model/Serial #: YSI 556 MPS 06505951AG Turbidimeter - Model/Serial #

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| (CAL) ICV (CCV) | | 9/26/14 | 0708 | 24.60 | 8.325 | 8.24/8.32 | 94.0/100.2 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 9/26/14 | 0722 | 1.413 | C468104 | 2/28/15 | 1.389/1.413 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.2 SU | | |
| (CAL) ICV (CCV) | | 9/26/14 | 0711 | 4.0 | C469196 | 4/4/16 | 4.0/4.00 | (P) F |
| (CAL) ICV (CCV) | | ↓ | 0714 | 7.0 | C466920 | 1/9/16 | 7.36/7.00 | (P) F |
| (CAL) ICV (CCV) | | ↓ | 0718 | 10.0 | C256280 | 10/9/14 | 9.84/9.98 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| (CAL) ICV (CCV) | | 9/26/14 | 0726 | 240@25 | 7168 | 12/2018 | 280.0/290.0 | (P) F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No) Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form

CAL - Initial Calibration

ICV - Initial Calibration Verification

CCV - Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings always start with pH 7, add a third calibration point if needed (i.e. pH > 7)

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments

Geosyntec consultants

Geosyntec

consultants

# Water Quality Instrument Calibration Form

Project/Site: CRHE KSC FL  Project #: FR1681  Field Personnel: D. Siemon

Water Quality Meter - Model/Serial#: YSI 556 0502373  Turbidimeter - Model/Serial#:

| Dissolved Oxygen (FDEP SOP FT 1500) | Date | Time | Temp (°C) | Saturation (mg/L)* | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| | | | | | Acceptance Criteria:+/-0.3 mg/L | | |
| CAL ICV CCV | 10/16/14 | 731 | 22.19 | 8.710 | 8.68-8.71 | 101.9-100.5 | P F |
| CAL ICV CCV | 11/11/14 | 629 | 22.46 | 8.595 | 9.03-8.60 | 105.3-101.0 | P F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |

| Specific Conductance (FDEP SOP FT 1200) | Date | Time | Standard Lot # | Standard Exp. Date | Standard (mS/cm) | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| Specific Conductance Probe Cleaned? Yes (No) | | | | 5/16 J | Acceptance Criteria: +/- 5% | | |
| ~~CAL ICV CCV~~ | | | | 240568 | 0.0 | | P F |
| CAL ICV CCV | 11/10/14 | 733 | 7168 | 12/18 | 1.413 | 1.219-1.414 | P F |
| CAL ICV CCV | 11/11/14 | 630 | " | " | " | 1.112-1.413 | P F |
| CAL ICV CCV | | | | | | | P F |

| pH (FDEP SOP FT 1100) | Date | Time | Standard Lot # | Standard Exp. Date | Standard (SU) | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| | | | | | Acceptance Criteria: +/- 0.2 SU | | |
| CAL ICV CCV | 11/10/14 | 734 | 2415440 | 4/1/16 | 7 | 7.09-7.00 | P F |
| CAL ICV CCV | ↓ | 736 | 240568 | 5/16 | 4 | 4.09-4.01 | P F |
| CAL ICV CCV | ↓ | 739 | 2404751 | 10/15 | 10 | 10.15-10.01 | P F |
| CAL ICV CCV | 11/10/14 | 631 | | | | 7.11-7.00 | P F |
| CAL ICV CCV | ↓ | 633 | SAME | | | 4.09-4.00 | P F |
| CAL ICV CCV | ↓ | 636 | | | | 10.09-10.01 | P F |

| ORP (FDEP SOP N/A) | Date | Time | Standard Lot # | Standard Exp. Date | Standard (mV @ Temp °C) | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| Dissolved Oxygen Membrane Changed? Yes (No) | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | 11/10/14 | 740 | 3AK68 | 11/16 | 240 @ 25° | 241.0-240.0 | P F |
| CAL ICV CCV | 11/11/14 | 638 | " | " | " | 233.5-240.0 | P F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |

| Turbidity 0.1-10 NTU | Date | Standard (NTU) | Reading (NTU) | Pass or Fail |
|---|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | | |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |

| Turbidity 11-40 NTU | Date | Standard (NTU) | Reading (NTU) | Pass or Fail |
|---|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | | |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |

| Turbidity 41-100 NTU | Date | Standard (NTU) | Reading (NTU) | Pass or Fail |
|---|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | | |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |

| Turbidity >100 NTU | Date | Standard (NTU) | Reading (NTU) | Pass or Fail |
|---|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |

Notes:

CAL = Initial Calibration

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

* See Table FS 2200-2 on the back of this form

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings <0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if neede

If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Geosyntec
consultants

# Water Quality Instrument Calibration Form

Project/Site: CRHE KSC FL / LC36B  Project #: RD 1681  Field Personnel: D. Sizemore

Water Quality Meter - Model/Serial#: YSI 556 0502373  Turbidimeter - Model/Serial#:

| **Dissolved Oxygen** (FDEP SOP FT 1500) | Date | Time | Temp (°C) | Saturation (mg/L)* | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| | | | | | **Acceptance Criteria:+/-0.3 mg/L** | | |
| CAL ICV CCV | 11/12/14 | 557 | 23.11 | 8.562 | 8.14-8.56 | 101.1-99.9 | (P) F |
| CAL ICV CCV | 11/13/14 | 0606 | 24.05 | 8.403 | 8.97-8.40 | 110.1-100.9 | (P) F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |

| **Specific Conductance** (FDEP SOP FT 1200) | Date | Time | Standard Lot # | Standard Exp. Date | Standard (mS/cm) | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| Specific Conductance Probe Cleaned? (Yes) No | | | | | **Acceptance Criteria: +/- 5%** | | |
| CAL ICV CCV | 11/12/14 | 558 | 7168 | 12/18 | 1.413 | 1111-1413 | (P) F |
| CAL ICV CCV | 11/13/14 | 607 | " | " | " | 1423-1411.5 | (P) F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |

| **pH** (FDEP SOP FT 1100) | Date | Time | Standard Lot # | Standard Exp. Date | Standard (SU) | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| | | | | | **Acceptance Criteria: +/- 0.2 SU** | | |
| CAL ICV CCV | 11/12/14 | 600 | 2405440 | 4/16 | 7 | 7.17-7.00 | (P) F |
| CAL ICV CCV | ↓ | 603 | 2405568 | 5/16 | 4 | 4.05-4.00 | (P) F |
| CAL ICV CCV | ↓ | 609 | 2404751 | 10/15 | 10 | 10.13-10.02 | (P) F |
| CAL ICV CCV | 11/13/14 | 1008 | | | | 7.12-7.01 | (P) F |
| CAL ICV CCV | ↓ | 611 | | | | 4.01-4.00 | (P) F |
| CAL ICV CCV | ↓ | 613 | | | | 10.11-10.04 | (P) F |

| **ORP** (FDEP SOP N/A) | Date | Time | Standard Lot # | Standard Exp. Date | Standard (mV @ Temp °C) | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|
| Dissolved Oxygen Membrane Changed? Yes (No) | | | | | **Geosyntec Acceptance Criteria: +/- 5%** | | |
| CAL ICV CCV | 11/12/14 | 610 | 3AK643 | 11/16 | 240 @ 25 | 219.5-240.0 | (P) F |
| CAL ICV CCV | 11/13/14 | 614 | " | " | " | 219-240.1 | (P) F |
| CAL ICV CCV | | | | | | | P F |
| CAL ICV CCV | | | | | | | P F |

| **Turbidity 0.1-10 NTU** | Date | Standard (NTU) | Reading (NTU) | Pass or Fail |
|---|---|---|---|---|
| | | **Acceptance Criteria: +/- 10%** | | |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |

| **Turbidity 11-40 NTU** | Date | Standard (NTU) | Reading (NTU) | Pass or Fail |
|---|---|---|---|---|
| | | **Acceptance Criteria: +/- 8%** | | |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |

| **Turbidity 41-100 NTU** | Date | Standard (NTU) | Reading (NTU) | Pass or Fail |
|---|---|---|---|---|
| | | **Acceptance Criteria: +/- 6.5%** | | |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |

| **Turbidity >100 NTU** | Date | Standard (NTU) | Reading (NTU) | Pass or Fail |
|---|---|---|---|---|
| | | **Acceptance Criteria: +/- 5%** | | |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |
| CAL ICV CCV | | | | P F |

Notes:

CAL = Initial Calibration
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
* See Table FS 2200-2 on the back of this form

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings <0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if neede
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

# DPT GEOCHEMICAL LOGS

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0017

Project Number: FR1681

Date: 6/22/09

| Time / DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity (1) NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0900 ~~JRB~~ | 8-12 | 6.27 | 1.12 | >999 | 0.14 | 28.5 | 0.0 | 0.7 | 70 |
| 0902 | 8-12 | 6.49 | 1.05 | >999 | 0.02 | 28.3 | 0.0 | 0.7 | -82 |
| 0904 | 8-12 | 6.52 | 1.00 | >999 | 0.05 | 28.1 | 0.0 | 0.6 | -88 |
| | | | | | | | | | |
| 0912 | 16-20 | 6.64 | 1.11 | >999 | 0.58 | 28.9 | 0.0 | 0.7 | -120 |
| 0914 | 16-20 | 6.69 | 1.09 | >999 | 0.07 | 28.8 | 0.0 | 0.7 | -128 |
| 0916 | 16-20 | 6.75 | 1.09 | >999 | 0.00 | 28.8 | 0.0 | 0.7 | -135 |
| | | | | | | | | | |
| 0925 | 26-30 | 6.85 | 1.26 | >999 | 0.00 | 27.3 | 0.1 | 0.8 | -150 |
| 0927 | 26-30 | 6.83 | 1.26 | >999 | 0.00 | 27.2 | 0.1 | 0.8 | -149 |
| 0929 | 26-30 | 6.83 | 1.26 | >999 | 0.00 | 27.0 | 0.1 | 0.8 | -148 |
| | | | | | | | | | |
| 0940 | 36-40 | 7.25 | 1.30 | >999 | 0.00 | 29.0 | 0.1 | 0.8 | -226 |
| 0942 | 36-40 | 7.30 | 1.30 | >999 | 0.00 | 28.9 | 0.1 | 0.8 | -225 |
| 0944 | 36-40 | 7.30 | 1.30 | >999 | 0.00 | 28.8 | 0.1 | 0.8 | -222 |
| | | | | | | | | | |
| 1046 | 41-45 | 7.06 | 1.37 | >999 | 0.90 | 30.8 | 0.1 | 0.9 | -216 |
| 1048 | 41-45 | 7.15 | 1.39 | >999 | 0.14 | 30.0 | 0.1 | 0.9 | -214 |
| 1050 | 41-45 | 7.15 | 1.41 | >999 | 0.00 | 29.4 | 0.1 | 0.9 | -209 |
| | | | | | | | | | |
| 1106 | 46-50 | 7.00 | 1.82 | >999 | 0.17 | 31.0 | 0.1 | 1.2 | -197 |
| 1108 | 46-50 | 7.04 | 1.87 | >999 | 0.02 | 30.2 | 0.1 | 1.2 | -201 |
| 1110 | 46-50 | 7.04 | 1.89 | >999 | 0.00 | 29.9 | 0.1 | 1.2 | -201 |
| | | | | | | | | | |
| 1126 | 61-65 | 7.36 | 2.69 | >999 | 0.00 | 34.0 | 0.1 | 2.1 | -299 |
| 1128 | 61-65 | 7.39 | 3.72 | >999 | 0.00 | 30.4 | 0.2 | 2.7 | -298 |
| 1130 | 61-65 | 7.42 | 4.21 | >999 | 0.00 | 29.8 | 0.2 | 2.7 | -298 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Note: Insert units if not provided on sheet. (1) >999 indicates turbidity reading is out of range of LaMotte.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0018

Project Number: FR1681

Date: 6/22/09

| DPT Location (Time) | Sample Depth | pH std units | Conductivity mS/cm | Turbidity (1) NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1246 | 8-12 | 6.94 | 1.22 | >999 | 0.97 | 35.5 | 0.1 | 0.8 | -218 |
| 1248 | 8-12 | 7.01 | 1.33 | >999 | 0.61 | 35.5 | 0.1 | 0.8 | -207 |
| 1250 | 8-12 | 7.03 | 1.21 | >999 | 1.73 | 35.5 | 0.0 | 0.7 | -211 |
| 1300 | 16-20 | 6.96 | 1.13 | >999 | 0.67 | 31.4 | 0.1 | 0.8 | -184 |
| 1302 | 16-20 | 7.02 | 1.18 | >999 | 0.21 | 30.6 | 0.1 | 0.8 | -188 |
| 1304 | 16-20 | 7.05 | 1.17 | >999 | 0.06 | 30.2 | 0.1 | 0.7 | -185 |
| 1314 | 26-30 | 6.79 | 1.47 | >999 | 0.11 | 31.1 | 0.1 | 0.9 | -183 |
| 1316 | 26-30 | 6.85 | 1.48 | >999 | 0.00 | 30.7 | 0.1 | 1.0 | -187 |
| 1318 | 26-30 | 6.88 | 1.65 | >999 | 0.00 | 30.6 | 0.1 | 1.1 | -182 |
| 1330 | 36-40 | 7.07 | 1.25 | >999 | 0.73 | 32.7 | 0.1 | 0.8 | -231 |
| 1332 | 36-40 | 7.19 | 1.30 | >999 | 0.04 | 31.5 | 0.1 | 0.9 | -227 |
| 1334 | 36-40 | 7.23 | 1.46 | >999 | 0.00 | 31.0 | 0.1 | 0.9 | -220 |
| 1400 | 41-45 | 7.13 | 1.28 | >999 | 0.41 | 33.4 | 0.1 | 0.8 | -256 |
| 1402 | 41-45 | 7.22 | 1.33 | >999 | 0.04 | 31.8 | 0.1 | 0.8 | -256 |
| 1404 | 41-45 | 7.24 | 1.25 | >999 | 0.00 | 31.0 | 0.1 | 0.8 | -246 |
| 1416 | 46-50 | 7.01 | 1.26 | >999 | 0.55 | 34.6 | 0.1 | 0.9 | -243 |
| 1418 | 46-50 | 7.13 | 1.47 | >999 | 0.05 | 33.0 | 0.1 | 1.0 | -229 |
| 1420 | 46-50 | 7.16 | 1.58 | >999 | 0.00 | 31.7 | 0.1 | 1.0 | -226 |
| 1438 | 61-65 | 7.05 | 3.02 | >999 | 0.13 | 32.9 | 0.2 | 2.3 | -249 |
| 1440 | 61-65 | 7.12 | 3.90 | >999 | 0.00 | 32.1 | 0.2 | 2.6 | -253 |
| 1442 | 61-65 | 7.22 | 4.11 | >999 | 0.00 | 31.5 | 0.2 | 2.7 | -253 |

Note: Insert units if not provided on sheet. (1) >999 indicates turbidity is out of range for LaMotte.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: Tim's DPT0019

Date: 6/22/09

| ~~DPT Location~~ | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1600 | 8-12 | 7.49 | 0.921 | >999 | 0.18 | 37.8 | 0.0 | 0.55 | -199 |
| 1602 | 8-12 | 7.47 | 0.798 | >999 | 0.10 | 37.7 | 0.0 | 0.49 | -206 |
| 1604 | 8-12 | 7.44 | 0.750 | >999 | 0.06 | 37.7 | 0.0 | 0.48 | -213 |
| 1610 | 16-20 | 7.23 | 1.01 | >999 | 0.00 | 32.2 | 0.0 | 0.6 | -217 |
| 1612 | 16-20 | 7.19 | 1.01 | >999 | 0.00 | 30.8 | 0.0 | 0.6 | -213 |
| 1614 | 16-20 | 7.18 | 0.99 | >999 | 0.00 | 30.2 | 0.0 | 0.6 | -208 |
| 1620 | 26-30 | 6.71 | 1.93 | >999 | 0.00 | 29.1 | 0.1 | 1.2 | -131 |
| 1622 | 26-30 | 6.69 | 1.82 | >999 | 0.00 | 28.9 | 0.1 | 1.2 | -130 |
| 1624 | 26-30 | 6.67 | 1.80 | >999 | 0.00 | 28.8 | 0.1 | 1.1 | -128 |
| 1634 | 36-40 | 7.32 | 1.21 | >999 | 0.17 | 32.7 | 0.1 | 0.8 | -225 |
| 1636 | 36-40 | 7.32 | 1.28 | >999 | 0.00 | 31.6 | 0.1 | 0.8 | -227 |
| 1638 | 36-40 | 7.33 | 1.29 | >999 | 0.00 | 31.2 | 0.1 | 0.8 | -227 |
| 1700 | 41-45 | 7.30 | 1.28 | >999 | 0.65 | 33.7 | 0.1 | 0.9 | -227 |
| 1702 | 41-45 | 7.18 | 1.39 | >999 | 0.16 | 31.8 | 0.1 | 0.9 | -225 |
| 1704 | 41-45 | 7.17 | 1.44 | >999 | 0.04 | 31.2 | 0.1 | 0.9 | -220 |
| 1716 | 46-50 | 7.09 | 1.49 | >999 | 0.19 | 32.6 | 0.1 | 1.0 | -210 |
| 1718 | 46-50 | 7.05 | 1.60 | >999 | 0.00 | 30.8 | 0.1 | 1.1 | -198 |
| 1720 | 46-50 | 7.04 | 1.71 | >999 | 0.00 | 30.1 | 0.1 | 1.1 | -190 |
| 1736 | 61-65 | 7.15 | 3.21 | >999 | 0.00 | 33.2 | 0.2 | 2.2 | -243 |
| 1738 | 61-65 | 7.21 | 3.53 | >999 | 0.00 | 32.0 | 0.2 | 2.4 | -244 |
| 1740 | 61-65 | 7.25 | 3.78 | >999 | 0.00 | 31.6 | 0.2 | 2.5 | -246 |

Note: Insert units if not provided on sheet. (1) >999 indicates Turbidity is out of range of LaMotte

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-20

Project Number: FR1681

Date: 6/23/09 / 6/24/09

| DPT Location | Sample Depth (FT) | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 914 | 8-12 | 6.77 | 0.774 | >999 | 4.17 | 27.48 | 36 | 0.479 | -125.1 |
| 916 | 8-12 | 6.74 | 0.763 | >999 | 2.17 | 27.38 | 35 | 0.474 | -117.2 |
| 918 | 8-12 | 6.73 | 0.758 | >999 | 1.80 | 27.34 | 35 | 0.471 | -113.3 |
| SAMPLE ~~9:20~~ | ~ | 6.50 CAL | PURGED PRIOR TO FIRST READING | | | | | | |
| | | | | | | | | | |
| 932 | 16-20 | 7.67 | 0.657 | 950 | 0.92 | 26.15 | 31 | 0.416 | -176.0 |
| 934 | 16-20 | 7.68 | 0.646 | >999 | 0.83 | 25.98 | 31 | 0.412 | -180.2 |
| 936 | 16-20 | 7.68 | 0.641 | >999 | 0.80 | 25.72 | 31 | 0.411 | -186.1 |
| 938 | SAMPLE | | | | | | | | |
| | | | | | | | | | |
| 951 | 26-30 | 7.31 | 0.962 | >999 | 0.84 | 27.05 | 45 | 0.601 | -153.4 |
| 953 | 26-30 | 7.28 | 0.956 | >999 | 0.85 | 26.91 | 45 | 0.599 | -155.9 |
| 955 | 26-30 | 7.25 | 0.949 | >999 | 0.86 | 26.79 | 45 | 0.597 | -149.6 |
| 957 | SAMPLE | | | | | | | | |
| | | | | | | | | | |
| 1012 | 36-40 | 7.43 | 0.991 | >999 | 0.86 | 28.69 | 45 | 0.602 | -196.7 |
| 1014 | 36-40 | 7.40 | 0.989 | >999 | 0.75 | 28.51 | 45 | 0.603 | -193.8 |
| 1016 | 36-40 | 7.37 | 0.983 | >999 | 0.68 | 28.21 | 45 | 0.602 | -191.3 |
| 1018 | SAMPLE | | | | | | | | |
| | | | | | | | | | |
| 1047 | 41-45 | 7.38 | 1.237 | >999 | 0.65 | 29.03 | 56 | 0.746 | -222.6 |
| 1049 | 41-45 | 7.35 | 1.229 | >999 | 0.59 | 28.71 | 56 | 0.746 | -219.0 |
| 1051 | 41-45 | 7.34 | 1.224 | >999 | 0.55 | 28.56 | 56 | 0.745 | -219.3 |
| 1053 | SAMPLE | | | | | | | | |
| | | | | | | | | | |
| 1113 | 46-50 | 7.40 | 1.374 | >999 | 0.75 | 29.59 | 62 | 0.823 | -262.0 |
| 1115 | 46-50 | 7.37 | 1.368 | >999 | 0.63 | 28.94 | 63 | 0.828 | -263.2 |
| 1117 | 46-50 | 7.35 | 1.367 | >999 | 0.55 | 28.55 | 63 | 0.833 | -262.6 |
| 1119 | SAMPLE | | | | | | | | |
| 1139 | 61-65 | 7.71 | 1.611 | >999 | 0.34 | 30.86 | 72 | 0.945 | -338.2 |
| 1141 | 61-65 | ~~7.71~~ | 1.645 | >999 | 0.36 | 30.47 | 74 | 0.978 | -364.1 |
| 1143 | 61-65 | 7.69 | 1.774 | >999 | 0.37 | 29.65 | 83 | 1.090 | -388.8 |
| 1145 | SAMPLE | | | | | | | | |

Note: Insert units if not provided on sheet.

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6/24/09

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1647 | 71-75 | 7.45 | 4.472 | >9999 | 0.24 | 30.76 | 216 | 2.685 | -233.9 |
| 1649 | 71-75 | 7.40 | 4.796 | >999 | 0.19 | 29.33 | 235 | 2.889 | -224.6 |
| 1651 | 71-75 | 7.29 | 4.837 | >999 | 0.17 | 28.59 | 240 | 2.941 | -211.5 |
| 1653 | SAMPLE | | | | | | | | |

**DPT GEOCHEMICAL DATA FORM**
DPT Location: DPT-21

Project Number: FR1681
Date: 6/23/05

| DPT Location | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1334 | 8-12 | 7.48 | 0.813 | >999 | 0.36 | 31.63 | 35 | 0.468 | -204.9 |
| 1336 | 8-12 | 7.43 | 0.801 | 850 | 0.36 | 31.22 | 35 | 0.466 | -199.2 |
| 1338 | 8-12 | 7.36 | 0.793 | 400 | 0.48 | 30.73 | 34 | 0.465 | -194.8 |
| 1340 | SAMPLE | | | | | | | | |
| 1358 | 16-20 | 7.40 | 0.895 | >999 | 0.46 | 30.43 | 39 | 0.527 | -175.3 |
| 1400 | 16-20 | 7.38 | 0.880 | >999 | 0.67 | 30.01 | 39 | 0.522 | -177.0 |
| 1402 | 16-20 | 7.37 | 0.871 | >999 | 0.74 | 29.50 | 39 | 0.521 | -176.9 |
| 1404 | SAMPLE | | | | | | | | |
| | | | | | | | | | |
| 1415 | 26-30 | 7.24 | 1.853 | >999 | 0.77 | 31.24 | 83 | 1.088 | -197.9 |
| 1417 | 26-30 | 7.16 | 1.928 | >999 | 0.71 | 30.90 | 87 | 1.129 | -198.3 |
| 1419 | 26-30 | 7.11 | 1.932 | >999 | 0.54 | 30.42 | 88 | 1.139 | -184.7 |
| 1421 | SAMPLE | | | | | | | | |
| 1447 | 36-40 | 7.40 | 1.125 | >999 | 0.46 | 32.51 | 48 | 0.639 | -251.1 |
| 1449 | 36-40 | 7.38 | 1.117 | >999 | 0.56 | 32.17 | 47 | 0.634 | -252.5 |
| 1451 | 36-40 | 7.38 | 1.085 | >999 | 0.47 | 31.59 | 47 | 0.627 | -251.8 |
| 1453 | SAMPLE | | | | | | | | |
| 1511 | 41-45 | 7.41 | 1.316 | >999 | 0.22 | 31.36 | 58 | 0.769 | -288.1 |
| 1513 | 41-45 | 7.36 | 1.366 | >999 | 0.32 | 31.82 | 60 | 0.789 | -286.8 |
| 1515 | 41-45 | 7.35 | 1.379 | >999 | 0.41 | 31.72 | 60 | 0.785 | -283.6 |
| 1517 | SAMPLE | | | | | | | | |
| | | | | | | | | | |
| 1539 | 46-50 | 7.47 | 1.475 | >999 | 0.33 | 31.70 | 65 | 0.861 | -409.6 |
| 1541 | 46-50 | 7.46 | 1.522 | >999 | 0.30 | 31.07 | 67 | 0.888 | -431.5 |
| 1543 | 46-50 | 7.44 | 1.544 | >999 | 0.28 | 30.66 | 69 | 0.909 | -445.3 |
| 1545 | ~~46-50~~ SAMPLE | | | | | | | | |
| | | | | | | | | | |
| 1608 | 61-65 | 7.56 | 1.950 | >999 | 0.38 | 30.21 | 93 | 1.235 | -420.2 |
| 1610 | 61-65 | 7.57 | 3.112 | >999 | 0.31 | 29.16 | 156 | 1.896 | -434.2 |
| 1612 | 61-65 | 7.52 | 3.843 | >999 | 0.27 | 28.52 | 190 | 2.368 | -436.6 |
| 1614 | SAMPLE | | | | | | | | |
| | | | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-22

Project Number: FR1681

Date: 6/23/09 / 6/24/09

| DPT Location | Sample Depth | pH std units | Conductivity µ S/cm | Turbidity NTUs | Diss. $O_2$ µg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1648 | 8-12 | 7.18 | 0.970 | >999 | 0.16 | 29.64 | 43 | 0.578 | -190.3 |
| 1650 | 8-12 | 7.13 | 0.948 | >999 | 0.22 | 29.03 | 43 | 0.572 | -186.9 |
| 1652 | 8-12 | 7.11 | 0.942 | >999 | 0.41 | 28.89 | 43 | 0.571 | -189.6 |
| 1654 | SAMPLE | | | | | | | | |
| 1702 | 16-20 | 7.20 | 1.024 | >999 | 0.51 | 28.61 | 46 | 0.610 | -184.0 |
| 1704 | 16-20 | 7.16 | 1.014 | >999 | 0.54 | 29.34 | 46 | 0.609 | -195.3 |
| 1706 | 16-20 | 7.15 | 0.999 | >999 | 0.38 | 28.86 | 45 | 0.604 | -201.7 |
| 1708 | SAMPLE | | | | | | | | |
| 1718 | 26-30 | 7.16 | 1.323 | >999 | 0.36 | 29.45 | 60 | 0.793 | -215.4 |
| 1720 | 26-30 | 7.09 | 1.317 | >999 | 0.59 | 29.18 | 60 | 0.792 | -212.8 |
| 1722 | 26-30 | 7.04 | 1.302 | >999 | 0.41 | 28.97 | 60 | 0.786 | -206.6 |
| 1724 | SAMPLE | | | | | | | | |
| 1739 | 36-40 | 7.33 | 1.227 | >999 | 0.27 | 30.09 | 55 | 0.731 | -235.9 |
| 1741 | 36-40 | 7.29 | 1.224 | >999 | 0.24 | 29.42 | 55 | 0.733 | -236.0 |
| 1743 | 36-40 | 7.26 | 1.209 | >999 | 0.23 | 28.88 | 55 | 0.731 | -229.0 |
| 1745 | SAMPLE | | | | | | | | |
| CONTINUE | DPT 6/24/09 | | | | | | | | |
| 753 | 41-45 | 7.09 | 1.130 | >999 | 0.30 | 25.84 | 55 | 0.730 | -242.8 |
| 755 | 41-45 | 7.10 | 1.166 | >999 | 0.28 | 25.88 | 57 | 0.746 | -250.9 |
| 757 | 41-45 | 7.09 | 1.177 | >999 | 0.27 | 25.91 | 57 | 0.753 | -252.6 |
| 759 | SAMPLE | | | | | | | | |
| 816 | 46-50 | 7.27 | 1.550 | >999 | 0.26 | 27.18 | 75 | 0.983 | -212.6 |
| 818 | 46-50 | 7.21 | 1.688 | >999 | 0.25 | 27.02 | 82 | 1.066 | -209.9 |
| 820 | 46-50 | 7.16 | 1.754 | >999 | 0.30 | 26.80 | 85 | 1.102 | -201.5 |
| 822 | SAMPLE | | | | | | | | |
| | | | | | | | | | |
| 845 | 61-65 | 7.45 | 2.791 | >999 | 0.41 | 27.58 | 136 | 1.727 | -259.9 |
| 847 | 61-65 | 7.44 | 2.775 | >999 | 0.42 | 27.89 | 135 | 1.711 | -268.5 |
| 849 | 61-65 | 7.44 | 2.665 | >999 | 0.45 | 27.94 | 128 | 1.624 | -277.2 |
| 851 | SAMPLE | | | | | | | | |
| 1723 | 71-75 | 7.52 | 3.675 | >1000 | 0.14 | 29.69 | 168 | 2.174 | -241.9 |
| 1725 | 71-75 | 7.55 | 3.358 | >1000 | 0.12 | 28.81 | 165 | 2.079 | -248.8 |
| 1727 | 71-75 | 7.52 | 3.933 | >1000 | 0.12 | 29.09 | 191 | 2.377 | -254.2 |

6/24/09

Note: Insert units if not provided on sheet.

SAMPLE @ 1729

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-23

Project Number: FR1681

Date: 6/24/09

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 952 | 8-12 | 7.22 | 0.792 | >999 | 0.47 | 31.87 | 34 | 0.454 | -184.2 |
| 954 | 8-12 | 7.19 | 0.767 | >999 | 0.23 | 31.49 | 33 | 0.444 | -187.3 |
| 956 | 8-12 | 7.18 | 0.741 | >999 | 0.22 | 30.53 | 32 | 0.435 | -190.0 |
| ~~SAMP~~ 958 | SAMPLE | | | | | | | | |
| 1005 | 16-20 | 7.39 | 0.765 | >999 | 0.43 | 30.44 | 33 | 0.450 | -212.1 |
| 1007 | 16-20 | 7.34 | 0.765 | 450 | 0.19 | 30.25 | 34 | 0.453 | -210.5 |
| 1009 | 16-20 | 7.32 | 0.770 | 400 | 0.20 | 30.38 | 34 | 0.454 | -217.2 |
| 1011 | SAMPLE | | | | | | | | |
| 1020 | 26-30 | 7.35 | 1.065 | >999 | 0.26 | 30.47 | 47 | 0.630 | -204.1 |
| 1022 | 26-30 | 7.30 | 1.079 | >999 | 0.20 | 30.35 | 48 | 0.636 | -207.9 |
| 1024 | 26-30 | 7.26 | 1.073 | >999 | 0.30 | 30.00 | 48 | 0.637 | -204.8 |
| 1026 | SAMPLE | | | | | ~~31.12~~ | | | |
| 1039 | 36-40 | 7.38 | 1.054 | >999 | 0.17 | 31.12 | 46 | 0.616 | -224.5 |
| 1041 | 36-40 | 7.33 | 1.084 | >999 | 0.17 | 31.47 | 47 | 0.628 | -228.0 |
| 1043 | 36-40 | 7.32 | 1.088 | >999 | 0.20 | 31.65 | 47 | 0.634 | -231.4 |
| 1045 | SAMPLE | | | | | | | | |
| 1150 | 41-45 | 7.28 | 1.322 | >999 | 0.31 | 33.03 | 56 | 0.749 | -233.4 |
| 1152 | 41-45 | 7.25 | 1.365 | >999 | 0.31 | 33.02 | 58 | 0.771 | -238.2 |
| 1154 | 41-45 | 7.22 | 1.382 | >999 | 0.43 | 32.84 | 59 | 0.782 | -239.8 |
| 1156 | SAMPLE | | | | | | | | |
| 1215 | 46-50 | 7.29 | 1.364 | >999 | 0.25 | 32.07 | 59 | 0.784 | -244.5 |
| 1217 | 46-50 | 7.26 | 1.386 | >999 | 0.34 | 32.44 | 60 | 0.789 | -246.9 |
| 1219 | 46-50 | 7.23 | 1.387 | >999 | 0.35 | 32.47 | 60 | 0.789 | -249.7 |
| 1221 | SAMPLE | | | | | | | | |
| 1243 | 61-65 | 7.41 | 4.493 | >999 | 0.24 | 28.66 | 222 | 2.737 | -251.1 |
| 1245 | 61-65 | 7.37 | 4.495 | >999 | 0.23 | 28.12 | 224 | 2.759 | -249.1 |
| 1247 | 61-65 | 7.32 | 4.506 | >999 | 0.24 | 28.05 | 224 | 2.761 | -250.5 |
| 1249 | SAMPLE | | | | | | | | |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-24

Project Number: FR1681

Date: 6/24/09

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1325 | 8-12 | 7.19 | 0.885 | >999 | 0.21 | 30.99 | 38 | 0.515 | -173.4 |
| 1327 | 8-12 | 7.12 | 0.846 | >999 | 0.16 | 30.33 | 37 | 0.497 | -172.5 |
| 1329 | 8-12 | 7.04 | 0.806 | >999 | 0.19 | 29.61 | 36 | 0.479 | -164.9 |
| 1331 | SAMPLE | | | | | | | | |
| 1355 | 16-20 | 7.88 | 0.519 | >999 | 0.20 | 28.97 | 23 | 0.312 | -236.3 |
| 1357 | 16-20 | 7.88 | 0.505 | >999 | 0.14 | 29.20 | 22 | 0.302 | -240.0 |
| 1359 | 16-20 | 7.87 | 0.507 | >1100 | 0.13 | 30.57 | 22 | 0.298 | -245.7 |
| 1401 | SAMPLE | | | | | | | | |
| 1416 | 26-30 | 7.38 | 0.864 | >999 | 0.37 | 30.51 | 38 | 0.507 | -215.3 |
| 1418 | 26-30 | 7.34 | 0.875 | >999 | 0.36 | 31.30 | 38 | 0.508 | -214.6 |
| 1420 | 26-30 | 7.30 | 0.876 | >999 | 0.35 | 31.38 | 38 | 0.508 | -211.8 |
| 1422 | SAMPLE | | | | | | | | |
| 1443 | 36-40 | 7.41 | 1.050 | >999 | 0.27 | 31.88 | 45 | 0.604 | -231.7 |
| 1445 | 36-40 | 7.39 | 1.044 | >999 | 0.25 | 30.74 | 47 | 0.613 | -227.9 |
| 1447 | 36-40 | 7.35 | 1.033 | >999 | 0.25 | 29.91 | 46 | 0.613 | -225.5 |
| 1449 | SAMPLE | ~~7.31~~ | ~~1.259~~ | ~~>999~~ | 0.23 | 32.11 | ~~54~~ | 0.723 | -220.7 |
| 1505 | 41-45 | 7.31 | 1.259 | >999 | 0.23 | 32.11 | 54 | 0.723 | -220.7 |
| 1507 | 41-45 | 7.28 | 1.292 | >999 | 0.24 | 32.44 | 55 | 0.736 | -223.7 |
| 1509 | 41-45 | 7.27 | 1.298 | >999 | 0.28 | 32.30 | 56 | 0.741 | -225.9 |
| 1511 | SAMPLE | | | | | | | | |
| 1528 | 46-50 | 7.37 | 1.254 | >999 | 0.19 | 33.05 | 52 | 0.698 | -238.9 |
| 1530 | 46-50 | 7.33 | 1.259 | >999 | 0.17 | 31.87 | 55 | 0.728 | -241.8 |
| 1532 | 46-50 | 7.30 | 1.266 | >999 | 0.16 | 31.50 | 55 | 0.733 | -242.1 |
| 1534 | SAMPLE | | | | | | | | |
| 1556 | 61-65 | 7.41 | 4.657 | >999 | 0.32 | 31.89 | 218 | 2.706 | -235.8 |
| 1558 | 61-65 | 7.41 | 4.859 | >999 | 0.24 | 31.39 | 228 | 2.822 | -237.9 |
| 1600 | 61-65 | 7.40 | 4.898 | >999 | 0.22 | 30.92 | 232 | 2.862 | -237.1 |
| 1602 | SAMPLE | | | | | | | | |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-25

Project Number: FR1681

Date: 6/25/09

| DPT Location | Sample Depth | pH std units | Conductivity ~ S/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 811 | 8-12 | 6.89 | 0.962 | 600 | 1.18 | 27.68 | 45 | 0.595 | -132.0 |
| 813 | 8-12 | 6.86 | 0.940 | 450 | 1.80 | 27.81 | 43 | 0.579 | -112.8 |
| 815 | 8-12 | 6.86 | 0.940 | 400 | 1.93 | 29.79 | 44 | 0.580 | -110.8 |
| 817 | SAMPLE | — | — | — | — | — | — | — | — |
| 825 | 16-20 | 7.46 | 0.765 | 7999 | 0.66 | 27.46 | 35 | 0.473 | -185.9 |
| 827 | 16-20 | 7.47 | 0.745 | >999 | 0.34 | 27.20 | 34 | 0.463 | -194.4 |
| 829 | 16-20 | 7.46 | 0.726 | 7999 | 0.31 | 27.12 | 34 | 0.453 | -194.8 |
| 831 | SAMPLE | — | — | — | — | — | — | — | — |
| 849 | 26-30 | 7.26 | 1.257 | >999 | 0.23 | 28.09 | 59 | 0.772 | -183.1 |
| 851 | 26-30 | 7.18 | 1.254 | >999 | 0.26 | 27.81 | 59 | 0.773 | -167.8 |
| 853 | 26-30 | 7.15 | 1.240 | >999 | 0.46 | 27.58 | 58 | 0.768 | -167.6 |
| 855 | SAMPLE | — | — | — | — | — | — | — | — |
| 910 | 36-40 | 7.36 | 1.254 | 7999 | 0.86 | 28.30 | 58 | 0.768 | -207.0 |
| 912 | 36-40 | 7.33 | 1.265 | >999 | 0.69 | 28.30 | 59 | 0.774 | -205.5 |
| 914 | 36-40 | 7.31 | 1.265 | 7999 | 0.62 | 28.26 | 59 | 0.774 | -205.0 |
| 916 | SAMPLE | — | — | — | — | — | — | — | — |
| 935 | 41-45 | 7.33 | 1.311 | 7999 | 0.58 | 29.47 | 60 | 0.789 | -210.9 |
| 937 | 41-45 | 7.30 | 1.317 | 7999 | 0.52 | 28.54 | 61 | 0.804 | -206.3 |
| 939 | 41-45 | 7.27 | 1.310 | 7999 | 0.57 | 27.98 | 61 | 0.806 | -199.7 |
| 941 | SAMPLE | — | — | — | — | — | — | — | — |
| 957 | 46-50 | 7.31 | 1.691 | 7999 | 0.40 | 30.01 | 77 | 1.008 | -207.9 |
| 959 | 46-50 | 7.27 | 1.735 | 7999 | 0.50 | 29.75 | 80 | 1.036 | -204.4 |
| 1001 | 46-50 | 7.25 | 1.744 | 7999 | 0.53 | 29.38 | 80 | 1.046 | -198.4 |
| 1003 | SAMPLE | — | — | — | — | — | — | — | — |
| 1030 | 61-65 | 7.43 | 4.665 | 7999 | 0.56 | 30.15 | 226 | 2.755 | -225.3 |
| 1032 | 61-65 | 7.44 | 4.851 | 7999 | 0.39 | 29.21 | 258 | 2.929 | -227.6 |
| 1034 | 61-65 | 7.46 | 4.864 | >999 | 0.46 | 28.48 | 242 | 2.969 | -226.9 |
| 1036 | SAMPLE | — | — | — | — | — | — | — | — |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-26

Project Number: FR1681

Date: 6/25/09

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1104 | 8-12 | 6.97 | 1.202 | >999 | 1.08 | 32.17 | 51 | 0.683 | -112.9 |
| 1106 | 8-12 | 6.93 | 1.137 | >999 | 0.74 | 31.20 | 49 | 0.658 | -117.6 |
| 1108 | 8-12 | 6.92 | 1.104 | >999 | 0.70 | 30.78 | 48 | 0.645 | -119.2 |
| 1110 | SAMPLE | — | — | — | — | — | — | — | → |
| 1204 | 16-20 | 7.52 | 0.730 | 1100 | 0.31 | 30.70 | 32 | 0.427 | -196.5 |
| 1206 | 16-20 | 7.50 | 0.709 | 750 | 0.27 | 30.44 | 31 | 0.418 | -185.5 |
| 1208 | 16-20 | 7.49 | 0.687 | 950 | 0.27 | 29.32 | 30 | 0.413 | -194.3 |
| 1210 | SAMPLE | — | — | — | — | — | — | — | → |
| 1223 | 26-30 | 7.07 | 1.361 | >999 | 0.37 | 29.88 | 61 | 0.807 | -163.2 |
| 1225 | 26-30 | 7.02 | 1.350 | >999 | 0.51 | 29.86 | 61 | 0.803 | -161.8 |
| 1227 | 26-30 | 7.00 | 1.344 | >999 | 0.48 | 29.69 | 61 | 0.801 | -157.9 |
| 1229 | SAMPLE | — | — | — | — | — | — | — | → |
| 1251 | 36-40 | 7.32 | 1.191 | >999 | 0.40 | 31.76 | 52 | 0.689 | -215.2 |
| 1253 | 36-40 | 7.30 | 1.201 | >999 | 0.46 | 31.61 | 52 | 0.694 | -215.1 |
| 1255 | 36-40 | 7.28 | 1.200 | 7999 | 0.43 | 31.35 | 52 | 0.696 | -213.8 |
| 1257 | SAMPLE | — | — | — | — | — | — | — | → |
| 1315 | 41-45 | 7.31 | 1.349 | 7999 | 0.35 | 31.99 | 59 | 0.777 | -225.1 |
| 1317 | 41-45 | 7.29 | 1.374 | 7999 | 0.36 | 31.56 | 60 | 0794 | -225.3 |
| 1319 | 41-45 | 7.28 | 1.387 | 7999 | 0.40 | 31.55 | 61 | 0.801 | -224.1 |
| 1321 | SAMPLE | — | — | — | — | — | — | — | → |
| 1337 | 46-50 | 7.25 | 1.696 | >999 | 0.33 | 31.54 | 75 | 0.989 | -198.4 |
| 1339 | 46-50 | 7.21 | 1.758 | >999 | 0.32 | 31.70 | 77 | 1.014 | -196.3 |
| 1341 | 4650 | 7.19 | 1.761 | 7999 | 0.37 | 31.46 | 78 | 1.019 | -192.0 |
| 1343 | SAMPLE | — | — | — | — | — | — | — | → |
| 1403 | 61-65 | 7.38 | 4.108 | 7999 | 0.33 | 30.27 | 202 | 2.523 | -238.5 |
| 1405 | 61-65 | 7.42 | 4.521 | >999 | 0.34 | 29.02 | 223 | 2.734 | -242.0 |
| 1407 | 61-65 | 7.39 | 4.661 | >999 | 0.32 | 28.65 | 230 | 2.831 | -239.9 |
| 1409 | SAMPLE | — | — | — | — | — | — | — | → |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-27

Project Number: FR1681

Date: 6/25/09

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1446 | 8-12 | 6.69 | 0.697 | >999 | 0.47 | 30.65 | 30 | 409 | -124.9 |
| 1448 | 8-12 | 6.70 | 0.658 | >999 | 0.49 | 30.43 | 28 | 386 | -122.4 |
| 1450 | 8-12 | 6.71 | 0.642 | >999 | 0.47 | 30.08 | 28 | 380 | -125.5 |
| 1452 | SAMPLE | — | — | — | — | — | — | — | → |
| 1502 | 16-20 | 8.34 | 0.336 | >999 | 0.71 | 27.20 | 15 | 207 | -240.2 |
| 1504 | 16-20 | 8.03 | 0.316 | >999 | 0.58 | 27.27 | 14 | 196 | -224.7 |
| 1506 | 16-20 | 8.02 | 0.304 | >999 | 0.54 | 28.05 | 13 | 185 | -197.6 |
| 1508 | SAMPLE | — | — | — | — | — | — | — | → |
| 1521 | 26-30 | 7.74 | 0.606 | >999 | 0.33 | 31.07 | 26 | 358 | -238.3 |
| 1523 | 26-30 | 7.73 | 0.609 | >999 | 0.30 | 30.35 | 26 | 359 | -234.5 |
| 1525 | 26-30 | 7.74 | 0.606 | >999 | 0.28 | 30.39 | 26 | 357 | -234.3 |
| 1527 | SAMPLE | — | — | — | — | — | — | — | → |
| 1541 | 36-40 | 7.21 | 1.139 | >999 | 0.46 | 29.07 | 52 | 0.687 | -176.2 |
| 1543 | 36-40 | 7.20 | 1.131 | >999 | 0.45 | 28.88 | 52 | 0.685 | -177.4 |
| 1545 | 36-40 | 7.19 | 1.122 | >999 | 0.43 | 28.69 | 51 | 0682 | -178.5 |
| 1547 | SAMPLE | — | — | — | — | — | — | — | → |
| 1612 | 41-45 | 7.26 | 1.255 | >999 | 0.44 | 28.32 | 58 | 0.768 | -190.9 |
| 1614 | 41-45 | 7.25 | 1.259 | >999 | 0.42 | 28.05 | 59 | 0.774 | -190.4 |
| 1616 | 41-45 | 7.25 | 1.256 | >999 | 0.36 | 27.77 | 59 | 0.775 | -190.9 |
| 1618 | SAMPLE | — | — | — | — | — | — | — | → |
| 1636 | 46-50 | 7.27 | 1.128 | >999 | 0.38 | 28.48 | 52 | 0.691 | -193.4 |
| 1638 | 46-50 | 7.23 | 1.150 | >999 | 0.37 | 28.23 | 53 | 0.704 | -188.6 |
| 1640 | 46-50 | 7.21 | 1.148 | >999 | 0.38 | 27.99 | 53 | 0.706 | -188.7 |
| 1642 | SAMPLE | — | — | — | — | — | — | — | → |
| 1658 | 61-65 | 7.57 | 3.091 | >999 | 0.82 | 28.65 | 152 | 1.877 | -198.3 |
| 1700 | 61-65 | 7.54 | 3.679 | >999 | 0.39 | 27.84 | 185 | 2.317 | -238.7 |
| 1702 | 61-65 | 7.48 | 4.256 | >999 | 0.37 | 27.50 | 216 | 2.646 | -239.3 |
| 1704 | SAMPLE | — | — | — | — | — | — | — | → |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-28

Project Number: FR1681

Date: 6/26/09

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 718 | 8-12 | 6.64 | 0.615 | >999 | 0.48 | 25.76 | 29 | 0.393 | -146.0 |
| 720 | 8-12 | 6.70 | 0.600 | >999 | 0.50 | 25.71 | 29 | 0.384 | -147.3 |
| 722 | 8-12 | 6.73 | 0.592 | >999 | 0.61 | 25.67 | 28 | 0.379 | -141.1 |
| 724 | SAMPLE | | | | | | | | |
| 733 | 16-20 | 7.16 | 0.684 | >999 | 0.65 | 26.28 | 32 | 0.435 | -142.6 |
| 735 | 16-20 | 7.20 | 0.680 | 800 | 0.35 | 26.14 | 32 | 0.433 | -164.7 |
| 737 | 16-20 | 7.23 | 0.674 | 750 | 0.42 | 26.02 | 32 | 0.429 | -162.3 |
| 739 | SAMPLE | | | | | | | | |
| 751 | 26-30 | 7.14 | 1.185 | >900 | 0.48 | 26.62 | 57 | 0.750 | -173.0 |
| 753 | 26-30 | 7.09 | 1.200 | >900 | 0.51 | 26.51 | 58 | 0.758 | -168.7 |
| 755 | 26-30 | 7.04 | 1.196 | >900 | 0.65 | 26.33 | 58 | 0.758 | -161.1 |
| 757 | SAMPLE | | | | | | | | |
| 811 | 36-40 | 7.65 | 0.689 | >999 | 0.34 | 28.60 | 31 | 0.423 | -220.4 |
| 813 | 36-40 | 7.65 | 0.685 | >999 | 0.29 | 28.10 | 31 | 0.421 | -231.2 |
| 815 | 36-40 | 7.67 | 0.756 | >999 | 0.30 | 27.99 | 35 | 0.469 | -237.0 |
| 817 | SAMPLE | | | | | | | | |
| 838 | 41-45 | 7.31 | 1.251 | >999 | 0.55 | 28.02 | 59 | 0.772 | -199.6 |
| 840 | 41-45 | 7.30 | 1.272 | >999 | 0.46 | 27.98 | 59 | 0.783 | -203.9 |
| 842 | 41-45 | 7.29 | 1.277 | >999 | 0.42 | 27.86 | 60 | 0.788 | -204.1 |
| 844 | SAMPLE | | | | | | | | |
| 900 | 46-50 | 7.22 | 1.626 | >999 | 0.60 | 27.85 | 77 | 1.002 | -178.3 |
| 902 | 46-50 | 7.20 | 1.645 | >999 | 0.51 | 27.80 | 78 | 1.013 | -173.6 |
| 904 | 46-50 | 7.17 | 1.648 | >999 | 0.41 | 27.80 | 78 | 1.016 | -167.7 |
| 906 | SAMPLE | | | | | | | | |
| 925 | 61-65 | 7.39 | 4.611 | >999 | 0.79 | 27.62 | 234 | 2.853 | -202.0 |
| 927 | 61-65 | 7.36 | 4.650 | >999 | 0.65 | 27.18 | 237 | 2.904 | -200.0 |
| 929 | 61-65 | 7.34 | 4.648 | >999 | 0.57 | 26.95 | 238 | 2.914 | -194.8 |
| 931 | SAMPLE | | | | | | | | |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-29

Project Number: FR1681

Date: 6/26/09

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1003 | 8-12 | 7.42 | 0.847 | >999 | 1.05 | 28.41 | 39 | 0.515 | -152.6 |
| 1005 | 8-12 | 7.38 | 0.822 | >999 | 2.15 | 28.17 | 38 | 0.503 | -136.6 |
| 1007 | 8-12 | 7.37 | 0.804 | >999 | 3.08 | 27.96 | 37 | 0.495 | -118.7 |
| 1009 | SAMPLE | — | — | — | — | — | — | — | → |
| 1017 | 16-20 | 7.56 | 0.660 | >999 | 0.41 | 27.78 | 30 | 0.407 | -198.7 |
| 1019 | 16-20 | 7.56 | 0.647 | 950 | 0.42 | 27.65 | 30 | 0.401 | -205.6 |
| 1021 | 16-20 | 7.56 | 0.638 | 1000 | 0.39 | 27.34 | 29 | 0.397 | -208.6 |
| 1023 | SAMPLE | — | — | — | — | — | — | — | → |
| 1035 | 26-30 | 7.16 | 1.241 | >999 | 0.45 | 27.51 | 58 | 0.769 | -154.8 |
| 1037 | 26-30 | 7.13 | 1.244 | >999 | 0.44 | 27.67 | 58 | 0.769 | -154.1 |
| 1039 | 26-30 | 7.11 | 1.243 | >999 | 0.55 | 27.71 | 58 | 0.768 | -153.1 |
| 1041 | SAMPLE | — | — | — | — | — | — | — | → |
| 1055 | 36-40 | 7.37 | 0.945 | >999 | 0.39 | 28.69 | 43 | 0.574 | -195.2 |
| 1057 | 36-40 | 7.34 | 0.943 | >999 | 0.36 | 28.53 | 43 | 0.574 | -192.6 |
| 1059 | 36-40 | 7.33 | 0.937 | >999 | 0.38 | 28.30 | 43 | 0.572 | -191.7 |
| 1101 | SAMPLE | — | — | — | — | — | — | — | → |
| 1208 | 41-45 | 7.33 | 1.281 | >999 | 0.36 | 30.00 | 58 | 0.761 | -200.8 |
| 1210 | 41-45 | 7.32 | 1.282 | >999 | 0.32 | 30.00 | 58 | 0.761 | -200.1 |
| 1212 | 41-45 | 7.30 | 1.273 | >999 | 0.33 | 29.74 | 57 | 0.759 | -195.4 |
| 1214 | SAMPLE | — | — | — | — | — | — | — | → |
| 1233 | 46-50 | 7.29 | 1.405 | >999 | 0.41 | 31.34 | 62 | 0.816 | -218.5 |
| 1235 | 46-50 | 7.26 | 1.464 | >999 | 0.40 | 31.25 | 65 | 0.850 | -219.0 |
| 1237 | 46-50 | 7.25 | 1.487 | >999 | 0.41 | 30.85 | 66 | 0.872 | -217.6 |
| 1239 | SAMPLE | — | — | — | — | — | — | — | → |
| 1259 | 61-65 | 7.37 | 4.656 | >999 | 0.18 | 29.83 | 225 | 2.774 | -216.9 |
| 1301 | 61-65 | 7.39 | 4.742 | >999 | 0.18 | 29.71 | 230 | 2.830 | -222.7 |
| 1303 | 61-65 | 7.39 | 4.764 | >999 | 0.18 | 29.53 | 232 | 2.851 | -225.1 |
| 1305 | SAMPLE | — | — | — | — | — | — | — | → |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-30

Project Number: FR1681

Date: 6/26/09

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1434 | 8-12 | 7.02 | 0.508 | >999 | 0.27 | 30.61 | 34 | 0.463 | -108.4 |
| 1436 | 8-12 | 6.98 | 0.730 | >999 | 0.24 | 30.80 | 32 | 0.428 | -119.4 |
| 1438 | 8-12 | 6.96 | 0.683 | >999 | 0.32 | 30.10 | 30 | 0.403 | -128.5 |
| 1440 | SAMPLE | | | | | | | | |
| 1451 | 16-20 | 7.40 | 0.631 | >999 | 0.29 | 29.42 | 28 | 0.378 | -176.2 |
| 1453 | 16-20 | 7.40 | 0.620 | ~~>999~~ 980 | 0.22 | 29.41 | 27 | 0.372 | -194.6 |
| 1455 | 16-20 | 7.40 | 0.621 | 900 | 0.20 | 29.53 | 27 | 0.372 | -199.1 |
| 1457 | SAMPLE | | | | | | | | |
| 1510 | 26-30 | 7.53 | 0.687 | >999 | 0.26 | 30.56 | 30 | 0.404 | -223.5 |
| 1512 | 26-30 | 7.49 | 0.683 | >999 | 0.23 | 30.21 | 30 | 0.404 | -226.0 |
| 1514 | 26-30 | 7.48 | 0.676 | >999 | 0.23 | 29.54 | 30 | 0.402 | -226.5 |
| 1516 | SAMPLE | | | | | | | | |
| 1528 | 36-40 | 7.34 | 1.056 | >999 | 0.28 | 31.30 | 46 | 0.614 | -209.3 |
| 1530 | 36-40 | 7.34 | 1.066 | >999 | 0.25 | 30.83 | 47 | 0.624 | -212.3 |
| 1532 | 36-40 | 7.32 | 1.048 | >999 | 0.27 | 30.83 | 46 | 0.618 | -208.3 |
| 1534 | SAMPLE | | | | | | | | |
| 1555 | 41-45 | 7.25 | 1.267 | >999 | 0.32 | 31.22 | 56 | 0.738 | -185.7 |
| 1557 | 41-45 | 7.23 | 1.264 | >999 | 0.31 | 29.95 | 57 | 0.752 | -185.0 |
| 1559 | 41-45 | 7.22 | 1.246 | >999 | 0.32 | 28.15 | 57 | 0.754 | -183.0 |
| 1601 | SAMPLE | | | | | | | | |
| 1615 | 46-50 | 7.15 | 1.457 | >999 | 0.40 | 30.34 | 66 | 0.863 | -168.8 |
| 1617 | 46-50 | 7.13 | 1.504 | >999 | 0.47 | 30.67 | 67 | 0.883 | -171.0 |
| 1619 | 46-50 | 7.12 | 1.528 | >999 | 0.43 | 31.00 | 68 | 0.892 | -171.0 |
| 1621 | SAMPLE | | | | | | | | |
| 1637 | 61-65 | 7.31 | 4.453 | >999 | 0.30 | 29.78 | 218 | 2.663 | -212.4 |
| 1639 | 61-65 | 7.33 | 4.616 | >999 | 0.29 | 29.05 | 227 | 2.788 | -212.3 |
| 1641 | 61-65 | 7.33 | 4.660 | >999 | 0.29 | 28.44 | 232 | 2.844 | -208.3 |
| 1643 | SAMPLE | | | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0031

Project Number: FR1681

Date: 7/16/09

| DPT Location | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0846 | 8-12 | 6.87 | 0.968 | >999 | 1.43 | 28.13 | 0.44 | 0.585 | -51.2 |
| 0848 | 8-12 | 6.94 | 0.947 | >999 | 1.54 | 27.94 | 0.44 | 0.584 | -61.7 |
| 0850 | 8-12 | 6.97 | 0.949 | >999 | 1.66 | 27.95 | 0.44 | 0.584 | -62.2 |
| 0856 | 16-20 | 7.40 | 0.798 | >999 | 0.68 | 28.64 | 0.36 | 0.488 | -121.5 |
| 0858 | 16-20 | 7.37 | 0.795 | >999 | 0.52 | 28.18 | 0.36 | 0.485 | -129.7 |
| 0900 | 16-20 | 7.35 | 0.783 | >999 | 0.46 | 27.79 | 0.36 | 0.482 | -134.0 |
| 0906 | 26-30 | 7.29 | 1.232 | >999 | 1.50 | 28.54 | 0.57 | 0.750 | -141.4 |
| 0908 | 26-30 | 7.26 | 1.238 | >999 | 0.86 | 28.32 | 0.58 | 0.760 | -148.3 |
| 0910 | 26-30 | 7.21 | 1.243 | >999 | 0.58 | 27.78 | 0.59 | 0.771 | -144.3 |
| 0924 | 36-40 | 7.57 | 0.972 | >999 | 1.16 | 29.26 | 0.44 | 0.586 | -165.9 |
| 0926 | 36-40 | 7.49 | 0.964 | >999 | 0.43 | 28.72 | 0.44 | 0.586 | -174.3 |
| 0928 | 36-40 | 7.46 | 0.960 | >999 | 0.36 | 28.40 | 0.44 | 0.586 | -177.3 |
| 0954 | 41-45 | 7.37 | 1.190 | >999 | 1.05 | 29.46 | 0.54 | 0.717 | -183.6 |
| 0956 | 41-45 | 7.36 | 1.199 | >999 | 0.76 | 29.16 | 0.55 | 0.726 | -183.0 |
| 0958 | 41-45 | 7.35 | 1.203 | >999 | 0.54 | 28.86 | 0.55 | 0.728 | -182.3 |
| 1014 | 46-50 | 7.36 | 1.460 | >999 | 1.14 | 30.41 | 0.67 | 0.874 | -134.5 |
| 1016 | 46-50 | 7.33 | 1.488 | >999 | 0.58 | 29.20 | 0.71 | 0.933 | -134.2 |
| 1018 | 46-50 | 7.25 | 1.513 | >999 | 0.28 | 27.72 | 0.72 | 0.935 | -132.1 |
| 1032 | 61-65 | 7.40 | 4.372 | >999 | 0.32 | 29.61 | 2.16 | 2.625 | -177.0 |
| 1034 | 61-65 | 7.41 | 4.437 | >999 | 0.27 | 29.00 | 2.17 | 2.678 | -180.0 |
| 1036 | 61-65 | 7.41 | 4.453 | >999 | 0.26 | 28.46 | 2.20 | 2.710 | -180.9 |

Note: Insert units if not provided on sheet. ① >999 indicates Turbidity is out of measurable range.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0032

Project Number: FR16581

Date: 7/16/09

| ~~DPT~~ Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1224 | 8-12 | 9.63 | 0.502 | >999 | 0.43 | 29.47 | 0.21 | 0.302 | -213.0 |
| 1226 | 8-12 | 9.66 | 0.454 | >999 | 0.28 | 29.60 | 0.19 | 0.270 | -220.6 |
| 1228 | 8-12 | 9.70 | 0.438 | >999 | 0.19 | 29.46 | 0.19 | 0.259 | -228.7 |
| 1242 | 16-20 | 8.24 | 0.537 | >999 | 0.43 | 28.21 | 0.25 | 0.338 | -130.9 |
| 1244 | 16-20 | 8.17 | 0.572 | >999 | 0.35 | 28.12 | 0.26 | 0.359 | -136.2 |
| 1246 | 16-20 | 8.06 | 0.595 | >999 | 0.30 | 28.10 | 0.27 | 0.372 | -138.6 |
| 1252 | 26-30 | 8.03 | 0.928 | >999 | 0.96 | 29.81 | 0.46 | 0.590 | -113.2 |
| 1254 | 26-30 | 7.66 | 1.045 | >999 | 0.47 | 28.74 | 0.48 | 0.649 | -121.0 |
| 1256 | 26-30 | 7.50 | 1.104 | >999 | 0.31 | 27.92 | 0.52 | 0.682 | -127.5 |
| 1308 | 36-40 | 7.56 | 0.826 | >999 | 0.45 | 29.85 | 0.37 | 0.493 | -165.0 |
| 1310 | 36-40 | 7.54 | 0.821 | >999 | 0.33 | 29.20 | 0.37 | 0.494 | -179.4 |
| 1312 | 36-40 | 7.52 | 0.819 | >999 | 0.31 | 28.87 | 0.37 | 0.496 | -183.4 |
| 1332 | 41-45 | 7.81 | 0.948 | >999 | 0.52 | 30.16 | 0.44 | 0.581 | -162.8 |
| 1334 | 41-45 | 7.70 | 1.060 | >999 | 0.35 | 29.44 | 0.46 | 0.620 | -168.5 |
| 1336 | 41-45 | 7.58 | 1.099 | >999 | 0.31 | 28.66 | 0.50 | 0.663 | -168.5 |
| 1352 | 46-50 | 7.60 | 1.128 | >999 | 0.52 | 29.65 | 0.52 | 0.682 | -148.9 |
| 1354 | 46-50 | 7.55 | 1.180 | >999 | 0.38 | 29.24 | 0.53 | 0.700 | -156.4 |
| 1356 | 46-50 | 7.49 | 1.200 | >999 | 0.33 | 28.91 | 0.55 | 0.721 | -162.8 |
| 1412 | 61-65 | 8.32 | 4.115 | >999 | 0.28 | 28.34 | 2.05 | 2.548 | -194.7 |
| 1414 | 61-65 | 8.17 | 4.192 | >999 | 0.26 | 28.00 | 2.09 | 2.586 | -196.0 |
| 1416 | 61-65 | 8.09 | 4.230 | >999 | 0.27 | 27.82 | 2.12 | 2.624 | -197.8 |

Note: Insert units if not provided on sheet.

① >999 indicates Turbidity is out of measurable range.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0033

Project Number: FR1681

Date: 7/16/09

| ~~DPT~~ Time HRD Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity (1) NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 1454 | 8-12 | 7.40 | 1.153 | >999 | 1.24 | 32.89 | 0.49 | 0.652 | -121.9 |
| 1456 | 8-12 | 7.37 | 1.126 | >999 | 0.97 | 32.27 | 0.48 | 0.640 | -126.5 |
| 1458 | 8-12 | 7.34 | 1.114 | >999 | 0.76 | 32.11 | 0.48 | 0.637 | -126.7 |
| | | | | | | | | | |
| 1508 | 16-20 | 7.58 | 0.825 | >999 | 1.92 | 33.32 | 0.35 | 0.468 | -140.1 |
| 1510 | 16-20 | 7.56 | 0.817 | >999 | 1.04 | 32.27 | 0.35 | 0.471 | -150.1 |
| 1512 | 16-20 | 7.54 | 0.808 | >999 | 0.39 | 31.74 | 0.35 | 0.469 | -154.5 |
| | | | | | | | | | |
| 1614 | 26-30 | 7.47 | 1.207 | >999 | 1.15 | 31.58 | 0.52 | 0.697 | -150.6 |
| 1616 | 26-30 | 7.37 | 1.184 | >999 | 0.71 | 30.15 | 0.53 | 0.700 | -161.0 |
| 1618 | 26-30 | 7.33 | 1.192 | >999 | 0.40 | 29.75 | 0.54 | 0.710 | -165.2 |
| | | | | | | | | | |
| **1628** | 36-40 | **7.47** | **0.912** | **>999** | **0.19** | **29.44** | **0.41** | **0.547** | **-202.6** |
| **1630** | 36-40 | **7.47** | **0.912** | **>999** | **0.18** | **29.29** | **0.41** | **0.548** | **-202.2** |
| **1632** | 36-40 | **7.47** | **0.910** | **>999** | **0.18** | **29.12** | **0.41** | **0.548** | **-201.1** |
| | | | | | | | | | |
| 1656 | 41-45 | 7.57 | 1.218 | >999 | 1.43 | 33.21 | 0.52 | 0.689 | -164.2 |
| 1658 | 41-45 | 7.53 | 1.215 | >999 | 0.60 | 31.23 | 0.53 | 0.705 | -175.1 |
| 1700 | 41-45 | 7.47 | 1.208 | >999 | 0.39 | 30.92 | 0.53 | 0.706 | -178.4 |
| | | | | | | | | | |
| 1714 | 46-50 | 7.38 | 1.539 | >999 | 0.95 | 31.69 | 0.68 | 0.889 | -155.3 |
| 1716 | 46-50 | 7.35 | 1.544 | >999 | 0.63 | 31.19 | 0.68 | 0.899 | -159.4 |
| 1718 | 46-50 | 7.35 | 1.547 | >999 | 0.46 | 31.09 | 0.69 | 0.902 | -160.2 |
| | | | | | | | | | |
| 1730 | 61-65 | 7.38 | 4.216 | >999 | 1.26 | 32.54 | 1.98 | 2.483 | -179.2 |
| 1732 | 61-65 | 7.39 | 4.383 | >999 | 0.52 | 31.99 | 2.04 | 2.542 | -191.4 |
| 1734 | 61-65 | 7.41 | 4.450 | >999 | 0.29 | 31.50 | 2.09 | 2.600 | -198.4 |
| | | | | | | | | | |
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Note: Insert units if not provided on sheet. (1) >999 indicates turbidity is out of measureable range.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT 0034

Project Number: FR1618

Date: 7/17/09

| | DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|---|
| 0755 | 0034 | 8-12 | 6.65 | 0.805 | — | 0.55 | 27.00 | 0.37 | 0.492 | -96.4 |
| 0757 | | | 6.74 | 0.784 | — | 0.49 | 27.64 | 0.36 | 0.482 | -57.5 |
| 0759 | | | 6.78 | 0.776 | — | 0.47 | 27.75 | 0.36 | 0.487 | -66.1 |
| | collected sample @ 0759 | | | | | | | | | |
| 807 | 0034 | 16-20 | 7.17 | 1.232 | — | 0.79 | 28.86 | 0.56 | 0.740 | -138.5 |
| 809 | | | 7.16 | 1.206 | — | 0.37 | 28.38 | 0.55 | 0.731 | -132.7 |
| 0811 | | | 7.15 | 1.178 | — | 0.30 | 27.80 | 0.29 | 0.724 | -137.1 |
| | collected sample @ 0811 | | | | | | | | | |
| 0822 | 0034 | 26-30 | 7.16 | 1.922 | — | 0.59 | 28.17 | 0.91 | 1.180 | -152.2 |
| 0824 | | | 7.13 | 1.917 | — | 0.30 | 27.64 | 0.92 | 1.184 | -142.2 |
| 0826 | | | 7.10 | 1.901 | — | 0.27 | 27.45 | 0.91 | 1.89 | -137.0 |
| | collected sample @ 0826 | | | | | | | | | |
| 0840 | 0034 | 36-40 | 7.42 | 1.179 | — | 0.85 | 29.96 | 0.53 | 0.703 | -150.9 |
| 0842 | | | 7.32 | 1.167 | — | 0.38 | 29.15 | 0.53 | 0.702 | -162.4 |
| 0844 | | | 7.31 | 1.161 | — | 0.25 | 28.87 | 0.53 | 0.703 | -167.4 |
| | collected sample @ 0844 | | | | | | | | | |
| 0910 | 0034 | 41-45 | 7.40 | 1.392 | — | 0.70 | 30.24 | 0.63 | 0.828 | -161.1 |
| 0912 | | | 7.30 | 1.407 | — | 0.35 | 29.51 | 0.64 | 0.846 | -162.5 |
| 0914 | | | 7.27 | 1.417 | — | 0.22 | 29.60 | 0.65 | 0.855 | -160.5 |
| | collected sample @ 0914 | | | | | | | | | |
| 0929 | 0034 | 46-50 | 7.59 | 1.428 | — | 0.95 | 30.47 | 0.64 | 0.849 | -161.0 |
| 0931 | | | 7.37 | 1.522 | — | 0.37 | 29.90 | 0.69 | 0.911 | -172.8 |
| 0933 | | | 7.32 | 1.557 | — | 0.23 | 29.34 | 0.71 | 0.928 | -169.2 |
| | collected sample @ 0933 | | | | | | | | | |
| 0949 | 0034 | 61-65 | 7.40 | 4.845 | — | 0.62 | 30.70 | 2.34 | 2.890 | -177.9 |
| 0951 | | | 7.36 | 4.946 | — | 0.31 | 29.79 | 2.43 | 2.966 | -117.0 |
| 0953 | | | 7.37 | 4.974 | — | 0.24 | 29.31 | 2.44 | 2.996 | -191.9 |

Note: Insert units if not provided on sheet.

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collected sample @ 0953

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0035

Project Number: FR1681

Date: 11/6/09

| Time DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity (1) NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1040 | 8-12 | 11.90 | 2.634 | >999 | 0.82 | 28.79 | 1.28 | 1.634 | -263.9 |
| 1042 | 8-12 | 11.94 | 2.873 | >999 | 0.43 | 28.51 | 1.35 | 1.734 | -271.8 |
| 1044 | 8-12 | 12.01 | 2.944 | >999 | 0.25 | 28.26 | 1.40 | 1.782 | -275.6 |
| 1054 | 16-20 | 9.62 | 0.515 | >999 | 0.22 | 28.71 | 0.25 | 0.365 | -106.8 |
| 1056 | 16-20 | 9.15 | 0.617 | >999 | 0.53 | 27.91 | 0.29 | 0.388 | -110.8 |
| 1058 | 16-20 | 8.87 | 0.429 | >999 | 0.37 | 27.36 | 0.33 | 0.455 | -127.9 |
| 1104 | 26-30 | 8.47 | 0.589 | >999 | 0.78 | 29.04 | 0.28 | 0.389 | -151.7 |
| 1106 | 26-30 | 8.20 | 0.683 | >999 | 0.46 | 27.71 | 0.32 | 0.442 | -153.6 |
| 1108 | 26-30 | 7.99 | 0.745 | >999 | 0.29 | 27.34 | 0.35 | 0.472 | -153.9 |
| 1212 | 36-40 | 7.86 | 0.924 | >999 | 0.70 | 28.96 | 0.43 | 0.584 | -153.5 |
| 1214 | 36-40 | 7.64 | 0.992 | >999 | 0.48 | 28.27 | 0.45 | 0.604 | -153.0 |
| 1216 | 36-40 | 7.56 | 1.005 | >999 | 0.41 | 28.03 | 0.46 | 0.615 | -154.0 |
| 1226 | 41-45 | 7.79 | 1.094 | >999 | 0.52 | 29.32 | 0.51 | 0.682 | -148.0 |
| 1228 | 41-45 | 7.72 | 1.152 | >999 | 0.31 | 28.21 | 0.54 | 0.718 | -154.8 |
| 1230 | 41-45 | 7.61 | 1.185 | >999 | 0.22 | 28.08 | 0.55 | 0.734 | -158.6 |
| 1242 | 46-50 | 8.24 | 0.923 | >999 | 0.99 | 29.43 | 0.44 | 0.573 | -126.0 |
| 1244 | 46-50 | 7.73 | 1.137 | >999 | 0.25 | 28.73 | 0.54 | 0.706 | -127.6 |
| 1246 | 46-50 | 7.60 | 1.190 | >999 | 0.22 | 27.73 | 0.55 | 0.732 | -126.7 |
| 1308 | 61-65 | 7.92 | 4.805 | >999 | 0.20 | 27.99 | 2.7 | 2.972 | -149.5 |
| 1310 | 61-65 | 7.86 | 4.823 | >999 | 0.20 | 27.57 | 2.5 | 2.992 | -159.6 |
| 1312 | 61-65 | 7.80 | 4.825 | >999 | 0.19 | 27.39 | 2.4 | 3.001 | -166.6 |

Note: Insert units if not provided on sheet. (1) >999 indicates Turbidity is out of measurable range.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0036

Project Number: FR1681

Date: 7/17/09

| DPT Location (Time / FRB) | Sample Depth | pH std units | Conductivity mS/cm | Turbidity (1) NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1402 | 8-12 | 10.96 | 0.932 | >999 | 0.90 | 34.35 | 0.33 | 0.491 | -336.7 |
| 1404 | 8-12 | 10.95 | 0.683 | >999 | 0.38 | 33.87 | 0.30 | 0.403 | -334.4 |
| 1406 | 8-12 | 10.92 | 0.609 | >999 | 0.20 | 33.29 | 0.27 | 0.362 | -328.6 |
| 1412 | 16-20 | 8.89 | 0.671 | >999 | 0.75 | 32.39 | 0.30 | 0.397 | -66.9 |
| 1414 | 16-20 | 8.79 | 0.708 | >999 | 0.35 | 30.24 | 0.31 | 0.422 | -67.9 |
| 1416 | 16-20 | 8.68 | 0.716 | >999 | 0.24 | 29.20 | 0.32 | 0.434 | -73.0 |
| 1428 | 26-30 | 7.76 | 1.099 | >999 | 0.67 | 28.75 | 0.51 | 0.672 | -146.3 |
| 1430 | 26-30 | 7.68 | 1.119 | >999 | 0.40 | 28.49 | 0.52 | 0.685 | -142.2 |
| 1432 | 26-30 | 7.63 | 1.128 | >999 | 0.36 | 28.17 | 0.52 | 0.695 | -141.1 |
| 1442 | 36-40 | 7.83 | 1.069 | >999 | 0.70 | 31.23 | 0.47 | 0.630 | -143.2 |
| 1444 | 36-40 | 7.78 | 1.074 | >999 | 0.34 | 30.35 | 0.47 | 0.635 | -151.6 |
| 1446 | 36-40 | 7.71 | 1.088 | >999 | 0.21 | 30.28 | 0.48 | 0.645 | -158.4 |
| 1508 | 41-45 | 10.44 | 0.942 | >999 | 1.87 | 33.57 | 0.39 | 0.560 | -258.4 |
| 1510 | 41-45 | 10.55 | 0.854 | >999 | 0.59 | 31.51 | 0.35 | 0.463 | -204.7 |
| 1512 | 41-45 | 10.17 | 0.767 | >999 | 0.46 | 30.84 | 0.32 | 0.433 | -178.0 |
| 1524 | 46-50 | 8.84 | 0.890 | >999 | 1.44 | 32.10 | 0.41 | 0.558 | -68.6 |
| 1526 | 46-50 | 8.50 | 0.984 | >999 | 0.66 | 31.20 | 0.44 | 0.599 | -73.5 |
| 1528 | 46-50 | 8.27 | 1.058 | >999 | 0.36 | 30.67 | 0.48 | 0.653 | -86.6 |
| | | QAB | | | | | | | |
| | 61-65 | 9.00 | 4.448 | >999 | 0.32 | 32.55 | 2.11 | 2.602 | -161.3 |
| | 61-65 | 8.76 | 4.546 | >999 | 0.22 | 31.03 | 2.15 | 2.676 | -157.7 |
| | 61-65 | 8.63 | 4.602 | >999 | 0.18 | 30.72 | 2.19 | 2.717 | -153.4 |

Note: Insert units if not provided on sheet. (1) >999 indicates Turbidity is out of measurable range.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-037

Project Number: FR1681

Date: 8/4/09

| | DPT Location | Sample Depth | pH std units | Conductivity µS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|---|
| 854 | DPT 037 | 8-12 | 6.30 | 1260 | 31.4 | 3.62 | 29.86 | 56 | 0.739 | -97.2 |
| 856 | 37 | 8-12 | 6.28 | 1238 | 2634 | 1.51 | 29.85 | 56 | 0.737 | -130.9 |
| 858 | 37 | 8-12 | 6.27 | 1230 | 1633 | 1.35 | 29.52 | 55 | 0.730 | -137.0 |
| 900 | SAMPLE | | | | | | | | | |
| 909 | 37 | 16-20 | 6.67 | 1389 | >9999 | 0.28 | 29.80 | 63 | 0.824 | -151.4 |
| 911 | 37 | 16-20 | 6.64 | 1355 | 74.5 | 0.15 | 29.47 | 61 | 0.809 | -170.5 |
| 913 | 37 | 16-20 | 6.61 | 1324 | 2417 | 0.13 | 29.23 | 60 | 0.796 | -182.4 |
| 915 | SAMPLE | | | | | | | | | |
| 926 | DPT 037 | 26-30 | 6.91 | 1532 | >9999 | 0.06 | 29.42 | 70 | 0.919 | -344.1 |
| 928 | 037 | 26-30 | 6.87 | 1492 | >9999 | 0.06 | 29.06 | 69 | 0.899 | -360.3 |
| 930 | 037 | 26-30 | 6.82 | 1466 | >9999 | 0.07 | 28.97 | 68 | 0.886 | -362.8 |
| 932 | SAMPLE | | | | | | | | | |
| 946 | DPT 037 | 36-40 | 7.03 | 2217 | >9999 | 0.06 | 30.37 | 102 | 1.312 | -402.2 |
| 948 | 037 | 36-40 | 6.88 | 2272 | >9999 | 0.05 | 30.17 | 104 | 1.345 | -418.5 |
| 950 | 037 | 36-40 | 6.94 | 2268 | >9999 | 0.07 | 30.01 | 105 | 1.346 | -425.2 |
| 952 | SAMPLE | | | | | | | | | |
| 1030 | DPT 037 | 41-45 | 6.96 | 2583 | >9999 | 0.26 | 31.36 | 117 | 1.489 | -124.3 |
| 1032 | 037 | 41-45 | 6.90 | 2606 | 54.9 | 0.51 | 31.06 | 119 | 1.519 | -128.4 |
| 1034 | 037 | 41-45 | 6.87 | 2607 | 6563 | 0.31 | 30.83 | 119 | 1.521 | -125.0 |
| 1036 | SAMPLE | | | | | | | | | |
| 1052 | DPT 037 | 46-50 | 7.07 | 3000 | >9999 | 0.21 | 30.96 | 138 | 1.756 | -175.1 |
| 1054 | 037 | 46-50 | 6.98 | 2996 | 8415 | 0.25 | 29.55 | 142 | 1.792 | -179.1 |
| 1056 | 037 | 46-50 | 6.94 | 2974 | 1265 | 0.27 | 29.12 | 142 | 1.781 | -147.9 |
| 1058 | SAMPLE | | | | | | | | | |
| 1117 | DPT 037 | 61-65 | 7.39 | 5165 | >9999 | 0.12 | 30.26 | 250 | 3.073 | -260.3 |
| 1119 | 037 | 61-65 | 7.40 | 5243 | 61.8 | 0.12 | 29.28 | 258 | 3.155 | -272.4 |
| 1121 | 037 | 61-65 | 7.39 | 5249 | 59.8 | 0.11 | 28.92 | 260 | 3.174 | -280.5 |
| 1123 | SAMPLE | | | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-038

Project Number: FR1681

Date: 8/4/09

| | DPT Location | Sample Depth | pH std units | Conductivity µS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|---|
| 1259 | DPT 038 | 8-12 | 10.16 | 430 | >9999 | 0.26 | 29.61 | 18 | 0.253 | -221.6 |
| 1301 | 038 | 8-12 | 10.16 | 403 | >9999 | 0.21 | 29.60 | 17 | 0.239 | -238.2 |
| 1303 | 038 | 8-12 | 10.17 | 392 | >9999 | 0.18 | 29.78 | 17 | 0.233 | -256.0 |
| 1305 | SAMPLE | | | | | | | | | |
| 1312 | DPT038 | 16-20 | 7.74 | 705 | >9999 | 0.60 | 30.17 | 30 | 0.412 | -256.9 |
| 1314 | 038 | 16-20 | 7.57 | 672 | 1773 | 0.29 | 29.56 | 30 | 0.401 | -272.7 |
| 1316 | 038 | 16-20 | 7.49 | 658 | 1488 | 0.24 | 29.29 | 29 | 0.395 | -275.1 |
| 1318 | SAMPLE | | | | | | | | | |
| 1328 | DPT 038 | 26-30 | 7.35 | 1066 | >9999 | 0.34 | 29.75 | 48 | 0.635 | -238.2 |
| 1331 | 038 | 26-30 | 7.25 | 1062 | >9999 | 0.31 | 29.25 | 48 | 0.638 | -274.6 |
| 1333 | 038 | 26-30 | 7.20 | 1062 | 72.1 | 0.55 | 29.44 | 48 | 0.636 | -280.4 |
| 1335 | SAMPLE | | | | | | | | | |
| 1348 | DPT038 | 36-40 | 7.44 | 870 | >9999 | 0.41 | 29.83 | 39 | 0.517 | -336.8 |
| 1350 | 038 | 36-40 | 7.38 | 870 | >9999 | 0.36 | 29.45 | 39 | 0.521 | -407.5 |
| 1352 | 038 | 36-40 | 7.32 | 873 | >9999 | 0.27 | 29.40 | 39 | 0.524 | -420.8 |
| 1354 | SAMPLE | | | | | | | | | |
| 1428 | DPT038 | 41-45 | 7.23 | 1124 | >9999 | 0.17 | 29.83 | 51 | 0.673 | -168.6 |
| 1430 | 038 | 41-45 | 7.18 | 1155 | >9999 | 0.15 | 30.38 | 51 | 0.684 | -188.2 |
| 1432 | 038 | 41-45 | 7.14 | 1171 | >9999 | 0.18 | 30.63 | 52 | 0.687 | -198.6 |
| 1434 | SAMPLE | | | | | | | | | |
| 1450 | DPT-038 | 46-50 | 7.15 | 1238 | >9999 | 0.44 | 31.35 | 54 | 0.716 | -150.5 |
| 1452 | 038 | 46-50 | 7.07 | 1232 | >9999 | 0.53 | 30.73 | 54 | 0.722 | -157.0 |
| 1454 | 038 | 46-50 | 7.04 | 1227 | 5609 | 0.36 | 30.37 | 55 | 0.723 | -159.5 |
| 1456 | SAMPLE | | | | | | | | | |
| 1519 | DPT-038 | 61-65 | 7.35 | 4243 | >9999 | 0.34 | 32.62 | 195 | 2.444 | -190.4 |
| 1521 | 038 | 61-65 | 7.36 | 4348 | >9999 | 0.17 | 30.36 | 207 | 2570 | -235.4 |
| 1523 | 038 | 61-65 | 7.34 | 4357 | 7539 | 0.15 | 29.47 | 211 | 2609 | -251.2 |
| 1525 | SAMPLE | | | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-039

Project Number: FR1681

Date: 8/4/09, 8/5/09

| | DPT Location | Sample Depth | pH std units | Conductivity µS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|---|
| 1607 | DPT-039 | 8-12 | 8.16 | 567 | >9999 | 0.29 | 31.20 | 24 | 0.325 | -91.5 |
| 1609 | 039 | 8-12 | 8.13 | 533 | >9999 | 0.17 | 30.61 | 22 | 0.300 | -148.9 |
| 1611 | 039 | 8-12 | 8.09 | 484 | >9999 | 0.13 | 29.43 | 21 | 0.291 | -175.4 |
| 1613 | SAMPLE | | | | | | | | | |
| → | CONTINUE DPT ON 8-5-09 | | | | | | | | | |
| 718 | DPT-039 | 16-20 | 7.57 | 660 | >9999 | 0.25 | 24.71 | 32 | 0.434 | -170.3 |
| 720 | 039 | 16-20 | 7.58 | 685 | >9999 | 0.18 | 24.68 | 34 | 0.450 | -186.3 |
| 722 | 039 | 16-20 | 7.49 | 697 | >9999 | 0.15 | 24.65 | 34 | 0.457 | -176.8 |
| 724 | SAMPLE | | | | | | | | | |
| 736 | DPT039 | 26-30 | 7.36 | 994 | >9999 | 0.16 | 25.09 | 49 | 0.648 | -146.8 |
| 738 | 039 | 26-30 | 7.29 | 1014 | >9999 | 0.15 | 24.98 | 50 | 0.660 | -160.9 |
| 740 | 039 | 26-30 | 7.16 | 1016 | 2442 | 0.61 | 24.91 | 50 | 0.662 | -156.5 |
| 742 | SAMPLE | | | | | | | | | |
| 756 | DPT-039 | 36-40 | 7.45 | 1012 | >9999 | 0.71 | 25.86 | 49 | 0.649 | -170.0 |
| 758 | 039 | 36-40 | 7.40 | 1019 | >9999 | 0.27 | 25.78 | 49 | 0.652 | -195.1 |
| 800 | 039 | 36-40 | 7.35 | 1018 | 5410 | 0.25 | 25.69 | 49 | 0.653 | -203.8 |
| 802 | SAMPLE | | | | | | | | | |
| 828 | DPT039 | 41-45 | 7.38 | 1092 | >9999 | 0.32 | 26.27 | 53 | 0.694 | -138.9 |
| 830 | 039 | 41-45 | 7.34 | 1100 | >9999 | 0.26 | 26.07 | 53 | 0.701 | -149.4 |
| 832 | 039 | 41-45 | 7.30 | 1099 | 8505 | 0.32 | 25.91 | 53 | 0.701 | -150.6 |
| 834 | SAMPLE | | | | | | | | | |
| 849 | DPT-039 | 46-50 | 7.43 | 1127 | >9999 | 0.30 | 26.31 | 54 | 0.717 | -182.2 |
| 851 | 039 | 46-50 | 7.34 | 1151 | >9999 | 0.24 | 26.19 | 56 | 0.733 | -196.3 |
| 853 | 039 | 46-50 | 7.30 | 1163 | >9999 | 0.21 | 26.15 | 56 | 0.740 | -199.7 |
| 855 | SAMPLE | | | | | | | | | |
| 914 | DPT-039 | 61-65 | 7.59 | 4084 | >9999 | 0.16 | 26.40 | 212 | 2.625 | -181.0 |
| 916 | 039 | 61-65 | 7.53 | 4299 | >9999 | 0.11 | 25.94 | 224 | 2.753 | -189.3 |
| 918 | 039 | 61-65 | 7.45 | 4330 | 852 | 0.13 | 25.64 | 227 | 2.781 | -176.8 |
| 920 | SAMPLE | | | | | | | | | |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-040

Project Number: FR1681

Date: 8/5/09

| | DPT Location | Sample Depth | pH std units | Conductivity µ S/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|---|
| 949 | DPT-040 | 8-12 | 7.64 | 654 | >9999 | 0.11 | 28.41 | 28 | 0.375 | -122.4 |
| 951 | 040 | 8-12 | 7.47 | 507 | >9999 | 0.08 | 27.96 | 23 | 0.309 | -123.8 |
| 953 | 040 | 8-12 | 7.39 | 469 | 25.8 | 0.08 | 27.64 | 21 | 0.289 | -128.3 |
| 955 | SAMPLE | | | | | | | | | |
| 1002 | DPT-040 | 16-20 | 7.14 | 1049 | >9999 | 0.27 | 28.37 | 48 | 0.639 | -154.5 |
| 1004 | 040 | 16-20 | 7.09 | 1025 | 5374 | 0.45 | 27.68 | 48 | 0.633 | -164.5 |
| 1006 | 040 | 16-20 | 7.05 | 1004 | 1567 | 0.36 | 27.71 | 47 | 0.626 | -167.0 |
| 1008 | SAMPLE | | | | | | | | | |
| 1018 | DPT-040 | 26-30 | 7.10 | 1198 | >9999 | 0.31 | 27.86 | 56 | 0.738 | -162.4 |
| 1020 | 040 | 26-30 | 7.02 | 1183 | 5112 | 0.29 | 27.52 | 56 | 0.733 | -160.0 |
| 1022 | 040 | 26-30 | 7.00 | 1169 | 4211 | 0.28 | 27.27 | 55 | 0.727 | -161.8 |
| 1024 | SAMPLE | | | | | | | | | |
| 1038 | DPT-040 | 36-40 | 7.53 | 1124 | >9999 | 0.21 | 28.43 | 52 | 0.686 | -224.2 |
| 1040 | 040 | 36-40 | 7.49 | 1120 | 5856 | 0.17 | 27.91 | 52 | 0.689 | -221.6 |
| 1042 | 040 | 36-40 | 7.46 | 1111 | 1553 | 0.16 | 27.53 | 52 | 0.689 | -225.3 |
| 1044 | SAMPLE | | | | | | | | | |
| 1336 | DPT-040 | 41-45 | 7.44 | 1119 | >9999 | 0.10 | 28.36 | 52 | 0.682 | -161.1 |
| 1338 | 040 | 41-45 | 7.37 | 1117 | >9999 | 0.08 | 28.42 | 51 | 0.681 | -158.0 |
| 1340 | 040 | 41-45 | 7.34 | 1115 | 6680 | 0.08 | 28.29 | 51 | 0.681 | -153.3 |
| 1342 | SAMPLE | | | | | | | | | |
| 1358 | DPT-040 | 46-50 | 7.31 | 1142 | >9999 | 0.17 | 29.97 | 51 | 0.678 | -193.7 |
| 1400 | 040 | 46-50 | 7.24 | 1145 | >9999 | 0.18 | 29.57 | 52 | 0.685 | -192.3 |
| 1402 | 040 | 46-50 | 7.20 | 1142 | 1480 | 0.39 | 29.27 | 52 | 0.686 | -188.0 |
| 1404 | SAMPLE | | | | | | | | | |
| 1423 | DPT-040 | 61-65 | 7.45 | 4386 | >9999 | 0.18 | 28.40 | 218 | 2.697 | -185.4 |
| 1425 | 040 | 61-65 | 7.45 | 4517 | >9999 | 0.14 | 27.95 | 226 | 2.784 | -190.7 |
| 1427 | 040 | 61-65 | 7.43 | 4522 | 1329 | 0.15 | 27.43 | 229 | 2.808 | -186.7 |
| 1429 | SAMPLE | | | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-041

Project Number: FR1681

Date: 8/5/09 & 8/6/09

| | DPT Location | Sample Depth | pH std units | Conductivity µS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|---|
| 1506 | DPT-041 | 8-12 | 7.27 | 861 | >9999 | 0.12 | 32.52 | 36 | 0.478 | -133.1 |
| 1508 | 041 | 8-12 | 7.19 | 756 | >9999 | 0.11 | 31.31 | 32 | 0.436 | -152.4 |
| 1510 | 041 | 8-12 | 7.08 | 709 | 45.7 | 0.26 | 30.69 | 31 | 0.414 | -156.6 |
| 1512 | SAMPLE | | | | | | | | | |
| 1519 | DPT041 | 16-20 | 7.71 | 650 | >9999 | 0.08 | 30.38 | 28 | 0.381 | -220.4 |
| 1521 | 041 | 16-20 | 7.68 | 613 | 1969 | 0.07 | 28.83 | 27 | 0.370 | -215.3 |
| 1523 | 041 | 16-20 | 7.65 | 592 | 1361 | 0.08 | 27.94 | 27 | 0.364 | -207.7 |
| 1525 | SAMPLE | | | | | | | | | |
| 1536 | DPT-041 | 26-30 | 7.23 | 1373 | >9999 | 0.48 | 30.23 | 62 | 0.811 | -242.8 |
| 1538 | 041 | 26-30 | 7.20 | 1341 | 5616 | 0.30 | 29.09 | 61 | 0.807 | -267.0 |
| 1540 | 041 | 26-30 | 7.15 | 1312 | 3867 | 0.24 | 28.53 | 61 | 0.798 | -255.9 |
| 1542 | SAMPLE | | | | | | | | | |
| 1555 | DPT-041 | 36-40 | 7.49 | 934 | >9999 | 0.22 | 29.67 | 41 | 0.554 | -332.2 |
| 1557 | 041 | 36-40 | 7.47 | 905 | 5450 | 0.17 | 29.04 | 41 | 0.545 | -353.1 |
| 1559 | 041 | 36-40 | 7.41 | 889 | 1474 | 0.16 | 28.63 | 40 | 0.540 | -375.0 |
| 1601 | SAMPLE | | | | | | | | | |
| 8/6/09 | | | | mS/cm | | | | | | |
| 0736 | DPT0041 | 41-45 | 6.50 | 0.865 | >9999 | 2.55 | 26.14 | 0.42 | 0.562 | -111.0 |
| 0730 | DPT0041 | 41-45 | 6.71 | 0.843 | >9999 | 2.15 | 26.21 | 0.43 | 0.571 | -130.7 |
| 0740 | DPT0041 | 41-45 | 6.80 | 0.909 | >999 | 2.35 | 26.21 | 0.44 | 0.580 | -149.3 |
| | | | | | | | | | | |
| 0754 | DPT0041 | 46-50 | 7.40 | 0.805 | >9999 | 1.59 | 26.26 | 0.62 | 0.815 | -147.2 |
| 0756 | DPT0041 | 46-50 | 7.37 | 0.829 | >9999 | 1.59 | 26.15 | 0.63 | 0.825 | -148.0 |
| 0758 | DPT0041 | 46-50 | 7.36 | 0.842 | >9999 | 1.58 | 26.06 | 0.65 | 0.846 | -146.9 |
| | | | | | | | | | | |
| 0818 | DPT0041 | 61-65 | 7.27 | 2.930 | >9999 | 2.12 | 26.76 | 1.52 | 1.938 | -229.6 |
| 0820 | DPT0041 | 61-65 | 7.37 | 3.155 | >9999 | 1.92 | 26.77 | 1.61 | 2.026 | -240.9 |
| 0822 | DPT0041 | 61-65 | 7.42 | 3.274 | >9999 | 1.72 | 26.74 | 1.66 | 2.083 | -247.6 |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: Time DPT0042

Project Number: FR1681

Date: 8/6/09

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0848 | 8-12 | 7.78 | 0.594 | >9999 | 1.41 | 29.34 | 0.26 | 0.356 | -121.5 |
| 0850 | 8-12 | 7.77 | 0.593 | >9999 | 1.37 | 29.26 | 0.26 | 0.356 | -114.9 |
| 0852 | 8-12 | 7.75 | 0.591 | >9999 | 1.45 | 29.12 | 0.26 | 0.356 | -108.1 |
| | | | | | | | | | |
| 0900 | 16-20 | 7.72 | 0.746 | >9999 | 1.81 | 29.20 | 0.33 | 0.450 | -141.3 |
| 0902 | 16-20 | 7.68 | 0.748 | >9999 | 1.57 | 29.08 | 0.33 | 0.451 | -151.2 |
| 0904 | 16-20 | 7.65 | 0.744 | >9999 | 1.52 | 28.91 | 0.33 | 0.499 | -156.8 |
| | | | | | | | | | |
| 0914 | 26-30 | 7.61 | 1.097 | >9999 | 1.52 | 29.14 | 0.50 | 0.661 | -148.7 |
| 0916 | 26-30 | 7.52 | 1.093 | >9999 | 1.35 | 28.74 | 0.50 | 0.663 | -153.4 |
| 0918 | 26-30 | 7.47 | 1.092 | >9999 | 1.33 | 28.48 | 0.50 | 0.666 | -155.5 |
| | | | | | | | | | |
| 0928 | 36-40 | 7.81 | 0.823 | >9999 | 1.83 | 29.68 | 0.36 | 0.491 | -160.6 |
| 0930 | 36-40 | 7.76 | 0.819 | >9999 | 1.28 | 29.33 | 0.37 | 0.492 | -170.6 |
| 0932 | 36-40 | 7.72 | 0.820 | >9999 | 1.17 | 29.27 | 0.37 | 0.493 | -177.1 |
| | | | | | | | | | |
| 0954 | 41-45 | 7.69 | 0.946 | >9999 | 1.86 | 30.39 | 0.42 | 0.565 | -286.6 |
| 0956 | 41-45 | 7.70 | 0.962 | >9999 | 1.57 | 29.99 | 0.43 | 0.573 | -286.2 |
| 0958 | 41-45 | 7.70 | 0.967 | >9999 | 1.48 | 29.70 | 0.43 | 0.578 | -285.3 |
| | | | | | | | | | |
| 1000 | 46-50 | 7.59 | 1.190 | >9999 | 2.78 | 30.07 | 0.54 | 0.722 | -177.0 |
| 1012 | 46-50 | 7.54 | 1.251 | >9999 | 2.63 | 29.37 | 0.57 | 0.762 | -185.8 |
| 1014 | 46-50 | 7.51 | 1.288 | >9999 | 2.57 | 29.00 | 0.59 | 0.784 | -191.0 |
| | | | | | | | | | |
| 1030 | 61-65 | 7.60 | 3.502 | >9999 | 2.80 | 29.85 | 1.68 | 2.127 | -196.5 |
| 1032 | 61-65 | 7.58 | 3.654 | >9999 | 2.70 | 29.25 | 1.77 | 2.220 | -218.5 |
| 1034 | 61-65 | 7.59 | 3.717 | >9999 | 2.60 | 28.94 | 1.81 | 2.261 | -225.2 |
| | | | | | | | | | |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0043

Date: 8/6/09

Time

| ~~DPT~~ FR Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 1152 | 8-12 | 7.42 | 1.059 | >9999 | 2.58 | 29.95 | 0.47 | 0.629 | -136.6 |
| 1154 | 8-12 | 7.38 | 1.060 | >9999 | 2.32 | 29.85 | 0.47 | 0.630 | -152.8 |
| 1156 | 8-12 | 7.36 | 1.051 | >9999 | 2.24 | 29.69 | 0.47 | 0.625 | -166.7 |
| | | | | | | | | | |
| 1208 | 16-20 | 7.37 | 0.929 | >9999 | 2.87 | 28.24 | 0.43 | 0.571 | -135.3 |
| 1210 | 16-20 | 7.31 | 0.939 | >9999 | 2.66 | 27.94 | 0.44 | 0.582 | -143.5 |
| 1212 | 16-20 | 7.28 | 0.950 | >9999 | 2.70 | 27.67 | 0.44 | 0.590 | -145.2 |
| | | | | | | | | | |
| 1222 | 26-30 | 7.44 | 0.809 | >9999 | 2.62 | 27.92 | 0.37 | 0.499 | -119.0 |
| 1224 | 26-30 | 7.41 | 0.806 | >9999 | 2.49 | 27.54 | 0.37 | 0.499 | -123.8 |
| 1226 | 26-30 | 7.38 | 0.800 | >9999 | 2.48 | 27.19 | 0.37 | 0.498 | -126.8 |
| | | | | | | | | | |
| 1236 | 36-40 | 7.52 | 0.904 | >9999 | 2.66 | 28.40 | 0.41 | 0.554 | -152.8 |
| 1238 | 36-40 | 7.47 | 0.903 | >9999 | 2.50 | 27.67 | 0.42 | 0.557 | -160.0 |
| 1240 | 36-40 | 7.45 | 0.902 | >9999 | 2.45 | 27.58 | 0.42 | 0.559 | -164.6 |
| | | | | | | | | | |
| 1306 | 41-45 | 7.50 | 0.933 | >9999 | 2.80 | 28.57 | 0.43 | 0.570 | -155.6 |
| 1308 | 41-45 | 7.50 | 0.939 | >9999 | 2.69 | 28.29 | 0.43 | 0.576 | -167.4 |
| 1310 | 41-45 | 7.51 | 0.944 | >9999 | 2.65 | 27.95 | 0.44 | 0.583 | -175.1 |
| | | | | | | | | | |
| 1320 | 46-50 | 7.80 | 0.927 | >9999 | 2.68 | 29.07 | 0.42 | 0.561 | -117.3 |
| 1322 | 46-50 | 7.70 | 0.929 | >9999 | 2.58 | 28.63 | 0.42 | 0.567 | -131.6 |
| 1324 | 46-50 | 7.63 | 0.928 | >9999 | 2.54 | 28.07 | 0.43 | 0.571 | -138.3 |
| | | | | | | | | | |
| 1508 | 61-65 | 7.61 | 3.475 | >9999 | 2.64 | 28.78 | 1.69 | 2.128 | -173.6 |
| 1510 | 61-65 | 7.57 | 3.513 | >9999 | 2.08 | 28.21 | 1.73 | 2.160 | -186.0 |
| 1512 | 61-65 | 7.55 | 3.529 | >9999 | 2.02 | 27.83 | 1.75 | 2.181 | -195.1 |
| | | | | | | | | | |
| | | | | | | | | | |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0044

Project Number: FR1681

Date: 8/6/09

Time

| DPT ~~Location~~ IKB | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1556 | 31-35 | 7.61 | 1.103 | >9999 | 3.74 | 29.58 | 0.49 | 0.657 | -171.3 |
| 1558 | 31-35 | 7.52 | 1.093 | >9999 | 3.78 | 29.42 | 0.49 | 0.653 | -180.3 |
| 1600 | 31-35 | 7.47 | 1.084 | >9999 | 3.76 | 29.13 | 0.49 | 0.650 | -184.2 |
| 1614 | 36-40 | 7.60 | 1.017 | >9999 | 3.26 | 29.90 | 0.45 | 0.607 | -153.6 |
| 1616 | 36-40 | 7.55 | 1.022 | >9999 | 3.04 | 29.76 | 0.46 | 0.610 | -161.3 |
| 1618 | 36-40 | 7.53 | 1.024 | >9999 | 2.97 | 29.56 | 0.46 | 0.613 | -166.9 |
| 1628 | 41-45 | 7.65 | 1.028 | >9999 | 3.17 | 30.25 | 0.46 | 0.609 | -171.5 |
| 1630 | 41-45 | 7.57 | 1.033 | >9999 | 3.05 | 30.16 | 0.46 | 0.611 | -178.8 |
| 1632 | 41-45 | 7.55 | 1.032 | >9999 | 2.99 | 30.04 | 0.46 | 0.612 | -184.9 |
| 1646 | 46-50 | 7.66 | 1.276 | >9999 | 2.55 | 30.02 | 0.58 | 0.772 | -161.9 |
| 1648 | 46-50 | 7.59 | 1.318 | >9999 | 2.47 | 29.86 | 0.60 | 0.799 | -170.4 |
| 1650 | 46-50 | 7.55 | 1.348 | >9999 | 2.45 | 29.63 | 0.62 | 0.816 | -175.8 |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**
DPT Location: 0045 DPT0045

Project Number: FR1681
Date: 01/25/10

* may be a problem w/ DO sensor

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0900 45 | 16-20 | 7.41 | 0.572 | — | 11.03 | 24.29 | 0.26 | 0.356 | -129.9 |
| | | 7.39 | 0.516 | — | 6.22 | 24.30 | 0.25 | 0.334 | -129.7 |
| | | 7.39 | 0.511 | — | 5.66 | 24.25 | 0.24 | 0.330 | -127.2 |
| 0910 | 26-30 | 8.00 | 0.577 | — | 12.76 | 22.52 | 0.28 | 0.380 | -178.5 |
| | | 7.83 | 0.589 | — | 9.01 | 22.98 | 0.29 | 0.387 | -180.5 |
| | | 7.74 | 0.599 | — | 7.50 | 23.19 | 0.29 | 0.392 | -177.0 |
| 0925 | 36-40 | 7.71 | 0.733 | — | 14.75 | 22.33 | 0.37 | 0.488 | -174.9 |
| | | 7.560 | 0.753 | — | 9.25 | 23.19 | 0.37 | 0.493 | -179.0 |
| | | 7.61 | 0.760 | — | 7.22 | 23.28 | 0.37 | 0.495 | -180.4 |
| 0940 | 41-45 | 7.57 | 0.843 | — | 12.62 | 22.84 | 0.42 | 0.557 | -166.8 |
| | | 7.46 | 0.865 | — | 9.89 | 23.20 | 0.43 | 0.569 | -167.3 |
| | | 7.43 | 0.880 | — | 8.22 | 23.35 | 0.43 | 0.576 | -166.1 |
| 0955 | 46-50 | 7.92 | 0.821 | — | 16.35 | 21.61 | 0.42 | 0.560 | -168.4 |
| | | 7.71 | 0.880 | — | 11.06 | 22.02 | 0.44 | 0.589 | -168.8 |
| | | 7.58 | 0.920 | — | 9.11 | 22.52 | 0.46 | 0.608 | -165.6 |
| 1010 | 56-60 | 7.74 | 2.290 | — | 11.03 | 22.41 | 1.17 | 1.467 | -214.9 |
| | | 7.81 | 2.370 | — | 7.50 | 23.48 | 1.24 | 1.574 | -222.4 |
| | | 7.78 | 2.448 | — | 7.00 | 23.48 | 1.27 | 1.610 | -225.1 |
| 1402 | 8-12 | 7.38 | 0.583 | — | 2.92 | 24.19 | 0.28 | 0.378 | -141.5 |
| | | 7.29 | 0.582 | — | 2.00 | 24.25 | 0.28 | 0.378 | -143.6 |
| | | 7.27 | 0.581 | — | 1.74 | 24.24 | 0.28 | 0.377 | -145.2 |

Note: Insert units if not provided on sheet.

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DPT-0045-____.0-20100125
time depth

**DPT GEOCHEMICAL DATA FORM**

DPT Location: 0046 DPT0046

Project Number: FR1681

Date: 01/25/10

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 1100 46 | 16-20 | 7.75 | 0.509 | — | 3.64 | 24.21 | 0.24 | 0.328 | -164.6 |
| | | 7.61 | 0.503 | — | 2.40 | 24.23 | 0.24 | 0.326 | -166.4 |
| | | 7.59 | 0.501 | — | 2.02 | 24.23 | 0.24 | 0.325 | -167.1 |
| | | | | | | | | | |
| 1115 | 26-30 | 8.00 | 0.448 | — | 9.46 | 23.49 | 0.22 | 0.287 | -204.8 |
| | | 7.91 | 0.4601 | — | 5.37 | 23.52 | 0.22 | 0.299 | -214.5 |
| | | 7.90 | 0.4606 | — | 3.91 | 23.606 | 0.22 | 0.304 | -217.1 |
| | | | | | | | | | |
| 1125 | 36-40 | 7.62 | 0.790 | — | 5.49 | 23.23 | 0.37 | 0502 | -197.1 |
| | | 7.57 | 0.778 | — | 3.20 | 23.51 | 0.38 | 0.589 | -197.2 |
| | | 7.54 | 0.7860 | — | 2.63 | 23.60 | 0.39 | 0.514 | -196.4 |
| | | | | | | | | | |
| 1235 ~~1255~~ | 41-45 | 7.29 | 0.892 | — | 4.21 | 23.91 | 0.44 | 0.580 | -158.8 |
| | | 7.27 | 0.893 | — | 3.03 | 23.90 | 0.44 | 0.581 | -156.2 |
| | | 7.25 | 0.894 | — | 2.54 | 23.88 | 0.44 | 0.581 | -153.6 |
| | | | | | | | | | |
| 1250 | 46-50 | 7.50 | 0.865 | — | 6.53 | 22.83 | 0.44 | 0.579 | -163.4 |
| | | 7.42 | 0.904 | — | 3.30 | 23.07 | 0.45 | 0.596 | -162.0 |
| | | 7.37 | 0.9260 | — | 2.45 | 23.24 | 0.46 | 0.609 | -160.4 |
| | | | | | | | | | |
| 1310 | 50-60 | | | — | not | enough | water | | |
| | | | | — | for | ~~sample~~ | readings | | |
| | | | | — | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 1340 | 8-12 | 7.18 | 0.697 | — | 6.21 | 22.25 | 0.34 | 0.449 | -113.3 |
| | | 7.11 | 0.681 | — | 2.91 | 22.28 | 0.32 | 0.430 | -119.7 |
| | | 7.09 | 0.651 | — | 2.24 | 22.22 | 0.31 | 0.414 | -123.6 |
| | | | | | | | | | |
| | | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: ~~DPT00~~47 DPT0047

Project Number: FR1681

Date: 01/25/10

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1415 47 | 8-12 | 7.34 | 0.463 | — | 3.80 | 24.49 | 0.22 | 0.301 | -99.3 |
| | | 7.27 | 0.462 | — | 2.19 | 24.30 | 0.22 | 0.299 | -101.5 |
| | | 7.24 | 0.458 | — | 1.83 | 24.24 | 0.22 | 0.296 | -103.1 |
| 1425 | 16-20 | 7.36 | 0.592 | — | 8.00 | 24.88 | 0.27 | 0.360 | -177.9 |
| | | 7.37 | 0.555 | — | 3.26 | 24.94 | 0.27 | 0.361 | -179.2 |
| | | 7.37 | 0.555 | — | 2.31 | 24.96 | 0.27 | 0.360 | -178.0 |
| | 26-30 | | | | | | | | |
| 1450 | 36-40 | 7.38 | 0.763 | — | 11.52 | 24.92 | 0.37 | 0.497 | -159.2 |
| | | 7.35 | 0.767 | — | 5.01 | 25.06 | 0.38 | 0.502 | -153.8 |
| | | 7.30 | 0.776 | — | 2.65 | 25.07 | 0.38 | 0.506 | -152.8 |
| 1525 | 41-45 | 7.43 | 0.779 | — | 11.00 | 25.23 | 0.39 | 0.523 | -147.4 |
| | | 7.36 | 0.813 | — | 4.46 | 25.60 | 0.40 | 0.535 | -142.0 |
| | | 7.33 | 0.827 | — | 2.77 | 25.61 | 0.41 | 0.540 | -140.4 |
| 1540 | 46-50 | 7.40 | 0.878 | — | 6.01 | 24.77 | 0.44 | 0.589 | -166.7 |
| | | 7.34 | 0.918 | — | 2.63 | 24.92 | 0.46 | 0.605 | -164.7 |
| | | 7.29 | 0.938 | — | 1.83 | 24.91 | 0.46 | 0.613 | -161.7 |
| 1602 | 56-60 | 7.25 | 1.960 | — | 5.55 | 24.20 | 1.03 | 1.325 | -140.2 |
| | | 7.05 | 1.346 | — | 2.30 | 24.22 | 1.07 | 1.369 | -144.6 |
| | | 7.19 | 2.124 | — | 1.71 | 24.28 | 1.09 | 1.388 | -145.3 |
| 1440 | 36-30 | 7.65 | 0.546 | — | 5.11 | 24.95 | 0.27 | 0.361 | -182.8 |
| | | 7.60 | 0.556 | — | 2.40 | 24.99 | 0.27 | 0.362 | -188.7 |
| | | 7.59 | 0.558 | — | 1.95 | 24.99 | 0.27 | 0.363 | -188.1 |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: 0048 DPT0048

Project Number: FR1681

Date: 1/26/10

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0800 | | | | | | | | | |
| 448 | 8-12 | 10.31 | 0.524 | — | 1.75 | 15.47 | 0.26 | 0.352 | -101.7 |
| | | 10.97 | 0.559 | — | 0.85 | 17.16 | 0.28 | 0.379 | -122.7 |
| | | 11.07 | 0.593 | — | 0.104 | 17.69 | 0.29 | 0.392 | -127.7 |
| | | | | | | | | | |
| 0810 | 16-20 | 8.10 | 0.578 | — | 2.61 | 20.89 | 0.29 | 0.383 | -199.3 |
| | | 7.90 | 0.596 | — | 1.61 | 21.70 | 0.29 | 0.396 | -196.7 |
| | | 7.81 | 0.602 | — | 1.31 | 21.89 | 0.29 | 0.393 | -194.1 |
| | | | | | | | | | |
| 0825 | 26-30 | 7.87 | 0.769 | — | 7.61 | 17.58 | 0.39 | 0.526 | -177.1 |
| | | 7.56 | 0.829 | — | 2.88 | 19.51 | 0.42 | 0.551 | -167.0 |
| | | 7.43 | 0.856 | — | 1.99 | 20.22 | 0.43 | 0.563 | -162.9 |
| | | | | | | | | | |
| 0845 | 36-40 | 7.47 | 0.773 | — | 2.03 | 20.04 | 0.38 | 0.507 | -176.6 |
| | | 7.42 | 0.785 | — | 1.51 | 20.65 | 0.39 | 0.512 | -174.6 |
| | | 7.38 | 0.790 | — | 1.25 | 20.96 | 0.39 | 0.518 | -172.1 |
| | | | | | | | | | |
| 0900 | 41-45 | 7.74 | 0.824 | — | 7.45 | 19.41 | 0.42 | 0.554 | -160.4 |
| | | 7.60 | 0.867 | — | 3.12 | 19.30 | 0.43 | 0.575 | -153.2 |
| | | 7.47 | 0.896 | — | 1.93 | 19.74 | 0.45 | 0.590 | -146.1 |
| | | | | | | | | | |
| 0915 | 46-50 | 8.03 | 0.759 | — | 9.61 | 18.99 | 0.39 | 0.518 | -142.4 |
| | | 7.67 | 0.818 | — | 2.11 | 19.68 | 0.41 | 0.545 | -142.7 |
| | | 7.54 | 0.854 | — | 1.46 | 20.22 | 0.43 | 0.571 | -138.5 |
| | | | | | | | | | |
| 0940 | 56-60 | 7.60 | 2.409 | — | 14.04 | 18.78 | 1.28 | 1.613 | -165.3 |
| | | 7.51 | 2.512 | — | 3.54 | 19.48 | 1.33 | 1.675 | -165.9 |
| | | 7.44 | 2.609 | — | 1.81 | 20.11 | 1.44 | 1.744 | -168.3 |
| | | | | | | | | | |
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Note: Insert units if not provided on sheet.

*DO not calibrated

**DPT GEOCHEMICAL DATA FORM**

DPT Location 0049 DPT0049

Project Number: FR1681

Date: 1/26/10

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 0049 | 26-30 | 7.28 | 0.744 | — | 6.25 | 22.04 | 0.36 | 0.482 | ~~-108~~ -140.8 |
| | | 7.25 | 0.739 | — | 4.00 | 22.29 | 0.36 | 0.479 | -130.5 |
| | | 7.21 | 0.733 | — | 2.06 | 22.45 | 0.36 | 0.476 | -127.8 |
| | | | | | | | | | |
| | 36-40 | 7.66 | 0.905 | — | 10.44 | 21.94 | 0.46 | 0.613 | -203.3 |
| | | 7.60 | 0.955 | — | 4.36 | 22.77 | 0.47 | 0.626 | -204.9 |
| | | 7.57 | 0.969 | — | 2.20 | 22.93 | 0.48 | 0.633 | -206.4 |
| | | | | | | | | | |
| | 41-45 | 7.70 | 1.019 | — | 8.54 | 22.88 | 0.50 | 0.655 | -199.4 |
| | | 7.61 | 1.003 | — | 3.50 | 23.25 | 0.49 | 0.650 | -202.3 |
| | | 7.56 | 0.998 | — | 1.69 | 23.60 | 0.49 | 0.649 | -199.7 |
| | | | | | | | | | |
| | 46-50 | 7.42 | 0.981 | — | 16.01 | 22.78 | 0.48 | 0.636 | -169.0 |
| | | 7.32 | 0.981 | — | 7.11 | 23.15 | 0.49 | 0.640 | -163.1 |
| | | 7.26 | 0.990 | — | 3.17 | 23.33 | 0.49 | 0.646 | -158.0 |
| | | | | | | | | | |
| | 56-60 | 7.42 | 2.336 | — | 8.26 | 23.44 | 1.20 | 1.518 | -201.3 |
| | | 7.39 | 2.339 | — | 3.30 | 23.62 | 1.20 | 1.526 | -204.5 |
| | | 7.38 | 2.356 | — | 1.75 | 23.73 | 1.21 | 1.536 | -208.1 |

Note: Insert units if not provided on sheet.

* DO not calibrated

**DPT GEOCHEMICAL DATA FORM**

DPT Location: 0050 DPT0050

Project Number: FR16081

Date: 1/26/10

| | DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|---|
| 1210 | 0050 | 8-12 | 7.52 | 0.699 | — | 14.01 | 23.21 | 0.35 | 0.458 | -80.3 |
| | | | 7.32 | 0.689 | — | 9.62 | 23.43 | 0.32 | 0.430 | -83.4 |
| | | | 7.24 | 0.642 | — | 7.36 | 23.32 | 0.30 | 0.405 | -88.0 |
| 1225 | | 16-20 | 7.05 | 0.915 | — | 10.69 | 24.34 | 0.45 | 0.598 | -152.1 |
| | | | 7.02 | 0.922 | — | 5.80 | 24.37 | 0.45 | 0.602 | -152.2 |
| | | | 6.99 | 0.928 | — | 2.40 | 24.57 | 0.46 | 0.605 | -147.6 |
| 1235 | | 26-30 | 7.14 | 1.053 | — | 4.41 | 23.71 | 0.52 | 0.685 | -156.3 |
| | | | 7.03 | 1.055 | — | 1.61 | 24.06 | 0.52 | 0.687 | -154.4 |
| | | | 7.00 | 1.058 | — | 1.22 | 24.23 | 0.52 | 0.687 | -152.2 |
| 1300 | | 36-40 | 7.35 | 0.932 | — | 7.81 | 24.01 | 0.46 | 0.610 | -188.9 |
| | | | 7.31 | 0.941 | — | 7.80 | 24.50 | 0.46 | 0.614 | -190.4 |
| | | | 7.29 | 0.949 | — | 7.28 | 24.67 | 0.47 | 0.620 | -190.9 |
| 1315 | | 41-45 | 7.35 | 0.947 | — | 3.47 | 24.90 | 0.47 | 0.628 | -191.5 |
| | | | 7.30 | 0.971 | — | 1.15 | 24.95 | 0.48 | 0.635 | -193.0 |
| | | | 7.29 | 0.981 | — | 0.87 | 24.99 | 0.48 | 0.640 | -193.0 |
| 1330 | | 46-50 | 7.33 | 0.972 | — | 10.11 | 24.15 | 0.48 | 0.633 | -175.2 |
| | | | 7.25 | 0.982 | — | 2.47 | 24.40 | 0.49 | 0.643 | -172.8 |
| | | | 7.22 | 0.995 | — | 1.36 | 24.49 | 0.49 | 0.651 | -169.0 |
| 1345 | | 56-60 | 7.26 | 2.406 | — | 5.11 | 24.24 | 1.23 | 1.561 | -174.9 |
| | | | 7.24 | 2.406 | — | 1.76 | 24.33 | 1.24 | 1.43 | -171.4 |
| | | | 7.23 | 2.426 | — | 1.57 | 24.37 | 1.26 | 1.592 | -186.1 |

Note: Insert units if not provided on sheet.

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*DO not calibrated

**DPT GEOCHEMICAL DATA FORM**

DPT Location: 0451 DPT0051

Project Number: FR1681

Date: 1/26/18 1/27/18

1/26/10

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1430 451 | 26-30 | 7.08 | 1.127 | — | 13.71 | 25.75 | 0.55 | 0.725 | ~~-~~ -152.2 |
| | | 7.01 | 1.062 | — | 6.85 | 25.97 | 0.52 | 0.680 | -149.4 |
| | | 6.94 | 1.033 | — | 4.07 | 25.88 | 0.50 | 0.665 | -143.4 |
| 1445 | 36-40 | 7.24 | 1.272 | — | 17.00 | 25.43 | 0.64 | 0.835 | -160.3 |
| | | 7.08 | 1.287 | — | 5.43 | 25.77 | 0.64 | 0.838 | -163.7 |
| | | 7.02 | 1.284 | — | 1.78 | 25.89 | 0.64 | 0.832 | -162.8 |
| 1455 | 41-45 | 7.24 | 1.067 | — | 6.79 | 25.18 | 0.51 | 0.675 | -165.0 |
| | | 7.17 | 1.028 | — | 2.21 | 25.33 | 0.50 | 0.658 | -162.6 |
| | | 7.14 | 1.007 | — | 1.22 | 25.29 | 0.49 | 0.648 | -159.2 |
| 1/27/10 0755 | 46-50 | 6.94 | 1.054 | — | 8.39 | 16.20 | 0.53 | 0.699 | -118.8 |
| | | 6.97 | 1.082 | — | 3.92 | 17.50 | 0.54 | 0.705 | -125.0 |
| | | 7.05 | 1.089 | — | 2.65 | 18.34 | 0.54 | 0.710 | -129.1 |
| 0815 | 56-60 | 7.37 | 2.816 | — | 8.82 | 14.75 | 1.52 | 1.901 | -122.2 |
| | | 7.29 | 2.973 | — | 3.62 | 16.07 | 1.59 | 1.987 | -125.0 |
| | | 7.25 | 3.101 | — | 2.28 | 16.94 | 1.65 | 2.061 | -126.6 |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: 0852→I DPT0052

Project Number: FR1681

Date: 1/27/10

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0850 | 452 | 26-30 | 7.41 | 1.059 | — | 1.07 | 17.81 | 0.53 | 0.689 | -124.3 |
| | | | 7.29 | 1.064 | — | 1.05 | 19.69 | 0.53 | 0.694 | -125.1 |
| | | | 7.23 | 1.066 | — | 0.11 | 20.48 | 0.53 | 0.695 | -120.6 |
| | | | | | | | | | | |
| 0900 | | 36-40 | 7.22 | 1.212 | — | 16.01 | 19.75 | 0.61 | 0.793 | -116.0 |
| | | | 7.10 | 1.228 | — | 6.33 | 20.19 | 0.62 | 0.803 | -108.4 |
| | | | 7.02 | 1.238 | — | 2.84 | 20.85 | 0.62 | 0.806 | -105.9 |
| | | | | | | | | | | |
| 0920 | | 41-45 | 7.27 | 1.164 | — | 12.01 | 19.64 | 0.59 | 0.772 | -136.3 |
| | | | 7.20 | 1.193 | — | 4.39 | 20.52 | 0.60 | 0.783 | -137.0 |
| | | | 7.15 | 1.214 | — | 2.44 | 21.04 | 0.61 | 0.801 | -139.0 |
| | | | | | | | | | | |
| 0935 | | 46-50 | 7.37 | 1.329 | — | 10.90 | 17.72 | 0.69 | 0.892 | -141.2 |
| | | | 7.35 | 1.389 | — | 3.63 | 18.67 | 0.71 | 0.917 | -147.2 |
| | | | 7.32 | 1.424 | — | 1.84 | 19.86 | 0.72 | 0.936 | -147.1 |
| | | | | | | | | | | |
| 0955 | | 56-60 | 7.43 | 2.753 | — | 13.03 | 18.11 | 1.46 | 1.836 | -135.7 |
| | | | 7.32 | 2.891 | — | 4.06 | 18.58 | 1.49 | 1.951 | -138.1 |
| | | | 7.28 | 2.559 | — | 1.85 | 19.49 | 1.34 | 1.697 | -138.1 |
| | | | | | | | | | | |
| 1010 | | 61-65 | 7.38 | 2.927 | — | 5.04 | 18.18 | 1.54 | 1.919 | -167.9 |
| | | | 7.39 | 2.982 | — | 0.96 | 19.16 | 1.58 | 1.971 | -173.1 |
| | | | 7.40 | 3.065 | — | 0.53 | 19.90 | 1.62 | 2.026 | -175.5 |
| | | | | | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: 0053 → H DPT0053

Project Number: FR1681

Date: 1/27/10

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1045 | | | | | | | | | |
| | 45B | 26-30 | 7.62 | 1.056 | — | 14.27 | 23.26 | 0.52 | 0.683 | -174.9 |
| | | | 7.40 | 1.028 | — | 6.03 | 24.13 | 0.50 | 0.661 | -177.7 |
| | | | 7.35 | 1.012 | — | 3.36 | 24.23 | 0.50 | 0.656 | -176.3 |
| | | | | | | | | | | |
| 1100 | | 30-40 | 7.30 | 1.240 | — | 9.03 | 24.22 | 0.62 | 0.807 | -159.7 |
| | | | 7.21 | 1.243 | — | 3.46 | 24.88 | 0.62 | 0.812 | -160.2 |
| | | | 7.16 | 1.256 | — | 1.72 | 25.06 | 0.63 | 0.818 | -159.8 |
| | | | | | | | | | | |
| 1120 | | 41-45 | 7.30 | 1.148 | — | 7.25 | 24.01 | 0.58 | 0.755 | -141.1 |
| | | | 7.20 | 1.160 | — | 2.14 | 24.42 | 0.57 | 0.751 | -139.6 |
| | | | 7.16 | 1.153 | — | 1.19 | 24.67 | 0.57 | 0.747 | -136.0 |
| | | | | | | | | | | |
| 1135 | | 46-50 | 7.47 | 1.031 | — | 11.21 | 23.55 | 0.51 | 0.671 | -175.4 |
| | | | 7.37 | 1.035 | — | 2.76 | 24.03 | 0.51 | 0.677 | -175.4 |
| | | | 7.32 | 1.047 | — | 1.35 | 24.32 | 0.52 | 0.684 | -173.8 |
| | | | | | | | | | | |
| 1225 | | 56-60 | 7.61 | 2.922 | — | 4.65 | 24.47 | 1.51 | 1.893 | -189.5 |
| | | | 7.44 | 2.986 | — | 1.66 | 24.76 | 1.53 | 1.921 | -194.0 |
| | | | 7.40 | 2.973 | — | 1.14 | 24.86 | 1.55 | 1.948 | -195.3 |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: E 0454 → J DPT0054

Date: 1/27/10

| DPT Location | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1305 0454 | 26-30 | 7.05 | 1.687 | — | 13.80 | 24.73 | 0.84 | 1.083 | -154.7 |
| | | 6.91 | 1.647 | — | 10.64 | 24.95 | 0.82 | 1.059 | -141.0 |
| | | 6.83 | 1.617 | — | 7.51 | 24.84 | 0.81 | 1.041 | -132.8 |
| 1320 | | | | | | | | | |
| | 36-40 | 7.20 | 1.381 | — | 7.85 | 25.32 | 0.69 | 0.895 | -162.4 |
| | | 7.18 | 1.375 | — | 3.00 | 25.28 | 0.69 | 0.893 | -167.2 |
| | | 7.16 | 1.375 | — | 1.57 | 25.27 | 0.69 | 0.894 | -170.2 |
| | | | | | | | | | |
| 1335 | 41-45 | 7.30 | 1.133 | — | 7.05 | 24.91 | 0.56 | 0.729 | -173.5 |
| | | 7.27 | 1.115 | — | 2.15 | 24.97 | 0.55 | 0.724 | -176.5 |
| | | 7.24 | 1.112 | — | 1.17 | 25.05 | 0.55 | 0.724 | -178.3 |
| | | | | | | | | | |
| 1355 | 46-50 | 7.24 | 1.544 | — | 10.11 | 25.50 | 0.78 | 1.015 | -145.2 |
| | | 7.19 | 1.588 | — | 2.79 | 25.34 | 0.82 | 1.059 | -145.7 |
| | | 7.15 | 1.659 | — | 1.31 | 25.14 | 0.85 | 1.097 | -144.3 |
| 1410 | | | | | | | | | |
| | 56-60 | 7.41 | 3.247 | — | 6.29 | 23.79 | 1.69 | 2.092 | -175.1 |
| | | 7.35 | 3.208 | — | 1.52 | 23.94 | 1.67 | 2.081 | -180.4 |
| | | 7.32 | 3.205 | — | 1.00 | 24.03 | 1.68 | 2.090 | -181.8 |
| | | | | | | | | | |
| 1430 | 61-65 | 7.43 | 3.478 | — | 11.42 | 23.34 | 1.78 | 2.201 | -203.4 |
| | | 7.43 | 3.356 | — | 7.24 | 23.60 | 1.76 | 2.180 | -210.4 |
| | | 7.43 | 3.360 | — | 4.77 | 23.78 | 1.78 | 2.207 | -215.6 |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**
DPT Location: 0455 → K DPT0055

Project Number: FR11681
Date: 1/27/10

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1515 | | | | | | | | | |
| 0455 | 26-30 | 7.31 | 1.315 | — | 10.34 | 24.57 | 0.65 | 0.852 | -137.7 |
| | | 7.11 | 1.295 | — | 8.29 | 24.82 | 0.64 | 0.831 | -141.5 |
| | | 7.05 | 1.258 | — | 6.39 | 25.07 | 0.61 | 0.801 | -142.1 |
| | | | | | | | | | |
| 1530 | 36-40 | 7.30 | 1.214 | — | 6.54 | 24.73 | 0.60 | 0.784 | -174.2 |
| | | 7.24 | 1.196 | — | 3.22 | 25.26 | 0.59 | 0.777 | -181.6 |
| | | 7.23 | 1.197 | — | 2.00 | 25.27 | 0.60 | 0.782 | -185.8 |
| | | | | | | | | | |
| 1545 | 41-45 | 7.24 | 1.296 | — | 10.01 | 24.22 | 0.64 | 0.840 | -161.1 |
| | | 7.25 | 1.290 | — | 4.37 | 24.69 | 0.64 | 0.838 | -165.2 |
| | | 7.22 | 1.293 | — | 1.93 | 24.90 | 0.65 | 0.846 | -169.5 |
| | | | | | | | | | |
| 1600 | 46-50 | 7.23 | 1.419 | — | 9.14 | 24.05 | 0.72 | 0.931 | -153.4 |
| | | 7.17 | 1.442 | — | 3.66 | 24.26 | 0.73 | 0.943 | -157.3 |
| | | 7.15 | 1.457 | — | 1.74 | 24.39 | 0.73 | 0.953 | -157.7 |
| | | | | | | | | | |
| 1620 | 56-60 | 7.31 | 3.063 | — | 3.03 | 23.33 | 1.60 | 2.089 | -176.9 |
| | | 7.29 | 3.135 | — | 0.86 | 23.64 | 1.66 | 2.069 | -178.7 |
| | | 7.28 | 3.214 | — | 0.59 | 23.76 | 1.69 | 2.112 | -178.8 |
| | | | | | | | | | |
| 1645 | 61-65 | 7.37 | 3.251 | — | 8.05 | 22.59 | 1.71 | 2.188 | -189.3 |
| | | 7.38 | 3.306 | — | 5.55 | 22.89 | 1.74 | 2.161 | -196.3 |
| | | 7.38 | 3.346 | — | 4.30 | 23.03 | 1.76 | 2.190 | -200.1 |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: 0456 → P DPT0056

Project Number: FR16816

Date: ~~1~~ 1/28/10

| | DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|---|
| 0800 | 0456 | 8-12 | 7.20 | 0.809 | — | 2.20 | 17.49 | 0.40 | 0.525 | -150.0 |
| | | | 7.30 | 0.808 | — | 1.47 | 17.63 | 0.40 | 0.527 | -153.7 |
| | | | 7.32 | 0.812 | — | 1.23 | 17.64 | 0.40 | 0.528 | -154.8 |
| 0810 | | 16-20 | 7.44 | 0.799 | — | 10.22 | 18.99 | 0.40 | 0.529 | -152.6 |
| | | | 7.36 | 0.826 | — | 4.02 | 20.28 | 0.41 | 0.542 | -157.9 |
| | | | 7.33 | 0.840 | — | 1.81 | 21.07 | 0.42 | 0.550 | -159.4 |
| 0825 | | 26-30 | 7.41 | 1.084 | — | 12.33 | 18.35 | 0.55 | 0.725 | -139.9 |
| | | | 7.36 | 1.121 | — | 4.57 | 19.54 | 0.56 | 0.735 | -147.4 |
| | | | 7.33 | 1.138 | — | 2.04 | 20.11 | 0.57 | 0.745 | -151.1 |
| 0835 | | 36-40 | 7.45 | 0.882 | — | 7.62 | 19.64 | 0.44 | 0.583 | -150.9 |
| | | | 7.38 | 0.898 | — | ~~7~~ 2.44 | 20.57 | 0.44 | 0.586 | -156.9 |
| | | | 7.35 | 0.904 | — | 1.24 | 20.91 | 0.45 | 0.587 | -159.2 |
| 0850 | | 41-45 | 7.35 | 1.133 | — | 4.11 | 19.90 | 0.56 | 0.732 | -138.6 |
| | | | 7.23 | 1.139 | — | 1.30 | 21.78 | 0.57 | 0.752 | -139.8 |
| | | | 7.19 | 1.163 | — | 0.96 | 22.09 | 0.58 | 0.759 | -140.1 |
| 0910 | | 46-50 | 7.43 | 1.327 | — | 3.08 | 19.96 | 0.68 | 0.878 | -146.9 |
| | | | 7.35 | 1.359 | — | 0.95 | 20.34 | 0.69 | 0.889 | -148.1 |
| | | | 7.31 | 1.377 | — | 0.65 | 20.84 | 0.69 | 0.889 | -147.9 |
| 0945 | | 56-60 | 7.45 | 2.512 | — | 4.38 | 20.73 | 1.29 | 1.618 | -147.5 |
| | | | 7.37 | 2.483 | — | 1.16 | 22.10 | ~~1.28~~ 1.32 | 1.655 | -159.1 |
| | | | 7.35 | 2.570 | — | 0.71 | 22.52 | 1.34 / 1.31 | 1.691 | -162.8 |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: 0057 → L DPT0057

Project Number: FR1681

Date: 1/28/10

| | DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| 1010 | 0457 | 26-30 | 7.28 | 1.166 | — | 9.40 | 25.17 | 0.57 | 0.752 | -129.9 |
| | | | 7.17 | 1.156 | — | 6.79 | 25.54 | 0.57 | 0.743 | -131.5 |
| | | | 7.12 | 1.135 | — | 4.56 | 26.11 | 0.56 | 0.733 | -129.7 |
| | | | | | | | | | | |
| 1025 | | 36-40 | 7.48 | 1.211 | — | 4.63 | 25.68 | 0.60 | 0.787 | -161.7 |
| | | | 7.39 | 1.214 | — | 2.05 | 26.34 | 0.60 | 0.791 | -168.6 |
| | | | 7.35 | 1.218 | — | 0.95 | 26.44 | 0.60 | 0.792 | -172.4 |
| | | | | | | | | | | |
| 1045 | | 41-45 | 7.38 | 1.361 | — | 3.44 | 26.66 | 0.68 | 0.890 | -156.0 |
| | | | 7.24 | 1.374 | — | 0.88 | 27.16 | 0.69 | 0.897 | -155.7 |
| | | | 7.22 | 1.382 | — | 0.59 | 27.15 | 0.69 | 0.8101 | -155.8 |
| | | | | | | | | | | |
| 1100 | | 46-50 | 7.28 | 1.638 | — | 5.91 | 27.41 | 0.82 | 1.062 | -150.6 |
| | | | 7.20 | 1.635 | — | 1.30 | 27.59 | 0.82 | 1.064 | -153.9 |
| | | | 7.17 | 1.638 | — | 0.64 | 27.74 | 0.82 | 1.066 | -155.7 |
| | | | | | | | | | | |
| 1120 | | 56-60 | 7.34 | 2.861 | — | 13.23 | 25.91 | 1.45 | 1.822 | -159.0 |
| | | | 7.28 | 2.829 | — | 2.31 | 26.80 | 1.48 | 1.866 | -169.3 |
| | | | 7.27 | 2.896 | — | 0.89 | 26.82 | 1.51 | 1.906 | -174.9 |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: 0458→M DPT0058

Project Number: FR16081

Date: 1/28/16

| | DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|---|
| 1225 | 0458 | 26-30 | 7.48 | 1.182 | — | 10.20 | 26.70 | 0.58 | 0.759 | -166.7 |
| | | | 7.22 | 1.138 | — | 6.05 | 27.17 | 0.55 | 0.727 | -160.4 |
| | | | 7.08 | 1.100 | — | 3.68 | 27.16 | 0.54 | 0.709 | -151.6 |
| | | ~~30-40~~ | | | | | | | | |
| 1240 | | 36-40 | 7.01 | 1.173 | — | 7.01 | 26.66 | 0.58 | 0.763 | -124.5 |
| | | | 6.93 | 1.173 | — | 2.62 | 27.03 | 0.58 | 0.763 | -127.0 |
| | | | 6.89 | 1.175 | — | 1.14 | 27.18 | 0.58 | 0.764 | -127.8 |
| 1255 | | 41-45 | 7.07 | 1.409 | — | 6.11 | 27.31 | 0.71 | 0.923 | -127.7 |
| | | | 6.99 | 1.428 | — | 1.78 | 27.45 | 0.72 | 0.935 | -128.1 |
| | | | 6.95 | 1.443 | — | 0.77 | 27.49 | 0.72 | 0.941 | -127.9 |
| 1310 | | 46-50 | 7.13 | 1.437 | — | 3.65 | 27.94 | 0.71 | 0.929 | -143.1 |
| | | | 7.07 | 1.428 | — | 0.82 | 28.07 | 0.71 | 0.929 | -145.5 |
| | | | 7.04 | 1.431 | — | 0.42 | 28.11 | 0.71 | 0.932 | -146.5 |
| 1330 | | 56-60 | 7.38 | 3.270 | — | 5.29 | 28.08 | 1.67 | 2.087 | -157.3 |
| | | | 7.32 | 3.187 | — | 1.33 | 27.84 | 1.64 | 2.057 | -164.2 |
| | | | 7.29 | 3.160 | — | 0.71 | 27.75 | 1.64 | 2.052 | -168.1 |
| 1350 | | 61-65 | 7.51 | 3.807 | — | 7.10 | 28.09 | 2.00 | 2.472 | -167.1 |
| | | | 7.43 | 3.776 | — | 4.32 | 28.11 | 1.97 | 2.431 | -173.6 |
| | | | 7.39 | 3.746 | — | 2.78 | 28.06 | 1.96 | 2.436 | -177.3 |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: 0459 -> N DPT0059

Project Number: FR1681

Date: 1/28/10

| | DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|---|
| 1435 | 0459 | 26-30 | 7.43 | 1.127 | — | 7.24 | 26.56 | 0.55 | 0.717 | -143.9 |
| | | | 7.24 | 1.081 | — | 5.55 | 26.66 | 0.52 | 0.690 | -142.8 |
| | | | 7.15 | 1.045 | — | 4.32 | 26.58 | 0.51 | 0.669 | -140.0 |
| 1450 | | 36-40 | 7.05 | 1.081 | — | 5.08 | 25.92 | 0.54 | 0.712 | -129.5 |
| | | | 6.91 | 1.109 | — | 2.60 | 26.47 | 0.55 | 0.722 | -126.3 |
| | | | 6.87 | 1.112 | — | 1.41 | 26.54 | 0.55 | 0.724 | -125.3 |
| 1505 | | 41-45 | 7.01 | 1.227 | — | 6.36 | 26.26 | 0.61 | 0.804 | -134.3 |
| | | | 6.90 | 1.245 | — | 2.11 | 26.83 | 0.62 | 0.814 | -136.8 |
| | | | 6.86 | 1.256 | — | 0.88 | 26.92 | 0.62 | 0.819 | -139.3 |
| 1525 | | 46-50 | 7.02 | 1.383 | — | 11.28 | 24.67 | 0.70 | 0.919 | -156.1 |
| | | | 7.00 | 1.435 | — | 2.73 | 25.60 | 0.73 | 0.948 | -154.1 |
| | | | 6.91 | 1.495 | — | 1.00 | 25.88 | 0.76 | 0.987 | -150.5 |
| 1540 | | 56-60 | 7.16 | 2.325 | — | 5.25 | 22.87 | 1.25 | 1.584 | -131.9 |
| | | | 7.07 | 2.492 | — | 1.42 | 23.49 | 1.31 | 1.668 | -142.0 |
| | | | 7.02 | 2.628 | — | 0.66 | 23.96 | 1.38 | 1.745 | -152.5 |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: 0460-60 DPT0060

Project Number: FR1681

Date: 1/28/10 1/29/10

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 1/28/10 1615 0460 | 26-30 | 7.34 | 1.625 | — | 11.24 | 24.33 | 0.81 | 1.045 | -115.2 |
| | | 7.16 | 1.601 | — | 8.93 | 24.68 | 0.80 | 1.036 | -125.1 |
| | | 7.10 | 1.588 | — | 6.76 | 25.07 | 0.80 | 1.029 | -131.6 |
| | | | | | | | | | |
| 1640 | 36-40 | 7.56 | 1.059 | — | 8.13 | 25.91 | 0.52 | 0.680 | -153.4 |
| | | 7.42 | 1.035 | — | 3.03 | 26.19 | 0.51 | 0.669 | -160.2 |
| | | 7.36 | 1.026 | — | 1.32 | 26.67 | 0.50 | 0.665 | -163.0 |
| | | | | | | | | | |
| 1/29/10 0730 | 41-45 | 6.50 | 1.257 | — | 2.54 | 22.77 | 0.66 | 0.861 | -80.6 |
| | | 6.48 | 1.339 | — | 1.15 | 23.07 | 0.67 | 0.879 | -98.6 |
| | | 6.58 | 1.358 | — | 0.89 | 23.30 | 0.68 | 0.881 | -108.3 |
| | | | | | | | | | |
| | 46-50 | Refusal | | | | | | | |
| | | | | — | | | | | |
| | | | | | | | | | |
| | 56-60 | | | — | | | | | |
| | | | | — | | | | | |
| | | | | | | | | | |
| | 61-65 | | | — | | | | | |
| | | | | — | | | | | |
| | | | | — | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: 0461 -> G DPT0061

Date: 1/29/10

| | DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|---|
| 0815 | 0461 | 26-30 | 7.50 | 1.145 | — | 13.05 | 19.61 | 0.57 | 0.744 | -126.7 |
| | | | 7.42 | 1.148 | — | 3.00 | 20.94 | 0.57 | 0.750 | -133.3 |
| | | | 7.35 | 1.156 | — | 1.31 | 21.89 | 0.58 | 0.754 | -131.0 |
| 0825 | | 36-40 | 7.47 | 1.062 | — | 5.07 | 22.22 | 0.53 | 0.699 | -131.8 |
| | | | 7.44 | 1.091 | — | 1.29 | 23.16 | 0.54 | 0.710 | -136.4 |
| | | | 7.31 | | — | ~~10~~.88 | 23.65 | 0.54 | 0.706 | -131.5 |
| 0845 | | 41-45 | 7.43 | 1.427 | — | 8.19 | 22.65 | 0.72 | 0.935 | -128.8 |
| | | | 7.35 | 1.445 | — | 2.66 | 23.73 | 0.73 | 0.949 | -130.9 |
| | | | 7.30 | 1.468 | — | 1.15 | 24.32 | 0.74 | 0.961 | -133.2 |
| 0900 | | 46-50 | 7.35 | 1.761 | — | 1.35 | 23.77 | 0.92 | 1.184 | -138.1 |
| | | | 7.29 | 1.851 | — | 0.67 | 24.40 | 0.95 | 1.218 | -139.5 |
| | | | 7.27 | 1.887 | — | 0.53 | 24.62 | 0.96 | 1.237 | -140.6 |
| 0930 | | 56-60 | 7.48 | 2.845 | — | 2.55 | 23.67 | 1.48 | 1.860 | -162.8 |
| | | | 7.42 | ~~2.845~~ 2.920 | — | 0.82 | 24.31 | 1.53 | 1.922 | -166.5 |
| | | | 7.36 | 2.977 | — | 0.47 | 24.53 | 1.56 | 1.962 | -165.1 |
| 0950 | | 61-65 | 7.50 | 3.285 | — | 8.65 | 23.27 | 1.69 | 2.101 | -156.2 |
| | | | 7.46 | 3.248 | — | 4.43 | 24.81 | 1.72 | 2.150 | -164.5 |
| | | | 7.42 | 3.336 | — | 3.21 | 25.19 | 1.76 | 2.191 | -169.2 |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: 0462 → in parking lot DPT0062

Date: 1/29/10

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1020 0462 | 8-12 | 7.19 | 1.050 | — | 8.46 | 23.40 | 0.51 | 0.612 | -87.2 |
| | | 7.07 | 1.006 | — | 5.70 | 23.52 | 0.49 | 0.648 | -90.9 |
| | | 7.01 | 0.999 | — | 3.56 | 23.60 | 0.48 | 0.633 | -94.1 |
| 1030 | 16-20 | 7.26 | 0.770 | — | 3.47 | 25.41 | 0.38 | 0.505 | -132.5 |
| | | 7.25 | 0.778 | — | 1.57 | 25.69 | 0.38 | 0.504 | -139.1 |
| | | 7.25 | 0.774 | — | 0.62 | 25.80 | 0.38 | 0.502 | -139.5 |
| 1040 | 26-30 | 7.35 | 0.942 | — | 7.16 | 25.28 | 0.46 | 0.613 | -112.4 |
| | | 7.27 | 0.942 | — | 1.80 | 24.79 | 0.46 | 0.612 | -115.3 |
| | | 7.23 | 0.941 | — | 0.71 | 25.01 | 0.46 | 0.611 | -116.1 |
| 1050 | 36-40 | 7.53 | 0.855 | — | 8.64 | 24.71 | 0.53 | 0.700 | -128.4 |
| | | 7.34 | 1.085 | — | 2.23 | 25.18 | 0.54 | 0.706 | -131.6 |
| | | 7.29 | 1.082 | — | 0.99 | 25.37 | 0.53 | 0.701 | -132.0 |
| 1120 | 41-45 | 7.41 | 1.340 | — | 4.38 | 26.19 | 0.67 | 0.871 | -144.3 |
| | | 7.24 | 1.350 | — | 0.75 | 26.29 | 0.67 | 0.881 | -145.4 |
| | | 7.20 | 1.360 | — | 0.48 | 26.21 | 0.68 | 0.885 | -144.8 |
| 1145 | 46-50 | 7.47 | 1.350 | — | 4.19 | 25.46 | 0.67 | 0.880 | -142.6 |
| | | 7.36 | 1.360 | — | 1.27 | 25.54 | 0.68 | 0.889 | -147.6 |
| | | 7.31 | 1.373 | — | 0.57 | 25.54 | 0.69 | 0.897 | -149.0 |
| 1200 | 56-60 | 7.48 | 2.747 | — | 8.30 | 25.59 | 1.45 | 1.831 | -119.8 |
| | | 7.37 | 2.851 | — | 3.27 | 25.68 | 1.49 | 1.871 | -137.2 |
| | | 7.33 | 2.894 | — | 1.22 | 25.75 | 1.51 | 1.899 | -145.6 |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: 0463->R DPT0063

Project Number: FR1681

Date: 1/29/10

| | DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|---|
| 1305 | 0463 | 26-30 | 7.26 | 1.371 | — | 6.41 | 27.30 | 0.67 | 0.867 | -137.7 |
| | | | 7.16 | 1.381 | — | 3.78 | 27.25 | 0.66 | 0.862 | -136.6 |
| | | | 7.11 | 1.314 | — | 2.16 | 27.12 | 0.65 | 0.849 | -131.1 |
| 1320 | | 36-40 | 7.43 | 1.682 | — | 6.43 | 27.51 | 0.85 | @1.09 | -123.6 |
| | | | 7.22 | 1.688 | — | 2.80 | 27.50 | 0.85 | 1.098 | -129.0 |
| | | | 7.15 | 1.691 | — | 1.25 | 27.49 | 0.85 | 1.099 | -130.0 |
| 1340 | | 41-45 | 7.13 | 1.586 | — | 0.52 | 26.73 | 0.80 | 1.032 | -134.7 |
| | | | 7.11 | 1.589 | — | 0.39 | 26.65 | 0.80 | 1.034 | -133.8 |
| | | | 7.08 | 1.592 | — | 0.35 | 26.55 | 0.80 | 1.035 | -131.3 |
| 1358 | | 46-50 | 7.21 | 1.755 | — | 0.70 | 26.20 | 0.89 | 1.157 | -130.1 |
| | | | 7.18 | 1.799 | — | 0.35 | 26.17 | 0.33 | 1.183 | -131.9 |
| | | | 7.15 | 1.836 | — | 0.33 | 26.06 | 0.32 | 1.201 | -131.8 |
| 1415 | | 56-60 | 7.05 | 3.016 | — | 1.77 | 25.90 | 1.60 | 2.001 | -133.7 |
| | | | 7.07 | 3.102 | — | 0.70 | 25.92 | 1.63 | 2.037 | -138.9 |
| | | | 7.09 | 3.151 | — | 0.60 | 25.93 | 1.65 | 2.064 | -142.5 |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0964 (AI)

Project Number: FR1681

Date: 2/1/10

| DPT Location (Time) | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0805 | 28 | 6.91 | 1.166 | - | 9.52 | 22.37 | 0.59 | 0.771 | -100.8 |
| 0807 | 28 | 6.86 | 1.188 | - | 1.78 | 23.83 | 0.59 | 0.770 | -130.5 |
| 0809 | 28 | 6.79 | 1.163 | - | 1.19 | 23.90 | 0.58 | 0.754 | -128.9 |
| | Sampled @ 0810 | | | | | | | | |
| 0821 | 38 | 7.88 | 1.288 | - | 8.57 | 20.77 | 0.64 | 0.833 | -141.2 |
| 0823 | 38 | 7.16 | 1.330 | - | 1.11 | 23.62 | 0.67 | 0.871 | -132.2 |
| 0825 | 38 | 7.08 | 1.354 | - | 0.91 | 23.71 | 0.68 | 0.880 | -125.5 |
| | Sampled @ 0826 | | | | | | | | |
| 0839 | 43 | 7.37 | 1.556 | - | 6.82 | 21.36 | 0.79 | 1.022 | -172.6 |
| 0841 | 43 | 7.21 | 1.641 | - | 1.18 | 23.34 | 0.83 | 1.069 | -168.9 |
| 0843 | 43 | 7.16 | 1.645 | - | 0.79 | 23.78 | 0.83 | 1.068 | -160.6 |
| | Sampled @ 0844 | | | | | | | | |
| 0857 | 48 | 7.58 | 1.692 | - | 10.82 | 20.59 | 0.85 | 1.087 | -142.7 |
| 0859 | 48 | 7.20 | 1.774 | - | 1.13 | 23.22 | 0.90 | 1.157 | -143.8 |
| 0901 | 48 | 7.13 | 1.772 | - | 0.75 | 23.55 | 0.90 | 1.151 | -129.8 |
| | Sampled @ 0902 | | | | | | | | |
| 0917 | 588 | 7.37 | 3.610 | - | 2.56 | 21.74 | 1.95 | 2.422 | -165.9 |
| 0919 | 588 | 7.23 | 3.860 | - | 1.13 | 22.84 | 2.06 | 2.535 | -160.5 |
| 0921 | 588 | 7.16 | 3.962 | - | 0.76 | 23.16 | 2.10 | 2.581 | -153.7 |
| | Sampled @ 0922 | | | | | | | | |
| 0933 | 563 | 7.40 | 3.998 | - | 0.70 | 21.36 | 2.14 | 2.625 | -191.9 |
| 0935 | 563 | 7.41 | 4.053 | - | 0.63 | 22.41 | 2.16 | 2.647 | -197.0 |
| 0937 | 563 | 7.41 | 4.079 | - | 0.62 | 22.76 | 2.17 | 2.661 | -197.7 |
| | Sampled at 0938 | | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0065 (AH)

Date: 2/11/10

| Time DPT Location | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1018 | 28 | 7.33 | 0.869 | — | 1.74 | 22.92 | 0.43 | 0.564 | -156.9 |
| 1020 | 28 | 7.23 | 0.863 | — | 0.98 | 22.15 | 0.42 | 0.556 | -150.2 |
| 1022 | 28 | 7.16 | 0.849 | — | 0.89 | 22.25 | 0.41 | 0.549 | -144.6 |
| | Sampled at 1023 | | | | | | | | |
| 1033 | 38 | 7.24 | 0.930 | — | 1.54 | 22.86 | 0.46 | 0.610 | -185.8 |
| 1035 | 38 | 7.26 | 0.941 | — | 1.10 | 22.92 | 0.47 | 0.616 | -186.3 |
| 1037 | 38 | 7.27 | 0.951 | — | 0.89 | 24.43 | 0.47 | 0.623 | -183.1 |
| | Sampled at 1038 | | | | | | | | |
| 1046 | 43 | 7.31 | 1.065 | — | 0.80 | 22.22 | 0.53 | 0.702 | -232.8 |
| 1048 | 43 | 7.31 | 1.096 | — | 0.50 | 23.92 | 0.49 | 0.721 | -236.2 |
| 1050 | 43 | 7.30 | 1.111 | — | 0.48 | 24.59 | 0.48 | 0.724 | -239.2 |
| | Sampled at 1051 | | | | | | | | |
| 1104 | 48 | 7.36 | 1.272 | — | 0.66 | 21.10 | 0.66 | 0.872 | -256.7 |
| 1106 | 48 | 7.35 | 1.395 | — | 0.51 | 23.01 | 0.72 | 0.934 | -259.9 |
| 1108 | 48 | 7.34 | 1.448 | — | 0.49 | 23.60 | 0.72 | 0.936 | -262.8 |
| | Sampled at 1109 | | | | | | | | |
| 1122 | 58 | 7.40 | 3.876 | — | 0.62 | 20.88 | 1.96 | 2.435 | -254.8 |
| 1124 | 58 | 7.40 | 3.973 | — | 0.52 | 20.82 | 2.08 | 2.558 | -257.5 |
| 1126 | 58 | 7.39 | 4.013 | — | 0.50 | 22.46 | 2.12 | 2.603 | -260.1 |
| | Sampled at 1127 | | | | | | | | |
| 1138 | 63 | 7.43 | 4.250 | — | 0.50 | 21.96 | 2.26 | 2.762 | -251.0 |
| 1140 | 63 | 7.43 | 4.244 | — | 0.48 | 22.59 | 2.26 | 2.759 | -252.3 |
| 1142 | 63 | 7.43 | 4.238 | — | 0.47 | 22.74 | 2.25 | 2.754 | -253.6 |
| | Sampled at 1143 | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0066 (AG)

Date: 2/11/10

Time

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 1255 | 28 | 7.17 | 1.382 | — | 1.00 | 22.28 | 0.69 | 0.896 | -155.3 |
| 1257 | 28 | 7.17 | 1.360 | — | 0.94 | 22.66 | 0.68 | 0.883 | -158.9 |
| 1259 | 28 | 7.20 | 1.345 | — | 0.86 | 22.64 | 0.67 | 0.873 | -164.7 |
| | Sampled at | | 1300 | | | | | | |
| 1310 | 38 | 7.24 | 1.260 | — | 0.67 | 21.00 | 0.64 | 0.840 | -207.9 |
| 1312 | 38 | 7.24 | 1.330 | — | 0.60 | 20.90 | 0.69 | 0.902 | -210.9 |
| 1314 | 38 | 7.24 | 1.437 | — | 0.55 | 21.43 | 0.74 | 0.954 | -215.2 |
| | Sampled at | | 1315 | | | | | | |
| 1327 | 43 | 7.32 | 1.467 | — | 0.82 | 22.10 | 0.75 | 0.957 | -219.6 |
| 1329 | 43 | 7.31 | 1.513 | — | 0.76 | 20.00 | 0.77 | 0.986 | -221.9 |
| 1331 | 43 | 7.31 | 1.533 | — | 0.73 | 19.96 | 0.78 | 0.998 | -224.3 |
| | Sampled at | | 1333 | | | | | | |
| 1344 | 48 | 7.35 | 1.467 | — | 0.66 | 19.35 | 0.74 | 0.952 | -229.3 |
| 1346 | 48 | 7.33 | 1.445 | — | 0.65 | 19.35 | 0.69 | 0.911 | -229.3 |
| 1348 | 48 | 7.32 | 1.388 | — | 0.62 | 19.80 | 0.64 | 0.836 | -223.1 |
| | Sampled at | | 1349 | | | | | | |
| 1402 | 58 | 7.37 | 1.443 | — | 0.50 | 18.98 | 0.73 | 0.940 | -240.9 |
| 1404 | 58 | 7.36 | 1.463 | — | 0.50 | 19.00 | 0.74 | 0.954 | -242.5 |
| 1406 | 58 | 7.36 | 1.491 | — | 0.49 | 19.01 | 0.76 | 0.970 | -243.9 |
| | Sampled at | | 1407 | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM** Project Number: FR1681

DPT Location: DPT0067 (North Side of Building) Date: 2/11/10

| ~~DPT~~ Time Location | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ m g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 1440 | 10 | 7.40 | 0.640 | — | 1.29 | 20.20 | 0.30 | 0.391 | -112.0 |
| 1442 | 10 | 7.24 | 0.574 | — | 0.69 | 20.56 | 0.27 | 0.356 | -106.8 |
| 1444 | 10 | 7.15 | 0.533 | — | 0.65 | 20.71 | 0.25 | 0.340 | -104.4 |
| | | | | | | | | | |
| 1508 | 18 | 7.16 | 0.648 | — | 0.83 | 21.44 | 0.38 | 0.515 | -164.7 |
| 1510 | 18 | 7.05 | 0.822 | — | 0.61 | 23.90 | 0.41 | 0.541 | -160.4 |
| 1512 | 18 | 7.02 | 0.838 | — | 0.57 | 24.33 | 0.41 | 0.547 | -152.4 |
| | Sampled at 1513 | | | | | | | | |
| 1520 | 28 | 7.20 | 0.838 | — | 1.09 | 22.34 | 0.42 | 0.555 | -172.3 |
| 1522 | 28 | 7.25 | 0.854 | — | 0.84 | 22.69 | 0.42 | 0.554 | -173.7 |
| 1524 | 28 | 7.24 | 0.855 | — | 0.77 | 23.88 | 0.42 | 0.554 | -176.9 |
| ~~1526~~ | Sampled at | | 1525 | | | | | | |
| 1532 | 38 | 7.39 | 0.908 | — | 0.46 | 20.75 | 0.45 | 0.594 | -201.8 |
| 1534 | 38 | 7.38 | 0.940 | — | 0.40 | 22.20 | 0.46 | 0.612 | -201.6 |
| 1536 | 38 | 7.37 | 0.950 | — | 0.37 | 23.04 | 0.47 | 0.618 | -197.1 |
| | Sampled at | | 1537 | | | | | | |
| 1548 | 43 | 7.47 | 0.972 | — | 0.75 | 20.82 | 0.49 | 0.636 | -215.6 |
| 1550 | 43 | 7.42 | 1.006 | — | 0.45 | 21.27 | 0.50 | 0.655 | -208.6 |
| 1552 | 43 | 7.34 | 1.033 | — | 0.41 | 22.38 | 0.51 | 0.671 | -196.6 |
| | Sampled at | | 1553 | | | | | | |
| 1605 | 48 | 7.45 | 0.958 | — | 0.70 | 20.82 | 0.48 | 0.634 | -223.6 |
| 1607 | 48 | 7.43 | 0.996 | — | 0.50 | 21.74 | 0.50 | 0.669 | -225.4 |
| 1609 | 48 | 7.40 | 1.033 | — | 0.47 | 22.68 | 0.52 | 0.680 | -207.8 |
| | Sampled at | | 1610 | | | | | | |
| 1625 | 58 | 7.47 | 3.447 | — | 0.44 | 21.25 | 1.85 | 2.266 | -233.6 |
| 1627 | 58 | 7.45 | 3.714 | — | 0.40 | 21.95 | 1.98 | 2.435 | -238.7 |
| 1629 | 58 | 7.37 | 3.868 | — | 0.38 | 22.43 | 2.05 | 2.519 | -237.4 |
| | Sampled at | | 1630 | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0068 (T)

Date: 2/2/10

| Time DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0755 | 28 | 7.32 | 0.710 | — | 1.24 | 23.49 | 0.35 | 0.461 | -177.9 |
| 0757 | 28 | 7.28 | 0.710 | — | 0.43 | 24.11 | 0.35 | 0.463 | -181.3 |
| 0759 | 28 | 7.33 | 0.713 | — | 0.35 | 24.36 | 0.35 | 0.463 | -180.1 |
| | Sampled at 0800 | | | | | | | | |
| 0807 | 38 | 7.38 | 0.748 | — | 0.31 | 24.04 | 0.36 | 0.486 | -173.3 |
| 0809 | 38 | 7.31 | 0.747 | — | 0.36 | 24.36 | 0.36 | 0.486 | -168.7 |
| 0811 | 38 | 7.29 | 0.749 | — | 0.28 | 24.43 | 0.36 | 0.487 | -165.8 |
| | Sampled at 0812 | | | | | | | | |
| 0823 | 43 | 7.22 | 1.120 | — | 0.32 | 24.25 | 0.55 | 0.724 | -149.0 |
| 0825 | 43 | 7.15 | 1.107 | — | 0.31 | 24.47 | 0.55 | 0.719 | -144.4 |
| 0827 | 43 | 7.13 | 1.107 | — | 0.31 | 24.44 | 0.55 | 0.719 | -143.0 |
| | Sampled at 0828 | | | | | | | | |
| 0840 | 48 | 7.31 | 1.541 | — | 0.39 | 23.73 | 0.79 | 1.026 | -159.7 |
| 0842 | 48 | 7.26 | 1.586 | — | 0.35 | 23.93 | 0.80 | 1.035 | -154.5 |
| 0844 | 48 | 7.22 | 1.597 | — | 0.34 | 23.96 | 0.80 | 1.039 | -151.6 |
| | Sampled at 0845 | | | | | | | | |
| 0855 | 58 | 7.32 | 3.659 | — | 0.29 | 23.72 | 1.94 | 2.396 | -175.1 |
| 0857 | 58 | 7.37 | 3.714 | — | 0.27 | 23.89 | 1.97 | 2.439 | -175.3 |
| 0859 | 58 | 7.36 | 3.765 | — | 0.26 | 23.93 | 1.99 | 2.460 | -173.8 |
| | Sampled at 0900 | | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM** Project Number: FR1681

DPT Location: DPT00-69 - (next to road - East of road - west of building) Date: 2/2/10

| ~~DPT~~ Time Location | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ m g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0922 | 10 | 7.30 | 0.826 | — | 1.04 | 23.37 | 0.40 | 0.536 | -156.9 |
| 0924 | 10 | 7.30 | 0.819 | — | 0.82 | 23.46 | 0.40 | 0.530 | -158.1 |
| 0926 | 10 | 7.30 | 0.811 | — | 0.62 | 23.46 | 0.40 | 0.526 | -158.2 |
| | Sampled at | 0927 | | | | | | | |
| 0946 | 18 | 7.46 | 0.660 | — | 1.05 | 24.74 | 0.31 | 0.417 | -173.4 |
| 0948 | 18 | 7.46 | 0.637 | — | 0.47 | 25.47 | 0.31 | 0.412 | -177.2 |
| 0950 | 18 | 7.49 | 0.633 | — | 0.37 | 25.73 | 0.31 | 0.410 | -177.4 |
| | Sampled at | 0951 | | | | | | | |
| 0958 | 28 | 7.38 | 1.035 | — | 0.41 | 24.17 | 0.52 | 0.687 | -167.6 |
| 1000 | 28 | 7.25 | 1.072 | — | 0.31 | 24.95 | 0.54 | 0.710 | -162.8 |
| 1002 | 28 | 7.21 | 1.101 | — | 0.30 | 25.29 | 0.55 | 0.720 | -159.7 |
| | Sampled at | 1003 | | | | | | | |
| 1235 | 38 | 7.71 | 0.626 | — | 0.93 | 21.35 | 0.30 | 0.406 | -239.9 |
| 1238 | 38 | 7.70 | 0.629 | — | 0.56 | 22.34 | 0.31 | 0.410 | -240.6 |
| 1239 | 38 | 7.68 | 0.647 | — | 0.32 | 22.43 | 0.32 | 0.424 | -237.0 |
| | Sampled at | 1240 | | | | | | | |
| 1252 | 43 | 7.62 | 0.890 | — | 0.55 | 20.20 | 0.45 | 0.592 | -223.0 |
| 1254 | 43 | 7.52 | 0.963 | — | 0.36 | 21.49 | 0.48 | 0.628 | -214.0 |
| 1256 | 43 | 7.51 | 0.990 | — | 0.31 | 22.56 | 0.49 | 0.645 | -214.9 |
| | Sampled at | 1257 | | | | | | | |
| 1308 | 48 | 7.50 | 1.125 | — | 0.38 | 20.58 | 0.57 | 0.735 | -227.5 |
| 1310 | 48 | 7.43 | 1.197 | — | 0.32 | 21.55 | 0.61 | 0.782 | -218.7 |
| 1312 | 48 | 7.38 | 1.272 | — | 0.30 | 22.45 | 0.64 | 0.829 | -211.1 |
| | Sampled at | 1313 | | | | | | | |
| 1325 | 58 | 7.44 | 3.598 | — | 0.38 | 21.17 | 1.92 | 2.354 | -204.9 |
| 1327 | 58 | 7.41 | 3.693 | — | 0.36 | 21.89 | 1.96 | 2.412 | -201.3 |
| 1329 | 58 | 7.38 | 3.778 | — | 0.33 | 22.31 | 2.01 | 2.462 | -199.0 |
| | Sampled at | 1330 | | | | | | | |
| | | | | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0070 (AC)

Date: 2/2/10

| ~~DPT~~ Location JRB / Time | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1407 | 28 | 7.23 | 0.841 | — | 1.62 | 22.55 | 0.41 | 0.543 | -123.5 |
| 1409 | 28 | 7.15 | 0.833 | — | 0.85 | 23.05 | 0.41 | 0.541 | -125.0 |
| 1411 | 28 | 7.13 | 0.831 | — | 0.65 | 23.31 | 0.41 | 0.539 | -125.1 |
| | Sampled at | | 1412 | | | | | | |
| 1418 | 38 | 7.39 | 0.712 | — | 0.46 | 22.67 | 0.34 | 0.450 | -177.3 |
| 1420 | 38 | 7.41 | 0.684 | — | 0.37 | 23.31 | 0.33 | 0.439 | -176.3 |
| 1422 | 38 | 7.38 | 0.674 | — | 0.34 | 23.73 | 0.33 | 0.437 | -172.9 |
| | Sampled at | | 1423 | | | | | | |
| 1432 | 43 | 7.46 | 0.771 | — | 0.67 | 21.77 | 0.40 | 0.535 | -178.1 |
| 1434 | 43 | 7.42 | 0.848 | — | 0.34 | 22.27 | 0.43 | 0.566 | -174.3 |
| 1436 | 43 | 7.38 | 0.884 | — | 0.31 | 22.61 | 0.44 | 0.583 | -170.0 |
| | Sampled at | | 1437 | | | | | | |
| 1446 | 48 | 7.51 | 0.947 | — | 0.46 | 22.07 | 0.48 | 0.642 | -181.6 |
| 1448 | 48 | 7.41 | 1.016 | — | 0.28 | 22.72 | 0.51 | 0.679 | -175.5 |
| 1450 | 48 | 7.33 | 1.071 | — | 0.27 | 23.10 | 0.54 | 0.708 | -167.5 |
| | Sampled at | | 1451 | | | | | | |
| 1502 | 58 | 7.37 | 2.040 | — | 0.90 | 22.06 | 1.28 | 1.758 | -167.8 |
| 1504 | 58 | 7.40 | 2.979 | — | 0.62 | 21.95 | 1.64 | 2.066 | -172.3 |
| 1506 | 58 | 7.41 | 3.260 | — | 0.30 | 22.08 | 1.74 | 2.163 | -174.1 |
| | Sampled at | | 1507 | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: Time DPT0071 (?)

Date: 2/2/10

| ~~DPT~~ TRD ~~Location~~ | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 1530 | 28 | 7.58 | 1.007 | — | 1.30 | 22.73 | 0.44 | 0.570 | -157.3 |
| 1532 | 28 | 7.46 | 0.835 | — | 0.42 | 23.49 | 0.39 | 0.515 | -148.7 |
| 1534 | 28 | 7.39 | 0.773 | — | 0.33 | 23.60 | 0.36 | 0.480 | -144.9 |
| | Sampled at 1535 | | | | | | | | |
| 1552 | 38 | 7.36 | 0.646 | — | 0.84 | 22.00 | 0.31 | 0.421 | -149.1 |
| 1554 | 38 | 7.36 | 0.656 | — | 0.47 | 22.02 | 0.33 | 0.438 | -150.3 |
| 1556 | 38 | 7.36 | 0.686 | — | 0.38 | 22.13 | 0.34 | 0.455 | -152.0 |
| | Sampled at 1557 | | | | | | | | |
| 1606 | 43 | 7.39 | 0.659 | — | 0.45 | 22.07 | 0.32 | 0.430 | -157.5 |
| 1608 | 43 | 7.39 | 0.691 | — | 0.34 | 22.02 | 0.35 | 0.466 | -158.0 |
| 1610 | 43 | 7.38 | 0.722 | — | 0.32 | 22.05 | 0.34 | 0.446 | -158.7 |
| | Sampled at 1611 | | | | | | | | |
| 1619 | 48 | 7.39 | 0.529 | — | 0.58 | 21.95 | 0.26 | 0.343 | -159.9 |
| 1621 | 48 | 7.39 | 0.520 | — | 0.51 | 21.92 | 0.25 | 0.330 | -160.5 |
| 1623 | 48 | 7.39 | 0.501 | — | 0.48 | 21.91 | 0.24 | 0.320 | -161.0 |
| | Sampled at 1624 | | | | | | | | |
| 1635 | 58 | 7.39 | 0.984 | — | 0.90 | 21.71 | 0.55 | 0.724 | -163.5 |
| 1637 | 58 | 7.38 | 1.123 | — | 0.36 | 21.73 | 0.56 | 0.730 | -164.2 |
| 1639 | 58 | 7.38 | 1.117 | — | 0.31 | 21.74 | 0.55 | 0.720 | -164.9 |
| | Sampled at 1640 | | | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0072 (AA)

Date: 2/3/10

Time

| ~~DPT Location~~ MW3 | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0742 | 28 | 6.78 | 1.247 | — | 1.16 | 15.06 | 0.63 | 0.812 | -115.8 |
| 0744 | 28 | 6.81 | 1.248 | — | 0.59 | 15.42 | 0.62 | 0.808 | -122.6 |
| 0746 | 28 | 6.85 | 1.232 | — | 0.41 | 16.68 | 0.61 | 0.794 | -128.9 |
| | Sampled at | 0747 | | | | | | | |
| 0759 | 38 | 7.01 | 1.382 | — | 0.67 | 19.37 | 0.86 | 0.128 | -148.6 |
| 0801 | 38 | 6.88 | 1.782 | — | 0.44 | 21.09 | 0.92 | 1.186 | -143.6 |
| 0803 | 38 | 6.87 | 1.849 | — | 0.44 | 21.75 | 0.94 | 1.207 | -139.0 |
| | Sampled at | 0804 | | | | | | | |
| 0814 | 43 | 7.09 | 2.074 | — | 0.82 | 18.25 | 1.09 | 1.385 | -124.8 |
| 0816 | 43 | 7.08 | 2.165 | — | 0.38 | 19.50 | 1.13 | 1.442 | -121.7 |
| 0818 | 43 | 7.05 | 2.244 | — | 0.35 | 20.11 | 1.17 | 1.478 | -118.9 |
| | Sampled at | 0819 | | | | | | | |
| 0828 | 48 | 7.21 | 2.380 | — | 0.72 | 17.96 | 1.24 | 1.567 | -131.8 |
| 0830 | 48 | 7.17 | 2.445 | — | 0.49 | 19.06 | 1.27 | 1.605 | -128.4 |
| 0832 | 48 | 7.13 | 2.489 | — | 0.44 | 19.84 | 1.30 | 1.635 | -125.5 |
| | Sampled at | 0833 | | | | | | | |
| 0845 | 58 | 7.36 | 4.182 | — | 0.61 | 17.95 | 2.28 | 2.795 | -152.3 |
| 0847 | 58 | 7.37 | 4.425 | — | 0.37 | 19.26 | 2.44 | 2.988 | -156.9 |
| 0849 | 58 | 7.35 | 4.686 | — | 0.33 | 20.23 | 2.56 | 3.118 | -159.7 |
| | Sampled at | 0850 | | | | | | | |
| 0901 | 63 | 7.55 | 5.155 | — | 0.75 | 16.80 | 2.78 | 3.346 | -198.7 |
| 0903 | 63 | 7.53 | 5.175 | — | 0.32 | 17.97 | 2.82 | 3.396 | -195.0 |
| 0905 | 63 | 7.52 | 5.307 | — | 0.26 | 18.98 | 2.93 | 3.524 | -191.8 |
| | Sampled at | 0906 | | | | | | | |
| 1428 | 10 | 7.24 | 1.010 | — | 1.65 | 18.58 | 0.49 | 0.641 | -130.4 |
| 1430 | 10 | 7.23 | 0.979 | — | 0.74 | 18.79 | 0.48 | 0.630 | -131.2 |
| 1432 | 10 | 7.22 | 0.964 | — | 0.59 | 18.93 | 0.48 | 0.624 | -132.2 |
| | Sampled at | 1433 | | | | | | | |
| 1440 | 18 | 7.25 | 0.934 | — | 1.42 | 19.40 | 0.49 | 0.647 | -140.2 |
| 1442 | 18 | 7.24 | 1.057 | — | 1.21 | 19.44 | 0.55 | 0.733 | -140.3 |
| 1444 | 18 | 7.23 | 1.156 | — | 1.01 | 19.57 | 0.58 | 0.764 | -140.5 |
| | Sampled at | 1445 | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0073 (AF)

Date: 2.3.10

| Time DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0938 | 28 | 6.84 | 1.320 | — | 1.17 | 20.08 | 0.66 | 0.858 | -91.5 |
| 0940 | 28 | 6.87 | 1.322 | — | 0.87 | 20.63 | 0.66 | 0.858 | -95.5 |
| 0942 | 28 | 6.89 | 1.319 | — | 0.71 | 21.21 | 0.66 | 0.859 | -95.9 |
| | Sampled at 0943 | | | | | | | | |
| 0954 | 38 | 7.09 | 2.138 | — | 1.61 | 21.68 | 1.11 | 1.413 | -126.0 |
| 0956 | 38 | 7.06 | 2.194 | — | 1.05 | 22.35 | 1.13 | 1.438 | -123.2 |
| 0958 | 38 | 7.03 | 2.224 | — | 0.88 | 22.70 | 1.14 | 1.452 | -119.9 |
| | Sampled at 0959 | | | | | | | | |
| 1005 | 43 | 7.26 | 2.132 | — | 0.65 | 18.23 | 1.11 | 1.408 | -141.1 |
| 1007 | 43 | 7.19 | 2.209 | — | 0.45 | 19.70 | 1.15 | 1.462 | -139.0 |
| 1009 | 43 | 7.13 | 2.275 | — | 0.42 | 20.50 | 1.19 | 1.501 | -134.8 |
| | Sampled at 1010 | | | | | | | | |
| 1020 | 48 | 7.25 | 2.171 | — | 0.49 | 18.26 | 1.15 | 1.456 | -164.6 |
| 1022 | 48 | 7.27 | 2.307 | — | 0.44 | 20.00 | 1.23 | 1.556 | -156.2 |
| 1024 | 48 | 7.20 | 2.429 | — | 0.42 | 20.89 | 1.27 | 1.600 | -151.6 |
| | Sampled at 1025 | | | | | | | | |
| 1036 | 58 | 7.30 | 4.096 | — | 1.19 | 17.88 | 2.30 | 2.846 | -154.5 |
| 1038 | 58 | 7.33 | 4.592 | — | 0.40 | 18.77 | 2.56 | 3.128 | -157.0 |
| 1040 | 58 | 7.33 | 4.919 | — | 0.30 | 19.56 | 2.68 | 3.246 | -156.8 |
| | Sampled at 1041 | | | | | | | | |
| 1406 | 10 | 7.07 | 0.853 | — | 1.59 | 19.16 | 0.41 | 0.543 | -60.0 |
| 1408 | 10 | 7.01 | 0.823 | — | 0.86 | 19.43 | 0.40 | 0.528 | -58.0 |
| 1410 | 10 | 6.98 | 0.798 | — | 0.60 | 19.73 | 0.39 | 0.513 | -56.2 |
| | Sampled at 1411 | | | | | | | | |
| 1412 | 18 | 7.00 | 1.036 | — | 0.89 | 20.94 | 0.84 | 0.715 | -83.3 |
| 1414 | 18 | 7.08 | 1.122 | — | 0.51 | 21.28 | 0.57 | 0.744 | -93.2 |
| 1416 | 18 | 7.10 | 1.152 | — | 0.40 | 21.29 | 0.58 | 0.752 | -96.9 |
| | Sampled at 1417 | | | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0074 (Y)

Date: 2/3/10

| ~~DPT~~ Time Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1110 | 28 | 6.89 | 1.316 | — | 1.09 | 22.09 | 0.66 | 0.852 | -82.1 |
| 1112 | 28 | 6.81 | 1.310 | — | 0.59 | 23.15 | 0.65 | 0.851 | -80.6 |
| 1114 | 28 | 6.76 | 1.309 | — | 0.64 | 23.89 | 0.65 | 0.847 | -79.3 |
| | Sampled at 1115 | | | | | | | | |
| 1131 | 38 | 6.87 | 1.555 | — | 0.70 | 23.46 | 0.83 | 1.086 | -113.3 |
| 1133 | 38 | 6.90 | 1.700 | — | 0.59 | 24.50 | 0.87 | 1.120 | -114.0 |
| 1135 | 38 | 6.90 | 1.733 | — | 0.57 | 24.86 | 0.88 | 1.131 | -114.2 |
| | Sampled at 1136 | | | | | | | | |
| 1221 | 43 | 7.08 | 2.259 | — | 0.61 | 21.66 | 1.20 | 1.523 | -123.8 |
| 1223 | 43 | 7.07 | 2.476 | — | 0.55 | 22.83 | 1.28 | 1.626 | -122.3 |
| 1225 | 43 | 7.07 | 2.541 | — | 0.51 | 23.61 | 1.35 | 1.707 | -116.6 |
| | Sampled at 1226 | | | | | | | | |
| 1237 | 48 | 7.22 | 2.753 | — | 0.27 | 23.78 | 1.45 | 1.822 | -135.4 |
| 1239 | 48 | 7.20 | 2.847 | — | 0.27 | 24.23 | 1.49 | 1.871 | -132.5 |
| 1241 | 48 | 7.18 | 2.899 | — | 0.27 | 24.48 | 1.51 | 1.900 | -129.4 |
| | Sampled at 1242 | | | | | | | | |
| 1254 | 58 | 7.39 | 3.772 | — | 1.08 | 21.76 | 2.04 | 2.526 | -158.4 |
| 1256 | 58 | 7.40 | 4.060 | — | 0.47 | 22.66 | 2.22 | 2.748 | -163.3 |
| 1258 | 58 | 7.40 | 4.395 | — | 0.38 | 23.39 | 2.39 | 2.931 | -162.7 |
| | Sampled at 1259 | | | | | | 2.53 | | |
| 1310 | 63 | 7.46 | 4.540 | — | 1.53 | 19.95 | ~~3.005~~ | 3.025 | -178.1 |
| 1312 | 63 | 7.50 | 4.809 | — | 0.43 | 20.99 | 2.62 | 3.171 | -180.9 |
| 1314 | 63 | 7.50 | 4.930 | — | 0.31 | 21.78 | 2.67 | 3.238 | -182.3 |
| | Sampled at 1315 | | | | | | 1.18 | | |
| 1336 | 10 | 7.51 | 3.307 | — | 1.76 | 19.56 | ~~1.996~~ | 2.960 | -133.4 |
| 1338 | 10 | 7.46 | 2.613 | — | 1.13 | 19.87 | ~~1.564~~ 1.19 | 1.564 | -124.6 |
| 1340 | 10 | 7.44 | 1.961 | — | 0.47 | ~~0.082~~ | 0.99 | 1.232 | -120.7 |
| | Sampled at 1341 | | | | | | | | |
| 1345 | 18 | 7.23 | 1.413 | — | 1.65 | 21.02 | 0.70 | 0.914 | -110.8 |
| 1347 | 18 | 7.21 | 1.374 | — | 0.97 | 21.18 | 0.68 | 0.881 | -105.3 |
| 1349 | 18 | 7.20 | 1.343 | — | 0.76 | 21.43 | 0.67 | 0.866 | -100.5 |
| | Sampled at 1350 | | | | | | | | |

Note: Insert units if not provided on sheet.

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681 / CRHE

Date: 2-23-2010

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| 1535 | 0081 | 26-30 | — | — | — | — | NA | — | — | — | gray |
| | | | | | | | | | | | |
| 1550 | 0081 | 36-40 | — | — | — | NA | — | — | — | — | gray |
| | | | | | | | | | | | cleared some |
| | | | | | | | | | | | |
| 1605 | 0081 | 41-45 | — | — | — | NA | — | — | — | — | Gray |
| | | | | | | | | | | | cleared quickly |
| | | | | | | | | | | | |
| 1620 | 0081 | 46-50 | — | — | — | NA | — | — | — | — | gray |
| | | | | | | | | | | | cleared quickly |
| | | | | | | | | | | | |
| 1640 | 0081 | 56-60 | — | — | — | NA | — | — | — | — | Gray |
| | | | | | | | | | | | |
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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0075

CRHE -

Project Number: ~~WSHRE~~ Contractor RI / FR1681

Date: ~~FR1681~~ 1/22/10

| Screened Interval (ft) | DPT Location (Time) | Sample Depth (ft) | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ ~g/L | Temp deg. C | Salinity ' % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16-20 DPT75 | 0838 | 18 | 6.94 | 0.910 | - | 13.8 | 24.85 | 0.44 | 0.581 | -61.5 | light grey |
| | 0840 | ↓ | 7.05 | 0.855 | - | 8.84 | 25.25 | 0.42 | 0.552 | -86.4 | " |
| | 0842 | ↓ | 7.06 | 0.840 | - | 7.15 | 24.83 | 0.41 | 0.545 | -91.7 | " |
| | | Sampled @ | 0843 | | | | | | | | |
| 26-30 DPT75 | 0850 | 28 | 6.98 | 1.014 | - | 13.67 | 23.98 | 0.50 | 0.655 | -108.6 | light grey |
| | 0852 | ↓ | 6.86 | 0.993 | - | 6.54 | 24.74 | 0.49 | 0.644 | -100.1 | " |
| | 0854 | ↓ | 6.80 | 0.976 | - | 5.13 | 24.61 | 0.48 | 0.634 | -91.8 | " |
| | | Sampled @ | 0855 | | | | | | | | |
| 36-40 DPT75 | 0908 | 38 | 6.77 | 1.191 | - | 16.43 | 26.76 | 0.59 | 0.772 | -107.9 | grey |
| | 0910 | ↓ | 6.87 | 1.184 | - | 9.25 | 23.92 | 0.59 | 0.769 | -113.6 | light grey |
| | 0912 | ↓ | 6.85 | 1.180 | - | 5.69 | 24.21 | 0.59 | 0.767 | -117.4 | " |
| | | Sampled @ | 0913 | | | | | | | | |
| 41-45 DPT75 | 0925 | 43 | 7.01 | 1.461 | - | 28.78 | 22.14 | 0.74 | 0.965 | -133.4 | light grey |
| | 0927 | ↓ | 7.06 | 1.498 | - | 9.32 | 24.13 | 0.75 | 0.975 | -152.6 | " |
| | 0929 | ↓ | 7.06 | 1.498 | - | 4.84 | 24.82 | 0.75 | 0.973 | -157.8 | " |
| | | Sampled @ | 0930 | | | | | | | | |
| 46-50 DPT75 | 0945 | 48 | 7.18 | 1.362 | - | 22.60 | 21.80 | 0.69 | 0.893 | -171.0 | grey |
| | 0947 | ↓ | 7.19 | 1.428 | - | 9.52 | 24.10 | 0.72 | 0.938 | -188.8 | " |
| | 0949 | ↓ | 7.19 | 1.495 | - | 4.41 | 25.11 | 0.75 | 0.974 | -181.3 | " |
| | | Sampled @ | 0950 | | | | | | | | |
| 56-60 DPT75 | 1005 | 58 | 7.11 | 3.181 | - | 25.07 | 22.63 | 1.69 | 2.111 | -184.9 | grey |
| | 1007 | ↓ | 7.22 | 3.477 | - 6.09 | ~~63.81~~ | 23.88 | 1.85 | 2.292 | -198.8 | light grey |
| | 1009 | ↓ | 7.27 | 3.587 | - | 3.69 | 24.08 | 1.89 | 2.338 | -203.9 | " |
| | | Sampled @ | 1010 | | | | | | | | |

Note: Insert units if not provided on sheet.

(1) Turbidity above 999.9 NTU

(4) DO + Specific conductance failed CCV

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: PPT0076

Project Number: ~~CH2E~~ CRHE Contractors RI / FR 1681

Date: ~~FR 1681~~ 2/22/10 NS

| Screened Interval (ft) | DPT Location / Time | Sample Depth (ft) | pH std units | (2) Conductivity mS/cm | (1) Turbidity NTUs | (2) Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16-20 | 1058 | 18 | 7.64 | 1.038 | – | 13.07 | 23.59 | 0.51 | 0.652 | -104.8 | light grey |
| DPT76 | 1100 | ↓ | 7.00 | 0.982 | – | 3.99 | 25.24 | 0.48 | 0.635 | -108.1 | " |
| | 1102 | ↓ | 6.93 | 0.967 | – | 5.01 | 24.91 | 0.48 | 0.638 | -106.2 | " |
| | | Sampled @ | 1103 | | | | | | | | |
| 26-30 | 1111 | 28 | 7.00 | 0.993 | – | 14.01 | 24.15 | 0.49 | 0.643 | -135.4 | grey |
| DPT 76 | 1113 | ↓ | 6.95 | 0.989 | – | 6.23 | 24.89 | 0.49 | 0.643 | -136.2 | light grey |
| | 1115 | ↓ | 6.95 | 0.966 | – | 4.35 | 24.87 | 0.47 | 0.627 | -123.0 | " |
| | | Sampled @ | 1116 | | | | | | | | |
| 36-40 | 1202 | 38 | 7.20 | 1.137 | – | 13.18 | 26.23 | 056 | 0.735 | -127.8 | grey |
| DPT 76 | 1204 | ↓ | 6.95 | 1.104 | – | 7.91 | 26.46 | 0.54 | 0.716 | -135.6 | light grey |
| | 1206 | ↓ | 6.90 | 1.087 | – | 4.60 | 25.77 | 0.53 | 0.704 | -124.0 | " |
| | | Sampled @ | 1207 | | | | | | | | |
| 41-45 | 1219 | 43 | 7.07 | 1.150 | – | 18.97 | 25.97 | 0.58 | 0.763 | -145.6 | grey |
| DPT 76 | 1221 | ↓ | 7.04 | 1.195 | – | 5.58 | 26.76 | 0.59 | 0.777 | -149.0 | light grey |
| | 1223 | ↓ | 6.99 | 1.194 | – | 3.97 | 26.54 | 0.59 | 0.775 | -141.3 | " |
| | | Sampled @ | 1224 | | | | | | | | |
| 46-50 | 1237 | 48 | 7.23 | 1.058 | – | 16.78 | 25.07 | 0.52 | 0.682 | -174.5 | grey |
| DPT 76 | 1239 | ↓ | 7.23 | 1.102 | – | 4.72 | 26.20 | 0.55 | 0.728 | -188.5 | " |
| | 1241 | ↓ | 7.21 | 1.203 | – | 3.09 | 26.15 | 0.60 | 0.785 | -187.6 | light grey |
| | | Sampled @ | 1242 | | | | | | | | |
| 56-60 | 1255 | 58 | 7.20 | 3.025 | – | 10.19 | 26.08 | 1.53 | 1.920 | -205.5 | grey |
| DPT 76 | 1257 | ↓ | 7.36 | 3.029 | – | 4.13 | 25.85 | 1.60 | 2.006 | -210.3 | " |
| | 1259 | ↓ | 7.32 | 3.229 | – | 2.93 | 25.62 | 1.69 | 2.106 | -200.2 | light grey |
| | | Sampled @ | 1300 | | | | | | | | |

Note: Insert units if not provided on sheet. (1) Turbidity above 999.9 NTU

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(2) DO & Specific Conductance failed CCV

**DPT GEOCHEMICAL DATA FORM**
DPT Location: DPT0077

Project Number: CMRE Contractors RI / FR1681
Date: ~~FR1681~~ 2/22/10

| Screened Interval (ft) | Time / DPT Location | Sample Depth (ft) | pH std units | Conductivity mS/cm | (1) Turbidity NTUs | (2) Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16-20 | 1337 | 18 | 7.28 | 0.870 | - | 9.40 | 24.35 | 0.42 | 0.560 | -76.9 | light grey |
| DPT 77 | 1339 | ↓ | 6.97 | 0.841 | - | 5.96 | 23.84 | 0.41 | 0.545 | -80.7 | " |
| | 1341 | ↓ | 6.89 | 0.821 | - | 4.32 | 23.48 | 0.40 | 0.533 | -82.0 | " |
| | | Sampled @ | 1342 | | | | | | | | |
| 26-30 | 1350 | 28 | 7.11 | 0.841 | - | 17.89 | 24.21 | 0.65 | 0.846 | -106.1 | grey |
| DPT 77 | 1352 | ↓ | 6.90 | 1.330 | - | 6.25 | 24.22 | 0.66 | 0.866 | -111.6 | light grey |
| | 1354 | ↓ | 6.85 | 1.328 | - | 3.64 | 24.01 | 0.66 | 0.861 | -105.4 | " |
| | | Sampled @ | 1355 | | | | | | | | |
| 36-40 | 1405 | 38 | 7.07 | 0.694 | - | 19.80 | 24.74 | 0.37 | 0.500 | -160.8 | grey |
| DPT 77 | 1407 | ↓ | 7.09 | 0.757 | - | 5.89 | 25.10 | 0.37 | 0.488 | -164.5 | " |
| | 1409 | ↓ | 7.09 | 0.735 | - | 2.81 | 24.69 | 0.36 | 0.477 | -154.4 | light grey |
| | | Sampled @ | 1410 | | | | | | | | |
| 41-45 | 1422 | 43 | 7.09 | 0.559 | - | 16.50 | 24.31 | 0.33 | 0.447 | -144.4 | grey |
| DPT 77 | 1424 | ↓ | 7.13 | 0.701 | - | 3.43 | 24.46 | 0.34 | 0.457 | -145.4 | light grey |
| | 1426 | ↓ | 7.07 | 0.700 | - | 2.52 | 24.22 | 0.34 | 0.454 | -133.7 | " |
| | | Sampled @ | 1427 | | | | | | | | |
| 46-50 | 1439 | 48 | 7.17 | 0.587 | - | 13.91 | 25.31 | 0.35 | 0.486 | -130.4 | grey |
| DPT 77 | 1441 | ↓ | 7.13 | 0.787 | - | 3.71 | 25.32 | 0.38 | 0.516 | -149.2 | " |
| | 1443 | ↓ | 7.15 | 0.797 | - | 2.37 | 25.03 | 0.39 | 0.517 | -151.2 | light grey |
| | | Sampled @ | 1444 | | | | | | | | |
| 56-60 | 1457 | 58 | 6.96 | 2.491 | - | 12.17 | 25.30 | ~~1.35~~ ~~1.698~~ | 1.709 | -157.4 | grey |
| DPT 77 | 1459 | ↓ | 7.10 | 2.680 | - | 2.88 | 24.75 | 1.39 | 1.757 | -188.4 | light grey |
| | 1501 | ↓ | 7.32 | 2.780 | - | 2.02 | 24.81 | 1.44 | 1.808 | -205.7 | light grey |
| | | Sampled @ | 1502 | | | | | | | | |

Note: Insert units if not provided on sheet.

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(1) Turbidity above 999.9 NTU

(2) DO & Specific Conductance failed CCV

**DPT GEOCHEMICAL DATA FORM**
DPT Location: DPT 0078

Project Number: CHRE Contractors RI/FR1681
Date: ~~FR1681~~ 2/22/10 - 2/23/10

| Screened Interval (ft) | DPT Location / Time | Sample Depth (ft) | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16-20 DPT 78 | 1633 | 18 | 7.34 | 0.843 | — | 9.43 | 23.80 | 0.42 | 0.554 | -102.6 | light grey |
| | 1635 | ↓ | 7.04 | 0.831 | — | 3.66 | 23.35 | 0.41 | 0.538 | -115.9 | " |
| | 1637 | ↓ | 6.97 | 0.807 | — | 2.02 | 22.95 | 0.40 | 0.525 | -113.0 | " |
| | | Sampled @ | 1638 | | | | | | | | |
| 26-30 DPT 78 | 1645 | 28 | 6.96 | 0.846 | — | 11.44 | 23.63 | 0.40 | 0.535 | -136.2 | grey |
| | 1647 | ↓ | 7.02 | 0.842 | — | 3.87 | 23.51 | 0.41 | 0.551 | -139.0 | light grey |
| | 1649 | ↓ | 6.95 | 0.842 | — | 2.50 | 23.05 | 0.41 | 0.546 | -121.2 | " |
| | | Sampled @ | 1650 | | | | | | | | |
| 36-40 DPT 78 | 0823 | 38 | 6.86 | 1.578 | — | 10.15 | 20.29 | 0.79 | 1.024 | -111.3 | grey |
| | 0825 | ↓ | 6.94 | 1.694 | — | 4.38 | 21.77 | 0.86 | 1.099 | -124.6 | light grey |
| | 0827 | ↓ | 6.95 | 1.694 | — | 2.69 | 21.76 | 0.86 | 1.100 | -118.5 | " |
| | | Sampled @ | 0828 | | | | | | | | |
| 41-45 DPT 78 | 0849 | 43 | 6.98 | 1.889 | — | 6.95 | 22.54 | 1.00 | 1.289 | -149.2 | light grey |
| | 0851 | ↓ | 7.02 | 2.105 | — | 2.78 | 23.17 | 1.08 | 1.378 | -157.6 | " |
| | 0853 | ↓ | 7.07 | 2.127 | — | 1.93 | 23.12 | 1.09 | 1.382 | -159.4 | " |
| | | Sampled @ | 0854 | | | | | | | | |
| 46-50 DPT 78 | 0912 | 48 | 7.12 | 2.276 | — | 9.04 | 21.98 | 1.16 | 1.471 | -168.7 | light grey |
| | 0914 | ↓ | 7.16 | 2.334 | — | 2.65 | 22.71 | 1.21 | 1.528 | -167.7 | " |
| | 0916 | ↓ | 7.15 | 2.391 | — | 1.43 | 22.97 | 1.23 | 1.552 | -163.4 | " |
| | | Sampled @ | 0917 | | | | | | | | |
| 56-60 DPT 78 | 0938 | 58 | 7.18 | 3.342 | — | 4.79 | 21.89 | 1.79 | 2.231 | -148.0 | light grey |
| | 0940 | ↓ | 7.23 | 3.580 | — | 1.88 | 22.33 | 1.89 | 2.338 | -158.5 | " |
| | 0942 | ↓ | 7.25 | 3.655 | — | 1.30 | 22.45 | 1.93 | 2.380 | -161.2 | " |
| | | Sampled @ | 0943 | | | | | | | | |

Note: Insert units if not provided on sheet

(1) Turbidity above 999.9 NTU

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(2) DO & Specific Conductance failed CCV for sample depths 18 & 28

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT 0079

Project Number: ~~EHRE~~ CRUE Contractors RI / FR 1681

Date: ~~FR1681~~ 2/28/10 MS

| Screened Interval (ft) | DPT Location (Time) | Sample Depth (ft) | pH std units | Conductivity mS/cm | Turbidity (1) NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16-20 | 1038 | 18 | 7.31 | 0.811 | – | 7.85 | 23.49 | 0.39 | 0.519 | -135.6 | light grey |
| DPT 79 | 1037 | ↓ | 7.22 | 0.798 | – | 5.54 | 23.54 | 0.39 | 0.517 | -146.0 | " |
| | 1039 | ↓ | 7.18 | 0.786 | – | 1.45 | 23.35 | 0.38 | 0.509 | -144.9 | " |
| | | Sampled @ | 1040 | | | | | | | | |
| | ~~1052~~ MS | | | | | | | | | | |
| 26-30 | 1052 | 28 | 7.19 | 0.958 | – | 1.00 | 23.06 | 0.47 | 0.614 | -139.3 | grey |
| DPT 79 | 1054 | ↓ | 7.12 | 0.940 | – | 0.89 | 23.01 | 0.46 | 0.610 | -135.1 | light grey |
| | 1056 | ↓ | 7.03 | 0.927 | – | 0.93 | 22.92 | 0.46 | 0.602 | -122.8 | " |
| | | Sampled @ | 1057 | | | | | | | | |
| 36-40 | 1116 | 38 | 7.16 | 1.258 | – | 14.55 | 23.92 | 0.63 | 0.828 | -152.7 | light grey |
| DPT 79 | 1118 | ↓ | 7.20 | 1.295 | – | 2.37 | 24.01 | 0.65 | 0.843 | -155.2 | " |
| | 1120 | ↓ | 7.19 | 1.290 | – | 1.25 | 23.69 | 0.64 | 0.838 | -147.6 | " |
| | | Sampled @ | 1121 | | | | | | | | |
| 46-~~45~~-50 | 1208 | 48 | 7.49 | 1.905 | – | 7.35 | 23.93 | 1.01 | 1.302 | -154.9 | grey |
| DPT 79 | 1210 | ↓ | 7.26 | 2.136 | – | 2.20 | 24.18 | 1.10 | 1.401 | -167.2 | light grey |
| | 1212 | ↓ | 7.23 | 2.208 | – | 1.41 | 24.24 | 1.13 | 1.436 | -168.3 | " |
| | | Sampled @ | 1213 | | | | | | | | |
| 56-60 | 1256 | 58 | 7.65 | 3.179 | – | 8.78 | 24.93 | 1.70 | 2.137 | -162.7 | grey |
| DPT 79 | 1259 | ↓ | 7.48 | 3.392 | – | 2.52 | 24.95 | 1.79 | 2.220 | -175.9 | light grey |
| | 1300 | ↓ | 7.39 | 3.472 | – | 1.33 | 24.15 | 1.82 | 2.258 | -171.2 | " |
| | | Sampled @ | 1301 | | | | | | | | |
| 41-45 | 1318 | 43 | 7.49 | 1.889 | – | 7.79 | 25.27 | 0.94 | 1.209 | -140.9 | light grey |
| DPT 79 | 1320 | ↓ | 7.22 | 1.871 | – | 1.49 | 24.77 | 0.95 | 1.216 | -156.4 | " |
| | 1322 | ↓ | 7.20 | 1.866 | – | 1.15 | 24.68 | 0.95 | 1.213 | -160.7 | " |
| | | Sampled @ | 1323 | | | | | | | | |

Note: Insert units if not provided on sheet. (1) Turbidity above 999.9 NTU

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0080

Project Number: ~~CHRE~~ CRHE Contractors RI / FR1681

Date: ~~FR1681~~ 2/23/10 NS

| Screened Interval (ft) | Time / DPT Location | Sample Depth (ft) | pH std units | Conductivity mS/cm | (1) Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16-20 DPT80 | 1350 | 18 | 7.15 | 0.833 | – | 7.18 | 23.81 | 0.41 | 0.539 | -116.4 | grey |
| | 1352 | ↓ | 7.06 | 0.818 | – | 2.36 | 23.45 | 0.40 | 0.530 | -111.2 | light grey |
| | 1354 | ↓ | 6.99 | 0.804 | – | 0.85 | 23.11 | 0.39 | 0.521 | -107.1 | " |
| | | Sampled @ | 1355 | | | | | | | | |
| 26-30 DPT80 | 1411 | 28 | 7.16 | 0.853 | – | 5.54 | 24.46 | 0.42 | 0.552 | -126.8 | light grey |
| | 1413 | ↓ | 7.08 | 0.846 | – | 2.19 | 24.28 | 0.41 | 0.549 | -126.3 | " |
| | 1415 | ↓ | 7.03 | 0.835 | – | 1.35 | 23.90 | 0.41 | 0.541 | -121.9 | " |
| | | Sampled @ | 1416 | | | | | | | | |
| 36-40 DPT80 | 1454 | 38 | 7.55 | 0.822 | – | 4.61 | 25.61 | 0.44 | 0.587 | -211.9 | dark grey |
| | 1456 | ↓ | 7.44 | 01.135 | – | 1.36 | 25.32 | 0.57 | 0.751 | -214.7 | grey |
| | 1458 | ↓ | 7.46 | 0.872 | – | 0.98 | 25.34 | 0.42 | 0.561 | -220.1 | " |
| | | Sampled @ | 1459 | | | | | | | | |
| 41-45 DPT80 | 1518 | 43 | 7.22 | 1.680 | – | 14.80 | 24.08 | 0.86 | 1.112 | -164.8 | light grey |
| | 1520 | ↓ | 7.24 | 1.737 | – | 2.76 | 23.94 | 0.88 | 1.132 | -170.5 | " |
| | 1522 | ↓ | 7.25 | 1.753 | – | 1.32 | 23.83 | 0.89 | 1.140 | -168.0 | " |
| | | Sampled @ | 1523 | | | | | | | | |
| 46-50 DPT80 | 1544 | 48 | 7.25 | 1.931 | – | 1.49 | 25.34 | .98 | 1.256 | -173.6 | grey |
| | | ↓ | Low water flow | | | | | | | | |
| | | Sampled @ | 1545 | | | | | | | | |
| 56-60 DPT80 | 1604 | 58 | 7.69 | 2.847 | – | 8.20 | 24.86 | 1.53 | 1.925 | -135.5 | light grey |
| | 1606 | ↓ | 7.34 | 3.154 | – | 2.23 | 24.00 | 1.67 | 2.078 | -181.5 | " |
| | 1609 | ↓ | 7.34 | 3.265 | – | 0.84 | 23.65 | 1.71 | 2.128 | -186.3 | " |
| | | Sampled @ | 1609 | | | | | | | | |

Note: Insert units if not provided on sheet. (1) Turbidity above 999.9 NTU

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681 / CRHE

Date: 2-23-2010

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1535 | 0081 | 26-30 | | | | | NA | | | | gray |
| 1550 | 0081 | 36-40 | | | | NA | | | | | gray |
| | | | | | | | | | | | cleared some |
| 1605 | 0081 | 41-45 | | | | NA | | | | | gray |
| | | | | | | | | | | | cleared quickly |
| 1620 | 0081 | 46-50 | | | | NA | | | | | gray |
| | | | | | | | | | | | cleared quickly |
| 1640 | 0081 | 56-60 | | | | NA | | | | | gray |

Notes:
DPT = Direct Push Technology
ft BLS = feet below land surface
mS/cm = milliSiemens per centimeter (or millimhos per centimeter)
NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)
Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0082

Project Number: CRME Contractor RI/FR1681

Date: ~~1/FR1681~~ 2/24/10

| Screened Interval (ft) | DPT Location | Time / Sample Depth (ft) | pH std units | Conductivity mS/cm | (1) Turbidity NTUs | (2) Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| 8-12 | 0803 | 10 | 7.06 | 0.958 | - | 7.61 | 19.04 | 0.42 | 0.606 | -16.5 | Black |
| DPT82 | 0805 | ↓ | 6.75 | 0.877 | - | 2.76 | 19.82 | 0.43 | 0.43 | -49.3 | Dark brown |
| | 0807 | ↓ | 6.68 | 0.866 | - | 2.77 | 19.91 | 0.43 | 0.562 | -60.5 | Brown |
| | | Sampled @ | 0808 | | | | | | | | |
| | | | | | | | | | | | |
| 16-20 | 0814 | 18 | 6.80 | 0.804 | - | 7.27 | 20.78 | 0.40 | 0.524 | -103.5 | grey |
| DPT82 | 0816 | ↓ | 6.83 | 0.802 | - | 3.13 | 21.62 | 0.39 | 0.521 | -110 | light grey |
| | 0818 | ↓ | 6.88 | 0.794 | - | 1.61 | 22.18 | 0.39 | 0.514 | -115.9 | " |
| | | Sampled @ | 0819 | | | | | | | | |
| | | | | | | | | | | | |
| 26-30 | 0826 | 28 | 6.98 | 0.856 | - | 18.03 | 20.17 | 0.42 | 0.552 | -102.4 | grey |
| DPT 82 | 0828 | ↓ | 6.86 | 0.849 | - | 2.43 | 21.49 | 0.41 | 0.553 | -110.6 | " |
| | 0830 | ↓ | 6.86 | 0.848 | - | 1.38 | 22.01 | 0.42 | 0.550 | -110.8 | light grey |
| | | Sampled @ | 0831 | | | | | | | | |
| | | | | | | | | | | | |
| 31-35 | 0841 | 33 | 7.04 | 0.657 | - | 3.08 | 19.46 | 0.34 | 0.453 | -148.9 | grey |
| DPT 82 | 0843 | ↓ | 7.08 | 0.692 | - | 0.59 | 21.65 | 0.34 | 0.453 | -168.2 | " |
| | 0845 | ↓ | 7.14 | 0.706 | - | 0.52 | 22.01 | 0.34 | 0.458 | -162.4 | light grey |
| | | Sampled @ | 0846 | | | | | | | | |
| 36-40 | 0903 | 38 | 7.57 | 0.851 | - | 11.74 | 20.44 | 0.42 | 0.556 | -101.2 | grey |
| DPT 82 | 0905 | ↓ | 7.12 | 0.876 | - | 2.03 | 22.03 | 0.43 | 0.571 | -114.6 | light grey |
| | 0907 | ↓ | 7.11 | 0.874 | - | 1.17 | 22.74 | 0.43 | 0.568 | -119.3 | " |
| | | Sampled @ | 0908 | | | | | | | | |
| 41-45 | 0919 | 43 | 7.01 | 0.577 | - | 10.46 | 20.52 | 0.80 | 1.039 | -101.6 | grey |
| DPT 82 | 0921 | ↓ | 7.03 | 1.687 | - | 1.56 | 22.03 | 0.86 | 1.107 | -110.8 | " |
| | 0923 | ↓ | 7.04 | 1.755 | - | 0.94 | 22.33 | 0.89 | 1.144 | -110.6 | light grey |
| | | Sampled @ | 0924 | | | | | | | | |
| 46-50 | 0948 | 48 | 7.13 | 1.744 | - | 9.35 | 20.65 | 0.89 | 1.153 | -101.9 | light grey |
| DPT 82 | 0950 | ↓ | 7.05 | 1.852 | - | 2.16 | 22.56 | 0.95 | 1.222 | -105.2 | " |
| | 0952 | ↓ | 7.07 | 1.913 | - | 0.95 | 22.54 | 0.97 | 1.244 | -105.7 | " |
| | | Sampled @ | 0953 | | | | | | | | |

Note: Insert units if not provided on sheet. (1) Turbidity above 999.9 NTU

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(2) DO failed CCV

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0083

Project Number: CRME ~~CTRE~~ Contractors RI / FR1681

Date: ~~FR1681~~ 2/24/10

| Screened Interval (ft) | DPT Location | Time / Sample Depth (ft) | pH std units | Conductivity mS/cm | (1) Turbidity NTUs | (2) Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8-12 | 1146 | 10 | 7.89 | 0.491 | - | 11.39 | 22.25 | 0.22 | 0.306 | -78.3 | Dark Brown |
| DPT83 | 1148 | ↓ | 7.40 | 0.470 | - | 1.58 | 22.84 | 0.23 | 0.305 | -93.4 | " |
| | 1150 | ↓ | 7.22 | 0.469 | - | 0.92 | 22.89 | 0.23 | 0.305 | -95.4 | Brown |
| | | Sampled @ | 1151 | | | | | | | | |
| 16-20 | 1156 | 18 | 7.10 | 0.499 | - | 10.18 | 22.74 | 0.25 | 0.347 | -106.6 | Grey |
| DPT83 | 1158 | ↓ | 7.11 | 0.543 | - | 1.02 | 24.23 | 0.26 | 0.349 | -121.1 | light grey |
| | 1200 | ↓ | 7.12 | 0.521 | - | 0.69 | 24.40 | 0.25 | 0.339 | -117.3 | " |
| | | Sampled @ | 1201 | | | | | | | | |
| 26-30 | 1208 | 28 | 7.18 | 0.658 | - | 3.45 | 23.68 | 0.32 | 0.428 | -114.2 | Grey |
| DPT83 | 1210 | ↓ | 7.09 | 0.658 | - | 0.48 | 24.61 | 0.32 | 0.428 | -119.2 | light grey |
| | 1212 | ↓ | 7.06 | 0.653 | - | 0.39 | 24.93 | 0.32 | 0.424 | -116.1 | " |
| | | Sampled @ | 1213 | | | | | | | | |
| 31-35 | 1221 | 33 | 7.36 | 0.343 | - | 9.43 | 23.73 | 0.25 | 0.370 | -117.8 | Grey |
| DPT83 | 1223 | ↓ | 7.20 | 0.646 | - | 0.52 | 24.70 | 0.31 | 0.419 | -145.1 | light grey |
| | 1225 | ↓ | 7.24 | 0.638 | - | 0.31 | 25.01 | 0.31 | 0.414 | -149.9 | " |
| | | Sampled @ | 1226 | | | | | | | | |
| 36-40 | 1237 | 38 | 7.31 | 0.591 | - | 5.23 | 24.87 | 0.32 | 0.436 | -149.7 | Grey |
| DPT83 | 1239 | ↓ | 7.19 | 0.702 | - | 0.56 | 25.64 | 0.34 | 0.455 | -150.4 | light grey |
| | 1241 | ↓ | 7.17 | 0.687 | - | 0.47 | 25.39 | 0.33 | 0.445 | -142.0 | " |
| | | Sampled @ | 1242 | | | | | | | | |
| 41-45 | 1304 | 43 | 7.25 | 0.904 | - | 9.30 | 25.64 | 0.45 | 0.602 | -118.2 | light grey |
| DPT83 | 1306 | ↓ | 7.00 | 01.011 | - | 0.57 | 26.27 | 0.50 | 0.656 | -109.7 | " |
| | 1308 | ↓ | 6.93 | 0.998 | - | 0.70 | 25.97 | 0.49 | 0.645 | -96.6 | " |
| | | Sampled @ | 1309 | | | | | | | | |
| 46-50 | 1321 | 48 | 6.92 | 1.116 | - | 9.96 | 25.73 | 0.57 | 0.759 | -130.8 | Grey |
| DPT83 | 1323 | ↓ | 6.99 | 1.398 | - | 0.69 | 26.31 | 0.72 | 0.942 | -123.3 | light grey |
| | 1325 | ↓ | 6.96 | 1.450 | - | 0.69 | 25.79 | 0.72 | 0.941 | -110.1 | " |
| | | Sampled @ | 1326 | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Insert units if not provided on sheet. (1) Turbidity above 999.9 NTU

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(2) DO failed CCV

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0084

Project Number: CRHE ~~CHRE~~ Contractor RI / FR1681

Date: ~~FR1681~~ 2/24/10 NS

| Screened Interval (ft) | DPT Location (Time) | Sample Depth (ft) | pH std units | Conductivity mS/cm | ① Turbidity NTUs | ② Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8-12 DPT84 | 1411 | 10 | 7.80 | 0.726 | - | 7.03 | 23.35 | 0.35 | 0.472 | -87.0 | grey |
| | 1413 | ↓ | 7.27 | 0.696 | - | 0.63 | 21.87 | 0.34 | 0.449 | -115.2 | light grey |
| | 1415 | ↓ | 7.07 | 0.659 | - | 0.70 | 21.30 | 0.32 | 0.427 | -109.2 | " |
| | | Sampled@ | 1416 | | | | | | | | |
| 16-20 DPT84 | 1422 | 18 | 6.78 | 0.825 | - | 7.76 | 23.51 | 0.41 | 0.549 | -130.2 | light grey |
| | 1424 | ↓ | 6.70 | 0.860 | - | 1.89 | 24.05 | 0.42 | 0.559 | -118.2 | " |
| | 1426 | ↓ | 6.75 | 0.854 | - | 0.66 | 23.67 | 0.42 | 0.555 | -117.3 | " |
| | | Sampled@ | 1427 | | | | | | | | |
| 26-30 DPT84 | 1435 | 28 | 7.04 | 0.921 | - | 9.04 | 23.60 | 0.46 | 0.616 | -153.4 | grey |
| | 1437 | ↓ | 7.18 | 0.966 | - | 0.94 | 24.30 | 0.48 | 0.630 | -171.2 | " |
| | 1439 | ↓ | 7.20 | 0.961 | - | 0.53 | 23.98 | 0.47 | 0.622 | -162.0 | light grey |
| | | Sampled@ | 1440 | | | | | | | | |
| 31-35 DPT84 | 1449 | 33 | 7.11 | 1.104 | - | 8.88 | 23.39 | 0.59 | 0.777 | -139.0 | grey |
| | 1451 | ↓ | 7.13 | 1.067 | - | 0.32 | 24.32 | 0.63 | 0.826 | -164.4 | light grey |
| | 1453 | ↓ | 7.15 | 1.077 | - | 0.24 | 24.14 | 0.64 | 0.830 | -160.1 | " |
| | | Sampled@ | 1454 | | | | | | | | |
| 36-40 DPT84 | 1517 | 38 | 7.03 | 1.307 | - | 11.94 | 21.09 | 0.65 | 0.854 | -133.6 | grey |
| | 1519 | ↓ | 6.96 | 1.366 | - | 1.37 | 22.71 | 0.69 | 0.895 | -140.7 | " |
| | 1521 | ↓ | 7.00 | 1.402 | - | 0.64 | 23.15 | 0.70 | 0.910 | -134.4 | light grey |
| | | Sampled@ | 1522 | | | | | | | | |
| 41-45 DPT84 | 1533 | 43 | 7.00 | 1.464 | - | 9.52 | 21.78 | 0.75 | 0.973 | -137.6 | grey |
| | 1535 | ↓ | 7.02 | 1.561 | - | 1.09 | 23.11 | 0.79 | 01.024 | -139.6 | light grey |
| | 1537 | ↓ | 7.03 | 1.611 | - | 0.64 | 23.21 | 0.81 | 01.049 | -130.9 | " |
| | | Sampled@ | 1538 | | | | | | | | |
| 46-50 DPT84 | 1552 | 48 | 7.19 | 1.554 | - | 13.22 | 21.10 | 0.84 | 1.077 | -124.4 | grey |
| | 1554 | ↓ | 7.09 | 1.691 | - | 1.27 | 22.19 | 0.86 | 1.106 | -134.0 | " |
| | 1556 | ↓ | 7.06 | 1.733 | - | 0.61 | 22.48 | 0.88 | 1.734 | -114.7 | light grey |
| | | Sampled@ | 1557 | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Insert units if not provided on sheet. ① Turbidity above 999.9 NTU

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② DO Failed CCV

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0085

Project Number: FR1681 - Contractor Rd

Date: 3/25/10

| Screened Interval (ft) | Time / DPT Location | Sample Depth (ft) | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8-12 DPT85 | 0816 | 10 | 6.52 | 0.721 | - | 8.75 | 14.57 | 0.34 | 0.447 | 32.7 | Dark brown |
| | 0818 | ↓ | 6.25 | 0.688 | - | 1.67 | 16.62 | 0.34 | 0.447 | -1.8 | Brown |
| | 0820 | ↓ | 6.70 | 0.683 | - | 1.35 | 16.98 | 0.33 | 0.443 | -20.2 | " |
| | | Sampled @ | 0821 | | | | | | | | |
| 16-20 DPT85 | 0827 | 18 | 6.67 | 0.752 | - | 12.66 | 12.77 | 0.46 | 0.604 | -87.9 | grey |
| | 0829 | ↓ | 6.71 | 0.986 | - | 0.38 | 18.11 | 0.49 | 0.642 | -107.4 | light grey |
| | 0831 | ↓ | 6.80 | 0.982 | - | 0.36 | 18.97 | 0.49 | 0.736 | -108.2 | " |
| | | Sampled @ | 0832 | | | | | | | | |
| 26-30 DPT85 | 0840 | 28 | 6.96 | 0.936 | - | 12.06 | 13.86 | 0.51 | 0.680 | -122.3 | grey/brown |
| | 0842 | ↓ | 6.90 | 1.126 | - | 1.05 | 18.40 | 0.57 | 0.747 | -131.7 | light grey |
| | 0844 | ↓ | 6.95 | 1.184 | - | 0.61 | 19.31 | 0.59 | 0.771 | -132.4 | " |
| | | Sampled @ | 0845 | | | | | | | | |
| 31-35 DPT85 | 0905 | 33 | 6.92 | 1.390 | - | 9.82 | 15.53 | 0.70 | 0.901 | -123.5 | Brown |
| | 0907 | ↓ | 6.89 | 1.468 | - | 1.29 | 19.10 | 0.75 | 0.963 | -138.2 | light grey |
| | 0909 | ↓ | 7.02 | 1.507 | - | 0.73 | 19.92 | 0.76 | 0.981 | -141.6 | " |
| | | Sampled @ | 0910 | | | | | | | | |
| 36-40 DPT85 | 0921 | 38 | 7.04 | 1.518 | - | 11.08 | 14.08 | 0.79 | 1.026 | -126.6 | grey |
| | 0923 | ↓ | 7.02 | 1.790 | - | 1.13 | 18.64 | 0.93 | 1.186 | -139.7 | light grey |
| | 0925 | ↓ | 7.10 | 1.899 | - | 0.56 | 19.31 | 0.97 | 1.237 | -142.7 | " |
| | | Sampled @ | 0926 | | | | | | | | |
| 41-45 DPT85 | 0940 | 43 | 7.16 | 1.701 | - | 7.45 | 17.04 | 0.89 | 1.140 | -158.1 | light grey |
| | 0942 | ↓ | 7.14 | 1.963 | - | 1.06 | 19.22 | 0.96 | 1.227 | -158.7 | " |
| | 0944 | ↓ | 7.18 | 1.949 | - | 0.61 | 19.63 | 01.00 | 1.271 | -150.3 | " |
| | | Sampled @ | 0945 | | | | | | | | |
| | 0959 | 48 | 7.11 | 1.757 | - | 2.70 | 19.56 | 0.90 | 1.157 | -147.7 | grey |
| | 1001 | ↓ | 7.17 | 1.784 | - | 0.64 | 19.87 | 0.93 | 1.193 | -147.5 | light grey |
| | 1003 | ↓ | 7.17 | 1.845 | - | 0.47 | 19.80 | 0.94 | 1.200 | -140.2 | " |
| | | Sampled @ | 1004 | | | | | | | | |
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Note: Insert units if not provided on sheet. (1) Turbidity above 999.9 NTU

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(2) Specific Conductance failed CCV

**DPT GEOCHEMICAL DATA FORM**
DPT Location: DPT0086

Project Number: FR1681 - Contractors Rd
Date: 3/25/10

| Screened Interval (ft) | Time / DPT Location | Sample Depth (ft) | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8-12 DPT86 | 1034 | 10 | 7.34 | 0.783 | - | 7.51 | 17.85 | 0.38 | 0.505 | -63.9 | Very Dark Brown |
| | 1036 | ↓ | 6.91 | 0.752 | - | 1.25 | 18.88 | 0.37 | 0.484 | -68.3 | Dark Brown |
| | 1038 | ↓ | 6.80 | 0.727 | - | 0.82 | 18.79 | 0.36 | 0.472 | -68.8 | Brown |
| | | Sampled @ | 1039 | | | | | | | | |
| 16-20 DPT86 | 1046 | 18 | 6.91 | 0.733 | - | 5.48 | 18.46 | 0.46 | 0.609 | -87.6 | grey |
| | 1048 | ↓ | 6.71 | 0.989 | - | 0.38 | 21.07 | 0.49 | 0.645 | -84.5 | light grey |
| | 1050 | ↓ | 6.76 | 0.978 | - | 0.41 | 20.85 | 0.48 | 0.634 | -81.2 | " |
| | | Sampled @ | 1051 | | | | | | | | |
| 26-30 DPT86 | 1151 | 28 | 7.44 | 0.633 | - | 13.16 | 16.97 | 0.41 | 0.549 | -58.8 | grey |
| | 1153 | ↓ | 6.90 | 0.951 | - | 1.58 | 20.46 | 0.47 | 0.624 | -66.4 | light grey |
| | 1155 | ↓ | 6.86 | 0.978 | - | 0.85 | 21.21 | 0.48 | 0.636 | -68.4 | " |
| | | Sampled @ | 1156 | | | | | | | | |
| 31-35 DPT86 | | 33 | | | - | | | | | | |
| | 1206 | ↓ | 7.06 | 1.034 | - | 8.30 | 18.52 | 0.62 | 0.818 | -111.9 | grey |
| | 1208 | ↓ | 6.98 | 1.368 | - | 0.78 | 21.14 | 0.69 | 0.880 | -109.3 | " |
| | 1210 | ↓ | 6.99 | 1.388 | - | 0.51 | 21.61 | 0.70 | 0.903 | -99.5 | light grey |
| | | Sampled @ | 1211 | | | | | | | | |
| 36-40 DPT86 | 1223 | 38 | 7.13 | 1.264 | - | 10.03 | 18.62 | 0.65 | 0.860 | -111.4 | grey |
| | 1225 | ↓ | 6.99 | 1.582 | - | 0.79 | 21.75 | 0.78 | 01.018 | -118.9 | " |
| | 1227 | ↓ | 7.02 | 1.616 | - | 0.44 | 21.13 | 0.82 | 1.052 | -116.5 | light grey |
| | | Sampled @ | 1228 | | | | | | | | |
| 41-45 DPT86 | 1240 | 43 | 7.15 | 1.309 | - | 11.08 | 18.29 | 0.69 | 0.905 | -110.1 | grey |
| | 1242 | ↓ | 7.05 | 1.644 | - | 0.63 | 21.70 | 0.84 | 01.082 | -120.8 | light grey |
| | 1244 | ↓ | 7.10 | 1.697 | - | 0.39 | 22.00 | 0.86 | 1.105 | -117.4 | " |
| | | Sampled @ | 1245 | | | | | | | | |
| 46-50 DPT86 | 1258 | 48 | 7.13 | 1.517 | - | 8.29 | 19.32 | 0.80 | 1.038 | -121.6 | grey |
| | 1300 | ↓ | 7.12 | 1.762 | - | 0.57 | 21.00 | 0.90 | 1.158 | -124.0 | light grey |
| | 1302 | ↓ | 7.16 | 1.842 | - | 0.35 | 21.45 | 0.94 | 1.202 | -117.9 | " |
| | | Sampled @ | 1303 | | | | | | | | |
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Note: Insert units if not provided on sheet.

(1) Turbidity above 999.9 NTU

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(4) Conductance failed CCV

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0086

Project Number: FR1681-Contractors RJ

Date: 02-26-10

| Screened Interval (ft) | Time / DPT Location | Sample Depth (ft) | pH std units | Conductivity (2) mS/cm | (1) Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12-16 DPT86 | 1531 | 14 | 7.31 | 0.942 | – | 4.14 | 21.94 | 0.45 | 0.597 | -50.3 | gray |
| | 1533 | ↓ | 6.73 | 0.882 | – | 1.27 | 22.09 | 0.43 | 0.573 | -44.1 | " |
| | 1535 | ↓ | 6.52 | 0.878 | – | 1.09 | 21.93 | 0.43 | 0.570 | -36.5 | " |
| | Sampled | @ 1536 | | | | | | | | | |
| 21-25 DPT 86 | 1543 | 23 | 6.69 | 0.920 | – | 1.98 | 22.93 | 0.45 | 0.601 | -57.0 | cloudy brown |
| | 1545 | ↓ | 6.57 | 0.926 | – | 0.64 | 22.79 | 0.46 | 0.602 | -54.7 | " |
| | 1547 | ↓ | 6.54 | 0.924 | – | 0.52 | 22.59 | 0.45 | 0.600 | -53.1 | " |
| | Sampled | @ 1548 | 0. | | – | | | | | | |

Note: Insert units if not provided on sheet.

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(1) Turbidity above 999.9 NTU

(2) Specific Conductance failed CCV

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT 00 87

Project Number: ~~CHRE~~ CRHE Contractors RI - FR1681

Date: ~~FR1684~~ 2/28/10

| Screened Interval (ft) | DPT Location | Time / Sample Depth (ft) | pH std units | Conductivity ② mS/cm | Turbidity ① NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8-12 DPT 87 | 1401 | 10 | 7.13 | 0.776 | - | 2.72 | 20.30 | 0.38 | 0.511 | -62.2 | Very Dark Brown |
| | 1403 | ↓ | 6.90 | 0.798 | - | 0.93 | 20.70 | 0.39 | 0.521 | -54.2 | Dark Brown |
| | 1405 | ↓ | 6.75 | 0.804 | - | 0.81 | 20.61 | 0.39 | 0.522 | -47.4 | Brown |
| | | Sampled @ | 1406 | ~~0.726~~ | | | | | | | |
| 16-20 DPT 87 | 1439 | 18 | 7.35 | 0.726 | - | 5.74 | 21.08 | 0.40 | 0.533 | -90.7 | grey |
| | 1441 | ↓ | 7.01 | 0.845 | - | 0.72 | 22.76 | 0.41 | 0.550 | -97.8 | light grey |
| | 1443 | ↓ | 7.02 | 0.851 | - | 0.54 | 22.80 | 0.42 | 0.553 | -98.1 | " |
| | | Sampled @ | 1444 | | | | | | | | |
| 26-30 DPT 87 | 1452 | 28 | 7.28 | 0.670 | - | 6.09 | 19.31 | 0.34 | 0.452 | -119.4 | grey |
| | 1454 | ↓ | 7.16 | 0.697 | - | 0.50 | 22.09 | 0.34 | 0.454 | -119.6 | " |
| | 1456 | ↓ | 7.11 | 0.693 | - | 0.33 | 22.84 | 0.34 | 0.450 | -116.2 | light grey |
| | | Sampled @ | 1457 | | | | | | | | |
| 31-35 DPT 87 | 1506 | 33 | 7.13 | 0.735 | - | 6.29 | 20.68 | 0.36 | 0.487 | -137.8 | grey |
| | 1508 | ↓ | 7.15 | 0.792 | - | 0.52 | 22.24 | 0.37 | 0.522 | -149.2 | light grey |
| | 1510 | ↓ | 7.21 | 0.809 | - | 0.28 | 22.97 | 0.40 | 0.525 | -152.6 | " |
| | | Sampled @ | 1511 | | | | | | | | |
| 36-40 DPT 87 | 1522 | 38 | 7.14 | 1.015 | - | 4.63 | 20.74 | 0.54 | 0.718 | -127.2 | grey |
| | 1524 | ↓ | 7.09 | 1.222 | - | 0.42 | 22.60 | 0.62 | 0.807 | -132.1 | light grey |
| | 1526 | ↓ | 7.11 | 1.275 | - | 0.27 | 23.18 | 0.64 | 0.829 | -133.1 | " |
| | | Sampled @ | 1527 | | | | | | | | |
| 41-45 DPT 87 | 1542 | 43 | 7.07 | 1.455 | - | 4.71 | 22.60 | 0.74 | 0.958 | -118.5 | light grey |
| | 1544 | ↓ | 7.07 | 1.519 | - | 0.73 | 22.67 | 0.77 | 0.991 | -109.0 | " |
| | 1546 | ↓ | 7.04 | 1.541 | - | 0.47 | 22.59 | 0.79 | 1.004 | -100.1 | " |
| | | Sampled @ | 1547 | | | | | | | | |
| 46-50 DPT 87 | 1601 | 48 | 7.09 | 1.316 | - | 4.32 | 19.38 | 0.69 | 0.906 | -90.4 | grey |
| | 1603 | ↓ | 7.13 | 1.561 | - | 0.47 | 21.91 | 0.79 | 1.026 | -97.7 | light grey |
| | 1605 | ↓ | 7.13 | 1.647 | - | 0.33 | 22.32 | 0.83 | 1.074 | -96.6 | " |
| | | Sampled @ | 1606 | | | | | | | | |
| | | | | | | | | | | | |
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Note: Insert units if not provided on sheet. ① Turbidity above 999.9 NTU

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② Specific Conductance failed CCV

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0088

Project Number: FR1681 - Contractors RL

Date: 2/25/10 - 2/26/10

| Screened Interval (ft) | Time / DPT Location | Sample Depth (ft) | pH std units | Conductivity ② mS/cm | Turbidity ① NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8-12 DPT88 | 1650 | 10 | 7.17 | 0.714 | - | 6.93 | 19.58 | 0.34 | 0.451 | -71.2 | light brown |
| | 1652 | ↓ | 6.85 | 0.677 | - | 1.10 | 20.43 | 0.33 | 0.438 | -56.8 | " |
| | 1654 | ↓ | 6.71 | 0.667 | - | 0.58 | 20.61 | 0.32 | 0.432 | -50.9 | " |
| | | Sampled @ | 1655 | | | | | | | | |
| | | | | | | | | | | | |
| 16-20 DPT088 | 0945 | 18 | 6.13 | 1.038 | - | 2.87 | 19.69 | 0.51 40.770 | 0.665 | -28.5 | light/dk brown |
| | 0947 | ↓ | 6.28 | 1.001 | - | 0.96 | 19.99 | 0.49 | 0.648 | -49.8 | " |
| | 0949 | ↓ | 6.39 | 0.983 | - | 0.73 | 20.45 | 0.49 | 0.637 | -39.2 | " |
| | | Sampled | 0950 | | | | | | | | |
| | | | | | | | | | | | |
| 26-30 DPT088 | 0801 | 28 | 6.58 | 0.889 | - | 1.93 | 15.99 | 0.44 | 0.575 | -96.9 | light brown |
| | 0803 | ↓ | 6.52 | 0.885 | - | 0.64 | 19.19 | 0.44 | 0.578 | -90.2 | " |
| | 0805 | ↓ | 6.55 | 0.893 | - | 0.38 | 20.05 | 0.44 | 0.589 | -88.4 | " |
| | | Sampled | 0806 | | | | | | | | |
| | | | | | | | | | | | |
| 31-35 | 0818 | 33 | 6.60 | 0.588 | - | 0.85 | 17.93 | 0.45 | 0.587 | -102.9 | light - brown |
| | 0820 | ↓ | 6.63 | 0.922 | - | 0.42 | 19.63 | 0.46 | 0.601 | -113.3 | " |
| | 0822 | ↓ | 6.66 | 0.923 | - | 0.31 | 20.25 | 0.46 | 0.600 | -111.1 | " |
| | | Sampled | 0824 | | | | | | | | |
| | | | | | | | | | | | |
| 36-40 DPT088 | 0836 | 38 | 6.71 | 1.283 | - | 1.71 | 19.19 | 0.66 | 0.859 | -114.3 | light grey |
| | 0838 | ↓ | 6.76 | 1.370 | - | 0.60 | 20.52 | 0.70 | 0.907 | -119.8 | " |
| | 0840 | ↓ | 6.81 | 1.440 | - | 0.33 | 20.74 | 0.72 | 0.936 | -117.7 | " |
| | | sampled | 0841 | | | | | | | | |
| | | | | | | | | | | | |
| 41-45 DPT088 | 0854 | 43 | 6.99 | 1.520 | - | 1.00 | 18.39 | 0.78 | 1.016 | -96.6 | light brown |
| | 0856 | ↓ | 6.92 | 1.654 | - | 0.38 | 20.69 | 0.84 | 1.081 | -95.1 | " |
| | 0858 | ↓ | 6.91 | 1.678 | - | 0.32 | 20.31 | 0.85 | 1.093 | -92.8 | " |
| | | Sampled | 0900 | | | | | | | | |
| 46-50 DPT088 | 0929 | 48 | 6.95 | 1.736 | - | 0.40 | 19.46 | 0.90 | 1.155 | -119.9 | |
| | 0931 | ↓ | 6.97 | 1.823 | - | 0.26 | 20.19 | 0.93 | 1.203 | -124.0 | |
| | 0933 | ↓ | 7.02 | 1.877 | - | 0.21 | 20.56 | 0.96 | 1.224 | -123.4 | |

Note: Insert units if not provided on sheet.

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sampled 0935

① Turbidity above 999.9 NTU

② Specific conductance failed CCV both sampling days

**DPT GEOCHEMICAL DATA FORM**

DPT Location: 0089

Project Number: FR168 - Contractors Rd

Date: 02-26-2010

| Screened Interval (ft) | Time / DPT Location | Sample Depth (ft) | pH std units | Conductivity (2) mS/cm | Turbidity (1) NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8-12 DPT89 | 1001 | 10 | 7.60 | 0.543 | — | 4.01 | 17.78 | 0.26 | 0.347 | -113.4 | dark brown |
| | 1003 | ↓ | 7.00 | 0.514 | — | 0.68 | 18.56 | 0.25 | 0.231 | -123.9 | dark brown |
| | 1005 | ↓ | 6.83 | 0.498 | — | 0.44 | 18.68 | 0.24 | 0.322 | -135.5 | " |
| | | sampled @ 1006 | | | | | | | | | |
| 16-20 DPT89 | 1013 | 18 | 6.89 | 0.675 | — | 1.39 | 18.40 | 0.33 | 0.445 | -239.7 | brownish-gray |
| | 1015 | ↓ | 6.95 | 0.692 | — | 0.44 | 21.15 | 0.34 | 0.450 | -225.9 | " |
| | 1017 | ↓ | 7.04 | 0.688 | — | 0.29 | 21.41 | 0.34 | 0.447 | -243.6 | " |
| | | Sampled @ 1018 | | | | | | | | | |
| 26-30 DPT89 | 1027 | 28 | 6.92 | 0.710 | — | 1.73 | 19.07 | 0.35 | 0.461 | -217.5 | brownish gray |
| | 1029 | ↓ | 7.02 | 0.720 | — | 0.51 | 21.17 | 0.35 | 0.470 | -211.5 | " |
| | 1031 | ↓ | 6.90 | 0.720 | — | 0.32 | 22.15 | 0.35 | 0.466 | -203.1 | " |
| | | Sampled @ 1032 | | | | | | | | | |
| 31-35 DPT89 | 1043 | 33 | 7.02 | 0.806 | — | 2.07 | 20.49 | 0.40 | 0.535 | -124.1 | Lt brown |
| | 1045 | ↓ | 6.87 | 0.838 | — | 0.45 | 22.18 | 0.41 | 0.545 | -133.9 | " |
| | 1047 | ↓ | 6.82 | 0.832 | — | 0.31 | 22.84 | 0.41 | 0.540 | -133.4 | " |
| | | Sampled @ 1048 | | | | | | | | | |
| 36-40 DPT89 | 1100 | 38 | 7.18 | 0.893 | — | 2.14 | 20.99 | 0.45 | 0.594 | -104.9 | gray |
| | 1102 | ↓ | 6.90 | 0.942 | — | 0.39 | 22.87 | 0.46 | 0.613 | -105.0 | " |
| | 1104 | ↓ | 6.83 | 0.943 | — | 0.33 | 22.99 | 0.46 | 0.612 | -106.0 | " |
| | | Sampled @ 1105 | | | | | | | | | |
| 41-45 DPT89 | 1207 | 43 | 7.27 | 1.562 | — | 1.71 | 23.50 | 0.79 | 1.027 | -107.8 | Lt brown |
| | 1209 | ↓ | 7.10 | 1.659 | — | 0.100 | 24.92 | 0.86 | 1.086 | -112.8 | " |
| | 1211 | ↓ | 7.03 | 1.692 | — | 0.36 | 25.24 | 0.85 | 1.103 | -110.8 | " |
| | | Sampled @ | | 1212 | | | | | | | |
| 46-50 DPT089 | 1225 | 48 | 7.40 | 1.897 | — | 2.93 | 23.74 | 0.97 | 1.246 | -105.9 | grayish brown |
| | 1227 | ↓ | 7.16 | 1.625 | — | 0.50 | 25.04 | 0.82 | 1.066 | -111.6 | " |
| | 1229 | ↓ | 7.10 | 1.668 | — | 0.34 | 25.11 | 0.84 | 1.087 | -109.2 | " |
| | | Sampled @ | | 1230 | | | | | | | |

Note: Insert units if not provided on sheet.

(1) Turbidity above 999.9 NTU

(2) Specific Conductance failed CCV

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**DPT GEOCHEMICAL DATA FORM**
DPT Location: 0090

Project Number: FR1181 - Contractors Rd
Date: 02-26-16

| Screened Interval (ft) | Time DPT Location | Sample Depth (ft) | pH std units | Conductivity ② mS/cm | Turbidity ① NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8-12 DPT90 | 1255 | 10 | 7.60 | 0.687 | – | 2.66 | 23.76 | 0.34 | 0.455 | -165.7 | brown rust colored |
| | 1259 | ↓ | 7.10 | 0.672 | – | 0.89 | 23.72 | 0.33 | 0.437 | -121.0 | clear - cloudy |
| | 1301 | ↓ | 7.02 | 0.667 | – | 0.90 | 23.45 | 0.32 | 0.435 | -119.8 | clear - slightly cloudy |
| | | Sampled @ 1302 | | | | | | | | | |
| 16-20 DPT90 | 1310 | 18 | 6.85 | 0.906 | – | 6.00 | 24.14 | 0.45 | 0.593 | -113.5 | light brown |
| | 1312 | ↓ | 6.83 | 0.936 | – | 0.82 | 25.51 | 0.46 | 0.612 | -120.6 | " |
| | 1314 | ↓ | 6.87 | 0.944 | – | 0.47 | 25.21 | 0.46 | 0.613 | -118.4 | " |
| | | Sampled @ 1315 | | | | | | | | | |
| 26-30 DPT90 | 1329 | 28 | 7.10 | 0.814 | – | 1.00 | 25.03 | 0.40 | 0.526 | -127.1 | Lt brown |
| | 1331 | ↓ | 6.97 | 0.797 | – | 0.22 | 25.45 | 0.39 | 0.516 | -130.7 | " |
| | 1333 | ↓ | 6.93 | 0.782 | – | 0.22 | 25.33 | 0.38 | 0.507 | -126.6 | " |
| | | Sampled @ 1334 | | | | | | | | | |
| 31-35 DPT90 | 1347 | 33 | 7.37 | 0.747 | – | 1.73 | 24.51 | 0.37 | 0.489 | -123.9 | Lt. Brown |
| | 1349 | ↓ | 7.16 | 0.753 | – | 0.52 | 24.58 | 0.37 | 0.489 | -135.3 | " |
| | 1351 | ↓ | 7.13 | 0.745 | – | 0.32 | 24.66 | 0.36 | 0.484 | -136.1 | " |
| | | Sampled @ 1352 | | | | | | | | | |
| 36-40 DPT90 | 1423 | 38 | 7.30 | 1.056 | – | 1.81 | 25.60 | 0.52 | 0.690 | -128.4 | Lt Brownish Org |
| | 1425 | ↓ | 7.18 | 1.073 | – | 0.60 | 25.81 | 0.53 | 0.698 | -135.5 | " |
| | 1427 | ↓ | 7.12 | 1.066 | – | 0.36 | 25.45 | 0.52 | 0.691 | -139.0 | " |
| | | Sampled @ 1428 | | | | | | | | | |
| 41-45 DPT90 | 1441 | 43 | 7.30 | 1.586 | – | 1.09 | 26.71 | 0.80 | 1.033 | -133.1 | Lt. Brown |
| | 1443 | ↓ | 7.12 | 1.591 | – | 0.47 | 26.68 | 0.80 | 1.039 | -141.2 | " |
| | 1445 | ↓ | 7.09 | 1.604 | – | 0.39 | 26.21 | 0.80 | 1.041 | -139.1 | " |
| | | Sampled @ 1446 | | | – | | | | | | |
| 46-50 DPT90 | 1459 | 48 | 7.46 | 1.733 | – | 2.04 | 25.94 | 0.99 | 1.056 | -125.1 | grayish-brown |
| | 1501 | ↓ | 7.16 | 1.692 | – | 0.58 | 26.02 | 0.86 | 1.109 | -132.9 | " |
| | 1503 | ↓ | 7.10 | 1.733 | – | 0.36 | 25.80 | 0.88 | 1.130 | -128.1 | " |
| | | Sampled @ 1504 | | | | | | | | | |

Note: Insert units if not provided on sheet.

① Turbidity above 999.9 NTU

② Specific Conductance failed QCV

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT 0091

Project Number: FR1681 - Contractor Rel.

Date: 3/1/10

| Screened Interval (ft) | Time DPT Location | Sample Depth (ft) | pH std units | Conductivity mS/cm | Turbidity (1) NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| 8-12 | 0801 | 10 | 6.96 | 0.625 | – | 10.06 | 17.52 | 0.32 | 0.478 | 103.6 | Brown |
| DPT91 | 0803 | ↓ | 6.45 | 0.643 | – | 2.87 | 19.95 | 0.31 | 0.418 | 53.4 | light brown |
| | 0805 | ↓ | 6.33 | 0.649 | – | 1.95 | 20.72 | 0.32 | 0.422 | -11.3 | " |
| | | Sampled @ | 0806 | | | | | | | | |
| 16-20 | 0813 | 18 | 6.46 | 0.650 | – | 9.30 | 16.28 | 0.37 | 0.501 | -65.3 | grey |
| DPT 91 | 0815 | ↓ | 6.58 | 0.809 | – | 0.38 | 21.88 | 0.40 | 0.530 | -78.8 | light grey |
| | 0817 | ↓ | 6.70 | 0.814 | – | 0.34 | 22.65 | 0.40 | 0.528 | -82.7 | " |
| | | Sampled @ | 0818 | | | | | | | | |
| 26-30 | 0823 | 28 | 6.93 | 0.676 | – | 5.41 | 19.23 | 0.34 | 0.453 | -108.2 | grey |
| DPT 91 | 0825 | ↓ | 6.95 | 0.724 | – | 0.24 | 22.14 | 0.35 | 0.468 | -113.5 | light grey |
| | 0827 | ↓ | 6.95 | 0.711 | – | 0.22 | 22.73 | 0.35 | 0.461 | -109.1 | " |
| | | Sampled @ | 0828 | | | | | | | | |
| 31-35 | 0839 | 33 | 7.14 | 0.511 | – | 12.16 | 16.51 | 0.30 | 0.403 | -101.8 | grey |
| DPT91 | 0841 | ↓ | 7.01 | 0.677 | – | 1.40 | 20.55 | 0.33 | 0.444 | -118.8 | " |
| | 0843 | ↓ | 6.97 | 0.706 | – | 0.65 | 22.63 | 0.34 | 0.458 | -118.5 | light grey |
| | | Sampled @ | 0844 | | | | | | | | |
| 36-40 | 0937 | 38 | 7.27 | 0.756 | – | 4.32 | 19.36 | 0.36 | 0.481 | -177.9 | grey |
| DPT 91 | 0939 | ↓ | 7.18 | 0.717 | – | 0.91 | 22.57 | 0.35 | 0.468 | -188.0 | light grey |
| | 0941 | ↓ | 7.20 | 0.740 | – | 0.45 | 22.64 | 0.36 | 0.483 | -187.1 | " |
| | | Sampled @ | 0942 | | | | | | | | |
| 41-45 | 0953 | 43 | 7.08 | 01.469 | – | 0.85 | 23.93 | 0.76 | 0.988 | -126.1 | light grey |
| DPT91 | 0955 | ↓ | 7.07 | 1.605 | – | 0.31 | 24.44 | 0.81 | 1.053 | -126.2 | " |
| | 0957 | ↓ | 7.06 | 1.648 | – | 0.32 | 24.61 | 0.83 | 1.073 | -120.0 | " |
| | | Sampled @ | 0958 | | | | | | | | |
| 46-50 | 1020 | 48 | 7.45 | 01.581 | – | 7.48 | 24.21 | 0.80 | 1.048 | -95.7 | grey |
| DPT91 | 1022 | ↓ | 7.07 | 1.749 | – | 0.64 | 25.42 | 0.90 | 1.161 | -103.6 | light grey |
| | 1024 | ↓ | 7.08 | 1.872 | – | 0.37 | 25.21 | 0.85 | 1.219 | -105.9 | " |
| | | Sampled @ | 1025 | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Insert units if not provided on sheet. (1) Turbidity above 999.9 NTU

**DPT GEOCHEMICAL DATA FORM**
DPT Location: DPT6092

Project Number: FR1681 - Contractors Rd.
Date: 3/1/10

| Screened Interval (ft) | Time / DPT Location | Sample Depth (ft) | pH std units | Conductivity mS/cm | Turbidity (1) NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| 8-12 DPT 92 | 1045 | 10 | 7.43 | 0.701 | - | 7.87 | 22.57 | 0.37 | 0.495 | -65.1 | grey brown |
| | 1047 | ↓ | 7.02 | 0.750 | - | 1.00 | 21.82 | 0.36 | 0.485 | -59.6 | light grey brown |
| | 1049 | ↓ | 6.82 | 0.725 | - | 0.74 | 21.43 | 0.35 | 0.470 | -54.0 | " |
| | | Sampled @ | 1050 | | | | | | | | |
| 12-16 DPT 92 | 1055 | 14 | 6.78 | 0.746 | - | 7.42 | 22.94 | 0.47 | 0.622 | -67.8 | grey |
| | 1057 | ↓ | 6.74 | 0.971 | - | 0.52 | 25.45 | 0.48 | 0.630 | -74.7 | light grey |
| | 1059 | ↓ | 6.74 | 0.949 | - | 0.51 | 23.09 | 0.47 | 0.616 | -76.1 | " |
| | | Sampled @ | 1100 | | | | | | | | |
| 16-20 ~~20-30~~ DPT 92 | 1105 | 18 | 6.71 | 1.014 | - | 1.29 | 24.12 | 0.50 | 0.664 | -85.6 | grey |
| | 1107 | ↓ | 6.74 | 1.015 | - | 0.60 | 23.86 | 0.50 | 0.657 | -81.9 | light grey |
| | 1109 | ↓ | 6.73 | 0.991 | - | 0.45 | 23.50 | 0.49 | 0.642 | -75.3 | " |
| | | Sampled @ | 1110 | | | | | | | | |
| 26-30 DPT 92 | 1116 | 28 | 7.31 | 1.001 | - | 10.54 | 22.89 | 0.50 | 0.656 | -88.7 | grey |
| | 1118 | ↓ | 6.93 | 1.061 | - | 0.77 | 24.05 | 0.53 | 0.699 | -90.8 | " |
| | 1120 | ↓ | 6.79 | 1.086 | - | 0.54 | 24.13 | 0.54 | 0.706 | -82.7 | light grey |
| | | Sampled @ | 1121 | | | | | | | | |
| 31-35 DPT 92 | 1202 | 33 | 7.49 | 1.189 | - | 10.37 | 22.22 | 0.59 | 0.772 | -100.3 | grey |
| | 1204 | ↓ | 7.15 | 1.225 | - | 0.71 | 23.77 | 0.61 | 0.803 | -91.4 | " |
| | 1206 | ↓ | 7.02 | 1.239 | - | 0.58 | 24.11 | 0.62 | 0.804 | -92.4 | light grey |
| | | Sampled @ | 1207 | | | | | | | | |
| 36-40 DPT 92 | 1228 | 38 | 7.10 | 1.393 | - | 7.66 | 24.79 | 0.68 | 0.897 | -112.7 | grey |
| | 1230 | ↓ | 6.96 | 1.521 | - | 0.61 | 25.75 | 0.77 | 0.998 | -113.0 | light grey |
| | 1232 | ↓ | 6.94 | 1.559 | - | 0.41 | 24.98 | 0.78 | 01.012 | -102.0 | " |
| | | Sampled @ | 1233 | | | | | | | | |
| 41-45 DPT 92 | 1244 | 43 | 7.05 | 1.473 | - | 3.81 | 25.24 | 0.77 | 1.002 | -107.8 | grey |
| | 1246 | ↓ | 7.02 | 1.667 | - | 0.44 | 25.51 | 0.85 | 1.096 | -111.6 | light grey |
| | 1248 | ↓ | 7.03 | 1.705 | - | 0.38 | 25.05 | 0.86 | 1.109 | -107.3 | " |
| | | Sampled @ | 1249 | | | | | | | | |
| 46-50 DPT 92 | 1301 | 48 | 7.18 | 1.661 | - | 3.10 | 25.17 | 0.86 | 1.101 | -116.6 | grey |
| | 1303 | ↓ | 7.14 | 1.801 | - | 0.43 | 25.50 | 0.91 | 1.178 | -113.5 | " |
| | 1305 | ↓ | 7.12 | 1.836 | - | 0.35 | 25.16 | 0.92 | 1.187 | -107.0 | light grey |
| | | Sampled @ 1306 | | | | | | | | | |

Note: Insert units if not provided on sheet. (1) Turbidity above 999.9 NTU

**DPT GEOCHEMICAL DATA FORM**
DPT Location: DPT0093

Project Number: FR1681 - Contractors RL
Date: 3/1/10

| Screened Interval (ft) | Time / DPT Location | Sample Depth (ft) | pH std units | Conductivity mS/cm | Turbidity (1) NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| 8-12 DPT93 | 1329 | 10 | 7.52 | 0.785 | - | 6.12 | 24.98 | 0.38 | 0.506 | -81.0 | Gray Brown |
| | 1331 | ↓ | 7.09 | 0.763 | - | 0.68 | 25.14 | 0.37 | 0.494 | -75.2 | light gray brown |
| | 1333 | ↓ | 6.92 | 0.748 | - | 0.50 | 22.28 | 0.36 | 0.485 | -70.7 | " |
| | | Sampled @ | 1334 | | | | | | | | |
| 12-16 DPT93 | 1339 | 14 | 6.91 | 0.885 | - | 4.76 | 24.90 | 0.44 | 0.582 | -81.3 | light gray brown |
| | 1341 | ↓ | 6.86 | 0.901 | - | 0.57 | 24.50 | 0.44 | 0.584 | -81.9 | " |
| | 1343 | ↓ | 6.85 | 0.887 | - | 0.43 | 24.17 | 0.43 | 0.576 | -83.8 | " |
| | | Sampled @ | 1344 | | | | | | | | |
| 16-20 DPT93 | 1350 | 18 | 6.96 | 0.877 | - | 3.56 | 25.51 | 0.43 | 0.577 | -93.2 | light gray |
| | 1352 | ↓ | 6.88 | 0.885 | - | 0.48 | 25.23 | 0.43 | 0.573 | -85.1 | " |
| | 1354 | ↓ | 6.83 | 0.872 | - | 0.48 | 24.80 | 0.43 | 0.566 | -77.7 | " |
| | | Sampled @ | 1355 | | | | | | | | |
| 26-30 DPT93 | 1414 | 28 | 7.16 | 0.654 | - | 4.96 | 24.04 | 0.34 | 0.547 | -101.0 | gray |
| | 1416 | ↓ | 6.98 | 0.844 | - | 0.64 | 25.02 | 0.41 | 0.547 | -104.6 | light gray |
| | 1418 | ↓ | 6.94 | 0.833 | - | 0.39 | 24.98 | 0.41 | 0.541 | -94.0 | " |
| | | Sampled @ | 1419 | | | | | | | | |
| 31-35 DPT93 | 1428 | 33 | 7.13 | 0.786 | - | 7.22 | 24.80 | 0.45 | 0.602 | -100.3 | gray |
| | 1430 | ↓ | 7.02 | 0.793 | - | 0.48 | 25.69 | 0.49 | 0.648 | -112.5 | light gray |
| | 1432 | ↓ | 7.02 | 0.997 | - | 0.27 | 25.39 | 0.49 | 0.646 | -116.6 | " |
| | | Sampled @ | 1433 | | | | | | | | |
| 36-40 DPT93 | 1444 | 38 | 7.12 | 1.381 | - | 5.76 | 24.37 | 0.69 | 0.906 | -124.5 | light gray |
| | 1446 | ↓ | 6.97 | 1.482 | - | 0.42 | 25.97 | 0.75 | 0.978 | -124.1 | " |
| | 1448 | ↓ | 7.00 | 1.525 | - | 0.34 | 25.55 | 0.76 | 0.991 | -127.4 | " |
| | | Sampled @ | 1449 | | | | | | | | |
| 41-45 DPT93 | 1459 | 43 | 7.26 | 1.555 | - | 6.50 | 24.30 | 0.81 | 1.051 | -110.7 | gray |
| | 1501 | ↓ | 7.11 | 1.746 | - | 0.44 | 25.12 | 0.89 | 1.152 | -112.0 | light gray |
| | 1503 | ↓ | 7.06 | 1.803 | - | 0.42 | 25.00 | 0.91 | 1.174 | -106.5 | " |
| | | Sampled @ | 1504 | | | | | | | | |
| 46-50 DPT93 | 1516 | 48 | 7.15 | 1.734 | - | 8.13 | 24.58 | 0.92 | 1.197 | -103.9 | gray |
| | 1518 | ↓ | 7.15 | 1.617 | - | 0.21 | 25.11 | 0.82 | 1.062 | -110.5 | light gray |
| | 1520 | ↓ | 7.12 | 1.667 | - | 0.17 | 24.87 | 0.84 | 1.085 | -107.7 | " |
| | | Sampled @ | 1521 | | | | | | | | |

Note: Insert units if not provided on sheet.

(1) Turbidity above 999.9 NTU

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0094

Project Number: FR1681 - Contractor Rd

Date: 3/10/10 - 3/11/10

| Screened Interval (ft) | DPT Location (Time) | Sample Depth (ft) | pH std units | Conductivity mS/cm | Turbidity (1) NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| 8-12 | 1550 | 10 | 7.95 | 0.435 | - | 10.41 | 24.80 | 0.22 | 0.293 | -70.8 | Dark Brown |
| DPT 94 | 1552 | ↓ | 7.16 | 0.440 | - | 2.57 | 22.72 | 0.21 | 0.281 | -58.6 | " |
| | 1554 | ↓ | 6.76 | 0.392 | - | 0.77 | 21.82 | 0.19 | 0.252 | -47.2 | " |
| | | Sampled @ 1555 | | | | | | | | | |
| 16-20 | 1607 | 18 | 6.39 | ~~0.660~~ 7.98 | - | 2.79 | 23.79 | 0.32 | 0.433 | -68.9 | grey |
| DPT 94 | 1609 | ↓ | 6.66 | 0.563 | - | 0.47 | 24.29 | 0.32 | 0.427 | -96.9 | light grey |
| | 1611 | ↓ | 6.86 | 0.639 | - | 0.28 | 23.95 | 0.31 | 0.414 | -116.6 | " |
| | | Sampled @ 1612 | | | | | | | | | |
| 26-30 | 1623 | 28 | 6.93 | 0.821 | - | 8.69 | 23.57 | 0.40 | 0.533 | -114.1 | grey |
| DPT 94 | 1625 | ↓ | 6.77 | 0.867 | - | 0.55 | 24.86 | 0.43 | 0.569 | -112.2 | " |
| | 1627 | ↓ | 6.74 | 0.864 | - | 0.36 | 24.64 | 0.42 | 0.560 | -105.5 | light grey |
| | | Sampled @ 1628 | | | | | | | | | |
| 31-35 | 0742 | 33 | 6.49 | 1.033 | - | 1.37 | 21.51 | 0.50 | 0.661 | -57.5 | grey |
| DPT 94 | 0744 | ↓ | 6.49 | 1.005 | - | 0.33 | 26.65 | 0.47 | 0.649 | -43.1 | light grey |
| | ~~0746~~ | ↓ | Phase II | | weather | Alert | | | | | |
| | | Sampled @ ~~0747~~ 0745 | | | | | | | | | |
| 36-40 | 0841 | 38 | 7.11 | 1.028 | - | 4.93 | 19.32 | 0.52 | 0.687 | -100.1 | grey |
| DPT 94 | 0843 | ↓ | 6.95 | 1.128 | - | 2.49 | 21.96 | 0.56 | 0.721 | -117.8 | " |
| | 0845 | ↓ | 6.95 | 1.075 | - | 0.67 | 22.28 | 0.53 | 0.696 | -114.6 | light grey |
| | | Sampled @ 0846 | | | | | | | | | |
| 41-45 | 0858 | 43 | 6.84 | 1.746 | - | 10.13 | 18.62 | 0.64 | 0.837 | -110.2 | grey |
| DPT 94 | 0900 | ↓ | 6.98 | 1.383 | - | 1.07 | 20.94 | 0.71 | 0.921 | -115.8 | light grey |
| | 0902 | ↓ | 7.02 | 1.501 | - | 0.51 | 22.31 | 0.76 | 0.979 | -117.4 | " |
| | | Sampled @ 0903 | | | | | | | | | |
| 46-50 | 0915 | 48 | 7.09 | 1.352 | - | 10.04 | 18.76 | 0.65 | 0.854 | -111.7 | grey |
| DPT 94 | 0917 | ↓ | 7.06 | 1.463 | - | 0.74 | 21.56 | 0.75 | 0.969 | -118.0 | " |
| | 0919 | ↓ | 7.12 | 1.589 | - | 0.39 | 22.15 | 0.80 | 1.033 | -118.3 | light grey |
| | | Sampled @ 0920 | | | | | | | | | |
| | | | | | | | | | | | |
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Note: Insert units if not provided on sheet.

(1) Turbidity above 999.9 NTU

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DNS

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0095

Project Number: ER1681 - Contractors Rd

Date: 3/24/10

| Screened Interval (ft) | DPT Location / Time | Sample Depth (ft) | pH std units | Conductivity mS/cm | Turbidity (1) NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| | | 10 | | | | | | | | | |
| 8-16 DPT95 | 1012 | ↓ | 7.62 | 0.445 | - | 6.32 | 19.38 | 0.20 | 0.269 | -62.4 | Dark Brown |
| | 1014 | ↓ | 6.96 | 0.347 | - | 1.72 | 20.09 | 0.16 | 0.231 | -53.2 | " |
| | 1016 | ↓ | 6.65 | 0.331 | - | 0.87 | 20.07 | 0.16 | 0.216 | -42.4 | " |
| | | Sampled @ | 1017 | | | | | | | | |
| 16-20 DPT95 | 1023 | 18 | 6.08 | 0.811 | - | 8.08 | 21.06 | 0.41 | 0.541 | -91.9 | grey brown |
| | 1025 | ↓ | 6.45 | 0.880 | - | 0.66 | 23.26 | 0.43 | 0.571 | -73.0 | light grey brown |
| | 1027 | ↓ | 6.64 | 0.869 | - | 0.41 | 23.16 | 0.43 | 0.563 | -83.3 | " |
| | | Sampled @ | 1028 | | | | | | | | |
| 26-30 DPT95 | 1036 | 28 | 6.97 | 0.745 | - | 8.35 | 20.18 | 0.40 | 0.537 | -95.9 | grey |
| | 1038 | ↓ | 6.78 | 0.880 | - | 0.49 | 22.35 | 0.44 | 0.579 | -89.5 | light grey |
| | 1040 | ↓ | 6.68 | 0.902 | - | 0.45 | 23.30 | 0.44 | 0.589 | -83.2 | " |
| | | Sampled @ | 1041 | | | | | | | | |
| 31-35 DPT95 | 1050 | 33 | 7.01 | 0.749 | - | 6.82 | 21.46 | 0.39 | 0.510 | -103.8 | grey |
| | 1052 | ↓ | 6.82 | 0.831 | - | 0.47 | 23.69 | 0.41 | 0.545 | -99.3 | light grey |
| | 1054 | ↓ | 6.74 | 0.841 | - | 0.42 | 24.02 | 0.41 | 0.546 | -90.1 | " |
| | | Sampled @ | 1055 | | | | | | | | |
| 36-40 DPT95 | | ~~38~~ | | | - | | | | | | |
| | 1105 | ↓ | 7.05 | 0.676 | - | 6.57 | 21.89 | 0.35 | 0.467 | -125.1 | grey |
| | 1107 | ↓ | 7.01 | 0.727 | - | 0.48 | 23.40 | 0.35 | 0.474 | -126.5 | light grey |
| | 1109 | ↓ | 6.99 | 0.738 | - | 0.27 | 23.75 | 0.36 | 0.478 | -123.2 | " |
| | | Sampled @ | 1110 | | | | | | | | |
| 41-45 DPT95 | 1120 | 43 | 6.97 | 0.809 | - | 9.52 | 21.50 | 0.41 | 0.544 | -113.0 | grey |
| | 1122 | ↓ | 7.04 | 0.970 | - | 0.52 | 23.34 | 0.51 | 0.687 | -113.6 | " |
| | 1124 | ↓ | 7.07 | 1.135 | - | 0.26 | 23.68 | 0.56 | 0.741 | -110.4 | light grey |
| | | Sampled @ | 1125 | | | | | | | | |
| 46-50 DPT95 | 1212 | 48 | 7.25 | 1.060 | - | 8.80 | 23.67 | 0.65 | 0.859 | -93.7 | grey |
| | 1214 | ↓ | 7.17 | 1.503 | - | 0.76 | 24.87 | 0.76 | 0.985 | -99.7 | light grey |
| | 1216 | ↓ | 7.17 | 1.546 | - | 0.36 | 24.53 | 0.78 | 01.005 | -98.7 | " |
| | | Sampled @ | 1217 | | | | | | | | |
| | | | | | | | | | | | |

Note: Insert units if not provided on sheet. (1) Turbidity above 999.9 NTU

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**DPT GEOCHEMICAL DATA FORM**
DPT Location: DPT0096

Project Number: FR1681 - Contractors Rd
Date: 3/10/10

| Screened Interval (ft) | Time / DPT Location | Sample Depth (ft) | pH std units | Conductivity mS/cm | Turbidity (1) NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | Color |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| 8-10 DPT96 | 1256 | 10 | 7.40 | 0.544 | – | 7.25 | 21.16 | 0.26 | 0.347 | -64.6 | Dark Brown |
| | 1258 | ↓ | 7.44 | 0.520 | – | 0.99 | 20.60 | 0.25 | 0.335 | -64.2 | Brown |
| | 1300 | ↓ | 7.13 | 0.507 | – | 0.57 | 20.25 | 0.24 | 0.329 | -55.7 | " |
| | | Sampled @ | 1301 | | | | | | | | |
| 16-20 DPT96 | 1308 | 18 | 6.74 | 0.610 | – | 5.47 | 22.80 | 0.31 | 0.403 | -89.0 | Brown grey |
| | 1310 | ↓ | 6.81 | 0.661 | – | 0.51 | 23.38 | 0.33 | 0.428 | -109.2 | light grey |
| | 1312 | ↓ | 6.90 | 0.648 | – | 0.36 | 23.02 | 0.31 | 0.421 | -107.3 | " |
| | | 1313 ← | Sampled @ | | | | | | | | |
| 26-30 DPT96 | 1321 | 28 | 6.83 | 0.810 | – | 8.54 | 21.96 | 0.40 | 0.537 | -101.1 | grey |
| | 1323 | ↓ | 6.88 | 0.915 | – | 0.50 | 23.47 | 0.46 | 0.604 | -104.3 | " |
| | 1325 | ↓ | 6.86 | 0.945 | – | 0.38 | 23.48 | 0.47 | 0.615 | -99.2 | light grey |
| | | Sampled @ | 1326 | | | | | | | | |
| 31-35 DPT96 | 1330 | 33 | 6.90 | 1.021 | – | 4.89 | 23.51 | 0.52 | 0.699 | -116.4 | grey |
| | 1338 | ↓ | 6.93 | 1.133 | – | 0.34 | 23.88 | 0.56 | 0.737 | -114.1 | " |
| | 1340 | ↓ | 6.91 | 1.154 | – | 0.32 | 23.54 | 0.56 | 0.730 | -103.5 | light grey |
| | | Sampled @ | 1341 | | | | | | | | |
| 36-40 DPT96 | 1356 | 38 | 6.91 | 1.282 | – | 3.02 | 23.25 | 0.66 | 0.863 | -115.7 | Grey |
| | 1358 | ↓ | 6.96 | 1.366 | – | 0.24 | 23.51 | 0.68 | 0.890 | -113.2 | light grey |
| | 1400 | ↓ | 6.97 | 1.367 | – | 0.17 | 23.09 | 0.68 | 0.889 | -108.4 | " |
| | | Sampled @ | 1401 | | | | | | | | |
| 41-45 DPT96 | 1413 | 43 | 7.07 | 1.143 | – | 8.10 | 22.23 | 0.59 | 0.770 | -110.0 | Grey |
| | 1415 | ↓ | 7.04 | 1.260 | – | 0.43 | 23.34 | 0.64 | 0.838 | -114.7 | " |
| | 1417 | ↓ | 7.05 | 1.330 | – | 0.24 | 23.38 | 0.65 | 0.863 | -112.5 | light grey |
| | | Sampled @ | 1418 | | | | | | | | |
| 46-50 DPT96 | 1430 | 48 | 7.10 | 1.274 | – | 6.26 | 22.12 | 0.66 | 0.869 | -106.1 | grey |
| | 1432 | ↓ | 7.08 | 1.468 | – | 0.30 | 23.07 | 0.75 | 0.967 | -112.3 | " |
| | 1434 | ↓ | 7.07 | 1.506 | – | 0.14 | 23.09 | 0.76 | 0.980 | -108.0 | light grey |
| | | Sampled @ | 1435 | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Insert units if not provided on sheet (1) Turbidity above 999.9 NTU

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0097 (B)

Project Number: FR1681

Date: 6/14/10



| Time DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0910 | 8-12 | 6.49 | 1.109 | — | 5.51 | 25.51 | 0.54 | 0.709 | 67.8 |
| 0912 | 8-12 | 6.51 | 1.081 | — | 4.99 | 25.15 | 0.53 | 0.699 | 63.6 |
| 0914 | 8-12 | 6.51 | 1.074 | — | 4.75 | 25.10 | 0.53 | 0.696 | 61.3 |
| | Sampled at 0916 | | | | | | | | |
| 0920 | 12-16 | 6.80 | 1.314 | — | 2.52 | 25.82 | 0.64 | 0.831 | -15.5 |
| 0922 | 12-16 | 6.75 | 1.259 | — | 2.02 | 25.30 | 0.62 | 0.809 | -9.1 |
| 0924 | 12-16 | 6.72 | 1.232 | — | 1.94 | 24.96 | 0.61 | 0.797 | -5.7 |
| | Sampled at 0925 | | | | | | | | |
| 0934 | 16-20 | 6.78 | 1.474 | — | 1.75 | 26.66 | 0.71 | 0.923 | -54.6 |
| 0936 | 16-20 | 6.79 | 1.452 | — | 1.55 | 26.22 | 0.70 | 0.917 | -50.1 |
| 0938 | 16-20 | 6.78 | 1.429 | — | 1.58 | 25.83 | 0.70 | 0.910 | -46.3 |
| | Sampled at 0939 | | | | | | | | |
| 0945 | 21-25 | 6.92 | 1.576 | — | 1.19 | 27.39 | 0.75 | 0.974 | -58.8 |
| 0947 | 21-25 | 6.86 | 1.554 | — | 1.58 | 26.55 | 0.75 | 0.969 | -55.5 |
| 0949 | 21-25 | 6.79 | 1.504 | — | 1.56 | 25.95 | 0.74 | 0.955 | -48.1 |
| | Sampled at 0950 | | | | | | | | |
| 1000 | 26-30 | 7.09 | 1.488 | — | 0.90 | 28.94 | 0.68 | 0.885 | -85.2 |
| 1002 | 26-30 | 7.03 | 1.430 | — | 0.83 | 27.72 | 0.67 | 0.873 | -75.5 |
| 1004 | 26-30 | 6.99 | 1.397 | — | 0.89 | 26.97 | 0.67 | 0.872 | -71.8 |
| | Sampled at 1005 | | | | | | | | |
| 1018 | 31-35 | 7.12 | 1.622 | — | 0.71 | 28.70 | 0.75 | 0.972 | -91.9 |
| 1020 | 31-35 | 7.04 | 1.556 | — | 0.72 | 27.26 | 0.73 | 0.955 | -81.0 |
| 1022 | 31-35 | 6.96 | 1.486 | — | 0.73 | 26.59 | 0.71 | 0.931 | -73.0 |
| | Sampled at 1023 | | | | | | | | |
| 1040 | 36-40 | 7.15 | 2.336 | — | 1.54 | 28.17 | 1.12 | 1.429 | -121.5 |
| 1042 | 36-40 | 7.10 | 2.323 | — | 1.57 | 27.73 | 1.12 | 1.432 | -116.0 |
| 1044 | 36-40 | 7.01 | 2.284 | — | 1.53 | 27.08 | 1.12 | 1.427 | -106.7 |
| | Sampled at 1045 | | | | | | | | |
| 1120 | 41-45 | 7.26 | 2.559 | — | 0.45 | 29.73 | 1.23 | 1.575 | -124.0 |
| 1122 | 41-45 | 7.21 | 2.581 | — | 0.40 | 28.28 | 1.25 | 1.583 | -114.2 |
| 1124 | 41-45 | 7.16 | 2.555 | — | 0.37 | 27.45 | 1.25 | 1.582 | -104.5 |
| | Sampled at 1125 | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0097 (B)

Project Number: FR1681

Date: 6/14/10



| Time DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1142 | 46-50 | 7.11 | 2.880 | — | 1.41 | 32.08 | 1.31 | 1.682 | -146.8 |
| 1144 | 46-50 | 7.15 | 2.949 | — | 1.36 | 31.25 | 1.35 | 1.726 | -147.5 |
| 1146 | 46-50 | 7.16 | 2.975 | — | 1.34 | 30.82 | 1.37 | 1.747 | -146.0 |
| | Sampled at 1147 | | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0098 (A)

Date: 6/14/10



| ~~DPT~~ Time Location | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1345 | 8-12 | 6.83 | 0.890 | — | 0.72 | 28.06 | 0.40 | 0.538 | -28.0 |
| 1347 | 8-12 | 6.81 | 0.864 | — | 0.68 | 27.60 | 0.40 | 0.529 | -27.0 |
| 1349 | 8-12 | 6.78 | 0.845 | — | 0.66 | 27.18 | 0.39 | 0.523 | -26.6 |
| | Sampled at 1350 | | | | | | | | |
| 1355 | 12-16 | 7.08 | 1.162 | — | 0.53 | 29.25 | 0.52 | 0.685 | -89.5 |
| 1357 | 12-16 | 7.00 | 1.080 | — | 0.41 | 27.47 | 0.50 | 0.663 | -72.6 |
| 1359 | 12-16 | 6.93 | 1.053 | — | 0.42 | 26.87 | 0.50 | 0.654 | -65.8 |
| | Sampled at 1400 | | | | | | | | |
| 1410 | 16-20 | 6.88 | 1.249 | — | 0.38 | 27.13 | 0.59 | 0.770 | -63.0 |
| 1412 | 16-20 | 6.83 | 1.220 | — | 0.38 | 26.89 | 0.58 | 0.759 | -60.1 |
| 1414 | 16-20 | 6.80 | 1.190 | — | 0.41 | 26.56 | 0.57 | 0.748 | -57.6 |
| | Sampled at 1415 | | | | | | | | |
| 1425 | 21-25 | 6.92 | 1.286 | — | 2.19 | 29.83 | 0.58 | 0.766 | -92.6 |
| 1427 | 21-25 | 6.83 | 1.231 | — | 2.27 | 27.70 | 0.57 | 0.756 | -77.0 |
| 1429 | 21-25 | 6.78 | 1.194 | — | 2.25 | 26.89 | 0.57 | 0.744 | -72.1 |
| | Sampled at 1430 | | | | | | | | |
| 1442 | 26-30 | 6.93 | 1.205 | — | 1.13 | 29.17 | 0.55 | 0.721 | -94.1 |
| 1444 | 26-30 | 6.88 | 1.158 | — | 1.15 | 27.33 | 0.54 | 0.719 | -88.3 |
| 1445 | 26-30 | 6.86 | 1.149 | — | 1.11 | 27.29 | 0.54 | 0.711 | -88.3 |
| | Sampled at 1446 | | | | | | | | |
| 1500 | 31-35 | 6.92 | 1.496 | — | 0.68 | 1.489 | 0.68 | 0.897 | -114.3 |
| 1502 | 31-35 | 6.94 | 1.463 | — | 0.66 | 1.454 | 0.68 | 0.887 | -103.9 |
| 1504 | 31-35 | 6.90 | 1.400 | — | 0.80 | 1.395 | 0.66 | 0.860 | -101.7 |
| | Sampled at 1505 | | | | | | | | |
| | | | | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0098(A)

Project Number: FR1681

Date: 6/14/10



| DPT Location (Time) | Sample Depth | pH std units | Conductivity µS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1530 | 36-40 | 6.90 | 2.056 | — | 0.71 | 32.05 | 0.97 | 1.262 | -151.7 |
| 1532 | 36-40 | 6.99 | 2.226 | — | 0.50 | 28.95 | 1.05 | 1.352 | -126.3 |
| 1534 | 36-40 | 6.94 | 2.189 | — | 0.53 | 28.31 | 1.05 | 1.341 | -119.7 |
| | Sampled at 1535 | | | | | | | | |
| 1552 | 41-45 | 7.10 | 2.361 | — | 0.65 | 27.98 | 1.11 | 1.423 | -127.3 |
| 1554 | 41-45 | 7.03 | 2.315 | — | 0.56 | 27.62 | 1.11 | 1.420 | -121.8 |
| 1556 | 41-45 | 7.00 | 2.294 | — | 0.53 | 27.53 | 1.12 | 1.429 | -120.4 |
| | Sampled at 1557 | | | | | | | | |
| 1619 | 46-50 | 7.22 | 2.645 | — | 0.40 | 28.70 | 1.23 | 1.557 | -148.8 |
| 1621 | 46-50 | 7.18 | 2.584 | — | 0.42 | 28.11 | 1.24 | 1.592 | -140.0 |
| 1623 | 46-50 | 7.15 | 2.571 | — | 0.42 | 27.97 | 1.23 | 1.560 | -138.6 |
| | Sampled at 1624 | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0099(D)

Project Number: FR1681

Date: 6/14/10 & 6/15/10



| ~~DPT~~ Time Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 6/14/10 | | | | | | | | | |
| 1820 | 8-12 | 7.16 | 0.739 | — | 0.93 | 27.33 | 0.33 | 0.437 | -41.6 |
| 1822 | 8-12 | 7.04 | 0.684 | — | 0.62 | 26.76 | 0.31 | 0.423 | -39.9 |
| 1824 | 8-12 | 6.98 | 0.665 | — | 0.57 | 26.40 | 0.31 | 0.418 | -39.6 |
| | Sampled at 1825 | | | | | | | | |
| | | | | | | | | | |
| 1832 | 12-16 | 6.90 | 0.886 | — | 1.55 | 27.10 | 0.40 | 0.533 | -95.0 |
| 1834 | 12-16 | 6.95 | 0.823 | — | 1.48 | 26.72 | 0.39 | 0.513 | -86.0 |
| 1836 | 12-16 | 6.93 | 0.796 | — | 1.55 | 26.71 | 0.38 | 0.502 | -79.3 |
| | Sampled at 1837 | | | | | | | | |
| | | | | | | | | | |
| 6/15/10 | | | | | | | | | |
| 0746 | 16-20 | 6.64 | 0.945 | — | 1.06 | 24.68 | 0.47 | 0.616 | -67.9 |
| 0748 | 16-20 | 6.67 | 0.923 | — | 1.08 | 24.48 | 0.46 | 0.603 | -62.6 |
| 0750 | 16-20 | 6.68 | 0.906 | — | 1.38 | 24.30 | 0.45 | 0.595 | -61.0 |
| | Sampled at 0751 | | | | | | | | |
| | | | | | | | | | |
| 0800 | 21-25 | 6.75 | 1.095 | — | 1.28 | 25.26 | 0.54 | 0.705 | -96.7 |
| 0802 | 21-25 | 6.73 | 1.081 | — | 1.28 | 25.06 | 0.53 | 0.698 | -88.8 |
| 0804 | 21-25 | 6.71 | 1.070 | — | 1.28 | 24.91 | 0.53 | 0.692 | -84.2 |
| | Sampled at 0805 | | | | | | | | |
| | | | | | | | | | |
| 0816 | 26-30 | 6.74 | 1.198 | — | 0.76 | 25.40 | 0.59 | 0.770 | -79.6 |
| 0818 | 26-30 | 6.72 | 1.185 | — | 0.77 | 25.18 | 0.58 | 0.765 | -74.6 |
| 0820 | 26-30 | 6.70 | 1.177 | — | 0.77 | 25.03 | 0.58 | 0.763 | -70.3 |
| | Sampled at 0821 | | | | | | | | |
| | | | | | | | | | |
| 0842 | 31-35 | 6.91 | 1.551 | — | 0.63 | 26.41 | 0.76 | 0.984 | -130.9 |
| 0844 | 31-35 | 6.93 | 1.553 | — | 0.60 | 26.14 | 0.76 | 0.987 | -135.0 |
| 0846 | 31-35 | 6.95 | 1.547 | — | 0.60 | 25.79 | 0.74 | 0.967 | -111.4 |
| | Sampled at 0847 | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0099 (D)

Date: 6/15/10



| ~~DPT~~ JRG Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 0907 | 36-40 | 6.87 | 1.920 | — | 0.69 | 25.62 | 0.95 | 1.220 | -105.2 |
| 0909 | 36-40 | 6.84 | 1.951 | — | 0.71 | 25.42 | 0.98 | 1.262 | -105.2 |
| 0911 | 36-40 | 6.86 | 1.957 | — | 0.70 | 25.78 | 0.98 | 1.259 | -103.8 |
| | Sampled at 0912 | | | | | | | | |
| | | | | | | | | | |
| 0926 | 41-45 | 7.09 | 1.974 | — | 0.56 | 26.48 | 0.97 | 1.250 | -130.7 |
| 0928 | 41-45 | 7.06 | 1.943 | — | 0.55 | 26.14 | 0.96 | 1.236 | -122.0 |
| 0930 | 41-45 | 7.03 | 1.944 | — | 0.57 | 25.98 | 0.97 | 1.245 | -119.5 |
| | Sampled at 0931 | | | | | | | | |
| | | | | | | | | | |
| 0947 | 46-50 | 7.21 | 2.035 | — | 0.51 | 26.95 | 1.00 | 1.281 | -144.9 |
| 0949 | 46-50 | 7.17 | 2.030 | — | 0.56 | 26.61 | 1.00 | 1.278 | -129.1 |
| 0951 | 46-50 | 7.09 | 2.026 | — | 0.61 | 26.44 | 1.01 | 1.289 | -122.9 |
| | Sampled at 0952 | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0100

Project Number: FR1681

Date: 6/15/10



| DPT Location (Time) | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1042 | 8-12 | 6.88 | 0.846 | — | 0.91 | 26.54 | 0.39 | 0.525 | -44.9 |
| 1044 | 8-12 | 6.82 | 0.822 | — | 0.93 | 26.22 | 0.39 | 0.516 | -41.3 |
| 1046 | 8-12 | 6.77 | 0.806 | — | 1.00 | 26.03 | 0.38 | 0.510 | -40.9 |
| | Sampled at 1047 | | | | | | | | |
| ~~1052~~ | | | | | | | | | |
| 1052 | 12-16 | 6.85 | 1.044 | — | 1.28 | 27.08 | 0.49 | 0.645 | -97.9 |
| 1054 | 12-16 | 6.87 | 1.014 | — | 1.22 | 26.43 | 0.48 | 0.635 | -90.1 |
| 1056 | 12-16 | 6.85 | 0.983 | — | 1.20 | 26.17 | 0.47 | 0.613 | -82.6 |
| | Sampled at 1057 | | | | | | | | |
| 1105 | 16-20 | 6.86 | 1.005 | — | 0.90 | 26.97 | 0.47 | 0.620 | -90.8 |
| 1107 | 16-20 | 6.81 | 0.957 | — | 0.90 | 26.78 | 0.45 | 0.593 | -85.9 |
| 1109 | 16-20 | 6.77 | 0.944 | — | 0.93 | 26.47 | 0.45 | 0.597 | -82.3 |
| | Sampled at 1110 | | | | | | | | |
| 1115 | 21-25 | 6.82 | 0.989 | — | 0.88 | 27.91 | 0.45 | 0.599 | -111.9 |
| 1117 | 21-25 | 6.80 | 0.945 | — | 0.88 | 27.21 | 0.44 | 0.581 | -104.4 |
| 1119 | 21-25 | 6.77 | 0.921 | — | 0.91 | 26.89 | 0.43 | 0.569 | -100.4 |
| | Sampled at 1120 | | | | | | | | |
| 1131 | 26-30 | 6.88 | 0.847 | — | 1.31 | 29.41 | 0.37 | 0.492 | -111.6 |
| 1133 | 26-30 | 6.85 | 0.813 | — | 1.10 | 28.83 | 0.36 | 0.489 | -106.5 |
| 1135 | 26-30 | 6.82 | 0.803 | — | 1.02 | 28.56 | 0.36 | 0.487 | -103.3 |
| | Sampled at 1136 | | | | | | | | |
| 1145 | 31-35 | 7.05 | 1.697 | — | 1.12 | 28.58 | 0.77 | 1.000 | -130.3 |
| 1147 | 31-35 | 6.99 | 1.597 | — | 0.80 | 27.16 | 0.76 | 0.985 | -126.0 |
| 1149 | 31-35 | 6.95 | 1.561 | — | 0.74 | 26.86 | 0.75 | 0.976 | -120.5 |
| | Sampled at 1150 | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0100

Date: 6/15/10

| ~~DPT~~ Time Location | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1308 | 36-40 | 7.00 | 1.990 | — | 0.73 | 28.10 | 0.94 | 1.209 | -89.5 |
| 1310 | 36-40 | 6.93 | 1.952 | — | 0.69 | 27.62 | 0.93 | 1.198 | -83.1 |
| 1312 | 36-40 | 6.88 | 1.923 | — | 0.65 | 27.34 | 0.92 | 1.189 | -79.2 |
| | Sampled at 1313 | | | | | | | | |
| 1327 | 41-45 | 6.88 | 2.002 | — | 0.96 | 33.48 | 0.90 | 1.142 | -150.2 |
| 1329 | 41-45 | 7.03 | 2.067 | — | 0.78 | 32.30 | 0.75 | 1.200 | -162.3 |
| 1331 | 41-45 | 7.06 | 2.117 | — | 0.73 | 31.47 | 0.74 | 1.244 | -165.0 |
| | Sampled at 1332 | | | | | | | | |
| 1349 | 46-50 | 7.20 | 2.054 | — | 0.47 | 33.86 | 0.87 | 1.142 | -211.7 |
| 1351 | 46-50 | 7.28 | 2.149 | — | 0.46 | 31.35 | 1.00 | 1.307 | -205.7 |
| 1353 | 46-50 | 7.28 | 2.276 | — | 0.47 | 29.99 | 1.07 | 1.385 | -199.6 |
| | Sampled at 1354 | | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0101 (E)

Date: 6/15/10



| ~~DPT~~ Time ~~Location~~ Jar | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ m g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1524 | 8-12 | 7.03 | 0.757 | — | 1.70 | 25.75 | 0.36 | 0.484 | -37.4 |
| 1526 | 8-12 | 6.97 | 0.748 | — | 1.29 | 25.62 | 0.36 | 0.476 | -37.4 |
| 1528 | 8-12 | 6.84 | 0.735 | — | 1.20 | 25.12 | 0.35 | 0.473 | -38.4 |
| | Sampled at 1529 | | | | | | | | |
| 1533 | 12-16 | 6.70 | 0.977 | — | 1.58 | 26.98 | 0.46 | 0.611 | -99.1 |
| 1535 | 12-16 | 6.78 | 0.958 | — | 1.39 | 25.92 | 0.45 | 0.601 | -94.7 |
| 1537 | 12-16 | 6.77 | 0.927 | — | 1.32 | 25.11 | 0.45 | 0.593 | -82.6 |
| | Sampled at 1538 | | | | | | | | |
| 1543 | 16-20 | 7.02 | 0.988 | — | 0.79 | 26.52 | 0.48 | 0.643 | -110.4 |
| 1545 | 16-20 | 6.92 | 1.024 | — | 0.76 | 25.96 | 0.50 | 0.657 | -99.7 |
| 1547 | 16-20 | 6.85 | 1.026 | — | 0.78 | 25.27 | 0.50 | 0.658 | -89.9 |
| | Sampled at 1548 | | | | | | | | |
| 1555 | 21-25 | 7.89 | 0.787 | — | 1.04 | 26.90 | 0.41 | 0.554 | -162.7 |
| 1557 | 21-25 | 7.35 | 0.914 | — | 0.75 | 25.92 | 0.47 | 0.628 | -140.1 |
| 1559 | 21-25 | 7.20 | 0.997 | — | 0.73 | 25.58 | 0.49 | 0.651 | -117.8 |
| | Sampled at 1600 | | | | | | | | |
| | | | | — | | | | | |
| 1608 | 26-30 | 7.37 | 0.911 | — | 0.77 | 25.59 | 0.44 | 0.589 | -126.2 |
| 1610 | 26-30 | 7.31 | 0.915 | — | 0.77 | 25.44 | 0.44 | 0.583 | -144.1 |
| 1612 | 26-30 | 7.15 | 0.890 | — | 0.98 | 25.17 | 0.44 | 0.579 | -131.1 |
| | Sampled at 1613 | | | | | | | | |
| 1623 | 31-35 | 7.79 | 1.059 | — | 0.72 | 27.45 | 0.53 | 0.702 | -202.5 |
| 1625 | 31-35 | 7.78 | 1.158 | — | 0.68 | 27.17 | 0.56 | 0.733 | -193.0 |
| 1627 | 31-35 | 7.73 | 1.191 | — | 0.66 | 27.04 | 0.57 | 0.752 | -189.5 |
| | Sampled at 1628 | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0101 (E)

Date: 6/15/10

Time



| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1641 | 36-40 | 7.37 | 1.786 | — | 0.61 | 26.92 | 0.86 | 1.111 | -177.3 |
| 1643 | 36-40 | 7.19 | 1.774 | — | 0.63 | 26.89 | 0.86 | 1.107 | -166.8 |
| 1645 | 36-40 | 7.12 | 1.757 | — | 0.66 | 26.76 | 0.84 | 1.084 | -161.5 |
| | Sampled at 1646 | | | | | | | | |
| 1700 | 41-45 | 7.70 | 1.898 | — | 0.61 | 27.46 | 0.98 | 1.295 | -178.5 |
| 1702 | 41-45 | 7.35 | 2.069 | — | 0.63 | 26.60 | 1.02 | 1.309 | -161.0 |
| 1704 | 41-45 | 7.20 | 2.077 | — | 0.66 | 26.36 | 1.03 | 1.320 | -152.8 |
| | Sampled at 1705 | | | | | | | | |
| ~~1719~~ | 46-50 | No readings taken | | | | | | | |
| ~~1721~~ | 46-50 | due to | — | | | | | | |
| ~~1723~~ | 46-50 | low recovery | — | | | | | | |
| | Sampled at 1724 | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0102 (F)

Date: 6/16/10

| ~~DPT Location~~ Time (HRS) | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0808 | 8-12 | 6.47 | 1.085 | — | 0.50 | 27.77 | 0.50 | 0.662 | -89.0 |
| 0810 | 8-12 | 6.45 | 1.062 | — | 0.54 | 27.40 | 0.49 | 0652 | -84.3 |
| 0812 | 8-12 | 6.42 | 1.040 | — | 0.67 | 27.21 | 0.49 | 0.646 | -79.7 |
| | Sampled at 0813 | | | | | | | | |
| 0830 | 12-16 | 6.35 | 1.085 | — | 1.46 | 28.86 | 0.57 | 0.757 | -100.4 |
| 0832 | 12-16 | 6.60 | 1.252 | — | 0.99 | 27.82 | 0.58 | 0.763 | -100.0 |
| 0834 | 12-16 | 6.65 | 1.214 | — | 0.85 | 27.06 | 0.57 | 0.752 | -92.0 |
| | Sampled at 0835 | | | | | | | | |
| 0845 | 16-20 | 6.81 | 1.253 | — | 0.44 | 27.44 | 0.59 | 0.770 | -105.0 |
| 0847 | 16-20 | 6.80 | 1.227 | — | 0.44 | 26.97 | 0.58 | 0.755 | -93.1 |
| 0849 | 16-20 | 6.80 | 1.195 | — | 0.46 | 26.76 | 0.57 | 0.747 | -90.7 |
| | Sampled at 0850 | | | | | | | | |
| 0855 | 21-25 | 6.80 | 1.190 | — | 0.78 | 27.84 | 0.55 | 0.730 | -109.8 |
| 0857 | 21-25 | 6.76 | 1.189 | — | 0.61 | 27.53 | 0.56 | 0.731 | -103.3 |
| 0859 | 21-25 | 6.73 | 1.172 | — | 0.56 | 27.22 | 0.55 | 0.725 | -101.6 |
| | Sampled at 0900 | | | | | | | | |
| 0912 | 26-30 | 6.74 | 1.066 | — | 0.52 | 28.24 | 0.49 | 0.646 | -120.7 |
| 0914 | 26-30 | 6.78 | 1.038 | — | 0.39 | 27.33 | 0.48 | 0.642 | -115.3 |
| 0916 | 26-30 | 6.80 | 0.986 | — | 0.39 | 27.14 | 0.45 | 0.598 | -105.7 |
| | Sampled at 0917 | | | | | | | | |
| 0932 | 31-35 | 7.93 | 1.305 | — | 0.70 | 30.96 | 0.58 | 0.765 | -164.8 |
| 0934 | 31-35 | 7.07 | 1.347 | — | 0.63 | 30.34 | 0.60 | 0.794 | -115.5 |
| 0936 | 31-35 | 6.97 | 1.313 | — | 0.48 | 28.79 | 0.60 | 0.787 | -118.4 |
| | Sampled at 0937 | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0102 (FI)

Date: 6/16/10

| ~~DPT~~ Time Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0955 | 36-40 | 7.18 | 1.834 | — | 0.74 | 30.19 | 0.89 | 1.181 | -179.3 |
| 0957 | 36-40 | 7.11 | 2.064 | — | 0.58 | 29.31 | 0.99 | 1.276 | -172.4 |
| 0959 | 36-40 | 7.06 | 2.120 | — | 0.59 | 28.20 | 1.01 | 1.294 | -146.8 |
| | Sampled | at 1000 | | | | | | | |
| 1013 | 41-45 | 7.08 | 2.226 | — | 0.41 | 30.18 | 1.01 | 1.293 | -165.1 |
| 1015 | 41-45 | 7.09 | 2.166 | — | 0.42 | 30.01 | 0.98 | 1.264 | -165.0 |
| 1017 | 41-45 | 7.09 | 2.105 | — | 0.44 | 29.88 | 0.95 | 1.227 | -165.2 |
| | Sampled | at 1018 | | | | | | | |
| 1035 | 46-50 | 7.14 | 2.587 | — | 0.29 | 30.34 | 1.20 | 1.542 | -189.5 |
| 1037 | 46-50 | 7.13 | 2.612 | — | 0.29 | 29.94 | 1.21 | 1.546 | -190.1 |
| 1039 | 46-50 | 7.13 | 2.591 | — | 0.28 | 29.69 | 1.21 | 1.535 | -190.4 |
| | Sampled | at 1040 | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0103 (G)

Project Number: FR1681

Date: 6/16/10

| ~~DPT Location~~ Time 180 | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ m g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1125 | 8-12 | 6.66 | 1.291 | — | 0.62 | 31.10 | 0.56 | 0.738 | -105.0 |
| 1127 | 8-12 | 6.64 | 1.248 | — | 0.67 | 30.78 | 0.55 | 0.725 | -105.9 |
| 1129 | 8-12 | 6.63 | 1.231 | — | 0.84 | 30.55 | 0.54 | 0.719 | -107.2 |
| | Sampled at 1130 | | | | | | | | |
| 1131 | 12-16 | 6.62 | 0.979 | — | 0.73 | 32.32 | 0.40 | 0.539 | -125.1 |
| 1133 | 12-16 | 6.63 | 0.932 | — | 0.55 | 32.27 | 0.39 | 0.524 | -127.4 |
| 1135 | 12-16 | 6.63 | 0.908 | — | 0.51 | 32.15 | 0.38 | 0.514 | -129.2 |
| | Sampled at 1136 | | | | | | | | |
| 1144 | 16-20 | 6.70 | 0.904 | — | 0.26 | 31.88 | 0.38 | 0.506 | -154.1 |
| 1146 | 16-20 | 6.71 | 0.856 | — | 0.27 | 31.53 | 0.37 | 0.492 | -155.8 |
| 1148 | 16-20 | 6.71 | 0.837 | — | 0.28 | 31.22 | 0.36 | 0.488 | -156.4 |
| | Sampled at 1149 | | | | | | | | |
| 1155 | 21-25 | 6.73 | 0.760 | — | 0.43 | 32.02 | 0.32 | 0.442 | -166.4 |
| 1157 | 21-25 | 6.74 | 0.701 | — | 0.28 | 31.80 | 0.26 | 0.540 | -166.6 |
| 1159 | 21-25 | 6.74 | 0.532 | — | 0.30 | 31.38 | 0.30 | 0.309 | -166.4 |
| | Sampled at 1200 | | | | | | | | |
| 1211 | 26-30 | 6.71 | 0.540 | — | 0.38 | 31.24 | 0.23 | 0.309 | -162.6 |
| 1213 | 26-30 | 6.71 | 0.532 | — | 0.32 | 31.29 | 0.22 | 0.306 | -157.2 |
| 1215 | 26-30 | 6.68 | 0.514 | — | 0.69 | 30.73 | 0.22 | 0.300 | -150.4 |
| | Sampled at 1216 | | | | | | | | |
| 1326 | 31-35 | 6.83 | 1.367 | — | 1.03 | 0.789 | 0.60 | 0.788 | -130.5 |
| 1328 | 31-35 | 6.74 | 1.307 | — | 0.83 | 0.770 | 0.58 | 0.770 | -113.1 |
| 1330 | 31-35 | 6.70 | 1.294 | — | 0.91 | 0.766 | 0.58 | 0.761 | -108.3 |
| | Sampled at 1331 | | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: Time DPT0103(G)

Project Number: FR 1681

Date: 6/26/10

| DPT ~~Location~~ JRH | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 1341 | 36-40 | 6.87 | 2.248 | — | 0.26 | 31.51 | 1.03 | 1.328 | -138.8 |
| 1343 | 36-40 | 6.90 | 2.267 | — | 0.27 | 30.24 | 1.04 | 1.335 | -129.0 |
| 1345 | 36-40 | 6.87 | 2.241 | — | 0.27 | 29.91 | 1.03 | 1.330 | -120.9 |
| | Sampled at 1346 | | | | | | | | |
| | | | | | | | | | |
| 1405 | 41-45 | 6.91 | 2283 | — | 0.31 | 28.94 | 1.07 | 1.377 | -115.7 |
| 1407 | 41-45 | 6.87 | 2.264 | — | 0.33 | 28.70 | 1.07 | 1.368 | -110.1 |
| 1409 | 41-45 | 6.84 | 2.240 | — | 0.37 | 28.58 | 1.06 | 1.363 | -107.4 |
| | Sampled at 1410 | | | | | | | | |
| | | | | | | | | | |
| 1500 | 46-50 | 7.16 | 1.666 | — | 0.65 | 35.16 | 0.69 | 0.905 | -177.8 |
| 1502 | 46-50 | 7.11 | 1.608 | — | 0.62 | 33.96 | 0.67 | 0.881 | -166.3 |
| 1504 | 46-50 | 7.07 | 1.554 | — | 0.72 | 32.49 | 0.66 | 0.874 | -147.7 |
| | Sampled at 1505 | | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: Time DPT0104 (H)

Date: 6/16/16

| DPT Location ~~Time~~ | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1543 | 8-12 | 6.77 | 0.679 | — | 0.50 | 28.48 | 0.30 | 0.410 | -87.2 |
| 1545 | 8-12 | 6.49 | 0.655 | — | 0.45 | 27.69 | 0.30 | 0.404 | -44.3 |
| 1547 | 8-12 | 6.37 | 0.650 | — | 0.43 | 27.51 | 0.30 | 0.402 | -42.2 |
| | Sampled at 1548 | | | | | | | | |
| 1555 | 12-16 | 6.35 | 0.653 | — | 0.76 | 28.77 | 0.27 | 0.361 | -9.7 |
| 1557 | 12-16 | 6.61 | 0.585 | — | 0.66 | 28.08 | 0.26 | 0.354 | -85.1 |
| 1559 | 12-16 | 6.60 | 0.567 | — | 0.61 | 27.70 | 0.26 | 0.349 | -80.7 |
| | Sampled at 1600 | | | | | | | | |
| 1609 | 16-20 | 6.79 | 0.594 | — | 0.28 | 28.64 | 0.26 | 0.350 | -114.0 |
| 1611 | 16-20 | 6.93 | 0.560 | — | 0.29 | 28.16 | 0.25 | 0.339 | -107.8 |
| 1613 | 16-20 | 6.91 | 0.550 | — | 0.30 | 27.79 | 0.25 | 0.337 | -103.6 |
| | Sampled at 1614 | | | | | | | | |
| 1621 | 21-25 | 6.86 | 0.416 | — | 0.25 | 29.12 | 0.25 | 0.243 | -132.5 |
| 1623 | 21-25 | 6.87 | 0.395 | — | 0.26 | 28.31 | 0.18 | 0.242 | -118.2 |
| 1625 | 21-25 | 6.83 | 0.398 | — | 0.29 | 27.81 | 0.17 | 0.240 | -108.7 |
| | Sampled at 1626 | | | | | | | | |
| 1634 | 26-30 | 6.74 | 0.360 | — | 0.40 | 29.76 | 0.15 | 0.223 | -142.6 |
| 1636 | 26-30 | 6.90 | 0.397 | — | 0.27 | 29.21 | 0.17 | 0.228 | -130.9 |
| 1638 | 26-30 | 6.86 | 0.353 | — | 0.27 | 28.76 | 0.15 | 0.204 | -122.7 |
| | Sampled at 1639 | | | | | | | | |
| 1648 | 31-35 | 6.76 | 0.334 | — | 0.29 | 29.30 | 0.14 | 0.198 | -130.7 |
| 1650 | 31-35 | 6.81 | 0.329 | — | 0.17 | 29.37 | 0.14 | 0.197 | -133.6 |
| 1652 | 31-35 | 6.87 | 0.328 | — | 0.18 | 29.44 | 0.14 | 0.196 | -137.8 |
| | Sampled at 1653 | | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0104 (H)

Date: 6/16/10 & 6/17/10

| Time DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1703 | 36-40 | 7.02 | 0.372 | — | 0.16 | 30.28 | 0.16 | 0.223 | -168.7 |
| 1705 | 36-40 | 7.05 | 0.384 | — | 0.17 | 30.25 | 0.17 | 0.231 | -168.4 |
| 1707 | 36-40 | 7.04 | 0.398 | — | 0.17 | 30.17 | 0.18 | 0.243 | -166.6 |
| | Sampled at 1708 | | | | | | | | |
| 6/17/10 0804 | 41-45 | 6.84 | 2.074 | — | 0.60 | 26.53 | 1.04 | 1.333 | -70.9 |
| 0806 | 41-45 | 6.83 | 2.108 | — | 0.48 | 26.33 | 1.04 | 1.336 | -63.0 |
| 0808 | 41-45 | 6.81 | 2.106 | — | 0.46 | 26.24 | 1.04 | 1.336 | -57.5 |
| | Sampled at 0809 | | | | | | | | |
| 0829 | 46-50 | 6.98 | 2.195 | — | 0.32 | 28.07 | 1.08 | 1.279 | -131.3 |
| 0831 | 46-50 | 6.97 | 2.086 | — | 0.31 | 27.47 | 1.02 | 1.306 | -138.1 |
| 0833 | 46-50 | 7.00 | 2.106 | — | 0.29 | 27.20 | 1.03 | 1.316 | -142.0 |
| | Sampled at 0834 | | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: Time DPT0105 (I)

Project Number: FR1681

Date: 6/17/10

| ~~DPT Location~~ Time | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0918 | 8-12 | 6.78 | 1.130 | — | 0.47 | 29.86 | 0.50 | 0.656 | -133.0 |
| 0920 | 8-12 | 6.63 | 1.048 | — | 0.42 | 29.00 | 0.47 | 0.630 | -135.9 |
| 0922 | 8-12 | 6.58 | 1.030 | — | 0.75 | 28.60 | 0.47 | 0.625 | -143.7 |
| | Sampled at 0923 | | | | | | | | |
| 0928 | 12-16 | 6.54 | 1.183 | — | 0.30 | 30.39 | 0.52 | 0.686 | -195.7 |
| 0930 | 12-16 | 6.58 | 1.138 | — | 0.31 | 29.85 | 0.51 | 0.674 | -186.2 |
| 0932 | 12-16 | 6.59 | 1.125 | — | 0.36 | 29.47 | 0.51 | 0.672 | -195.1 |
| | Sampled at 0933 | | | | | | | | |
| 0943 | 16-20 | 6.65 | 1.024 | — | 0.10 | 30.86 | 0.43 | 0.573 | -172.6 |
| 0945 | 16-20 | 6.67 | 0.912 | — | 0.09 | 29.96 | 0.40 | 0.536 | -161.2 |
| 0947 | 16-20 | 6.68 | 0.875 | — | 0.09 | 29.52 | 0.39 | 0.521 | -153.4 |
| | Sampled at 0948 | | | | | | | | |
| 0955 | 21-25 | 6.77 | 1.233 | — | 0.47 | 30.51 | 0.55 | 0.728 | -164.1 |
| 0957 | 21-25 | 6.80 | 1.226 | — | 0.40 | 30.01 | 0.55 | 0.721 | -168.6 |
| 0959 | 21-25 | 6.82 | 1.206 | — | 0.56 | 29.77 | 0.54 | 0.713 | -170.7 |
| | Sampled at 1001 | | | | | | | | |
| 1011 | 26-30 | 6.87 | 1.155 | — | 0.46 | 31.07 | 0.51 | 0.678 | -198.1 |
| 1013 | 26-30 | 6.86 | 1.161 | — | 0.35 | 31.09 | 0.51 | 0.673 | -198.9 |
| 1015 | 26-30 | 6.86 | 1.141 | — | 0.31 | 30.97 | 0.49 | 0.654 | -199.5 |
| | Sampled at 1016 | | | | | | | | |
| 1025 | 31-35 | 6.87 | 0.592 | — | 0.15 | 30.67 | 0.25 | 0.344 | -208.8 |
| 1027 | 31-35 | 6.86 | 0.581 | — | 0.14 | 30.81 | 0.25 | 0.336 | -209.2 |
| 1029 | 31-35 | 6.86 | 0.570 | — | 0.14 | 30.87 | 0.24 | 0.332 | -209.4 |
| | Sampled at 1030 | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0105 (I)

Project Number: FR1681

Date: 6/17/10

| ~~DPT~~ Time Location | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ m g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1045 | 36-40 | 6.87 | 0.570 | — | 0.22 | 31.74 | 0.23 | 0.319 | -216.2 |
| 1047 | 36-40 | 6.87 | 0.543 | — | 0.23 | 31.98 | 0.23 | 0.308 | -216.4 |
| 1049 | 36-40 | 6.86 | 0.529 | — | 0.22 | 32.21 | 0.22 | 0.300 | -216.7 |
| | Sampled at 1050 | | | | | | | | |
| | | | | | | | | | |
| 1111 | 41-45 | 7.15 | 1.981 | — | 0.64 | 30.88 | 0.92 | 1.181 | -192.4 |
| 1113 | 41-45 | 7.15 | 1.938 | — | 0.43 | 30.83 | 0.87 | 1.122 | -194.6 |
| 1115 | 41-45 | 7.16 | 1.880 | — | 0.35 | 30.74 | 0.84 | 1.092 | -196.1 |
| | Sampled at 1116 | | | | | | | | |
| | | | | | | | | | |
| 1130 | 46-50 | 7.18 | 1.644 | — | 0.16 | 31.90 | 0.69 | 0.899 | -228.2 |
| 1132 | 46-50 | 7.18 | 1.530 | — | 0.08 | 32.25 | 0.64 | 0.843 | -229.6 |
| 1134 | 46-50 | 7.19 | 1.454 | — | 0.08 | 32.43 | 0.62 | 0.813 | -230.2 |
| | Sampled at 1135 | | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: Time DPT0106 (J)

Project Number: FR1681

Date: 6/17/10

| DPT ~~Location~~ GRID | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1315 | 8-12 | 6.67 | 1.034 | — | 0.63 | 26.27 | 0.49 | 0.653 | -56.1 |
| 1317 | 8-12 | 6.55 | 1.020 | — | 0.63 | 25.95 | 0.49 | 0.650 | -51.4 |
| 1319 | 8-12 | 6.48 | 1.016 | — | 0.64 | 25.86 | 0.49 | 0.648 | -50.3 |
| | Sampled at 1320 | | | | | | | | |
| 1324 | 12-16 | 6.45 | 1.104 | — | 0.62 | 27.22 | 0.51 | 0.667 | -96.5 |
| 1326 | 12-16 | 6.56 | 1.040 | — | 0.53 | 26.20 | 0.50 | 0.653 | -87.9 |
| 1328 | 12-16 | 6.54 | 1.013 | — | 0.51 | 25.73 | 0.49 | 0.646 | -82.0 |
| | Sampled at 1329 | | | | | | | | |
| 1336 | 16-20 | 6.49 | 1.207 | — | 0.55 | 29.23 | 0.54 | 0.709 | -129.8 |
| 1338 | 16-20 | 6.69 | 1.071 | — | 0.30 | 26.09 | 0.51 | 0.675 | -101.1 |
| 1340 | 16-20 | 6.66 | 1.053 | — | 0.32 | 25.81 | 0.51 | 0.673 | -97.3 |
| | Sampled at 1341 | | | | | | | | |
| 1402 | 21-25 | 6.85 | 0.925 | — | 0.26 | 26.84 | 0.40 | 0.530 | -124.9 |
| 1404 | 21-25 | 6.84 | 0.839 | — | 0.28 | 26.35 | 0.39 | 0.521 | -113.4 |
| 1406 | 21-25 | 6.81 | 0.815 | — | 0.31 | 26.09 | 0.39 | 0.515 | -107.6 |
| | Sampled at 1407 | | | | | | | | |
| 1558 | | | | | | | | | |
| 1600 | 26-30 | 7.07 | 0.761 | — | 0.58 | 27.08 | 0.35 | 0.466 | -141.5 |
| 1600 | 26-30 | 7.03 | 0.717 | — | 0.56 | 26.51 | 0.33 | 0.436 | -128.3 |
| 1602 | 26-30 | 6.99 | 0.679 | — | 0.57 | 26.20 | 0.31 | 0.419 | -118.0 |
| | Sampled at 1603 | | | | | | | | |
| 1612 | 31-35 | 6.80 | 0.539 | — | 0.75 | 30.54 | 0.25 | 0.356 | -158.4 |
| 1614 | 31-35 | 6.84 | 0.612 | — | 0.27 | 28.98 | 0.26 | 0.358 | -163.8 |
| 1616 | 31-35 | 6.88 | 0.585 | — | 0.26 | 27.64 | 0.26 | 0.349 | -164.8 |
| | Sampled at 1617 | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0106 (J)

Date: 6/17/10

Time

| ~~DPT~~ ~~Location~~ GRD | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1643 | 36-40 | 7.13 | 0.576 | — | 0.17 | 31.33 | 0.26 | 0.351 | -207.0 |
| 1645 | 36-40 | 7.29 | 0.505 | — | 0.11 | 29.98 | 0.26 | 0.354 | -220.9 |
| 1647 | 36-40 | 7.28 | 0.595 | — | 0.12 | 29.85 | 0.26 | 0.355 | -217.6 |
| | Sampled at 1648 | | | | | | | | |
| 1700 | 41-45 | 7.32 | 0.586 | — | 0.60 | 28.61 | 0.26 | 0.359 | -279.1 |
| 1702 | 41-45 | 7.32 | 0.594 | — | 0.31 | 28.50 | 0.27 | 0.365 | -292.1 |
| 1704 | 41-45 | 7.31 | 0.603 | — | 0.28 | 28.28 | 0.28 | 0.389 | -296.8 |
| | Sampled at 1705 | | | | | | | | |
| 1720 | 46-50 | 7.32 | 0.640 | — | 0.36 | 30.01 | 0.28 | 0.379 | -257.4 |
| 1722 | 46-50 | 7.32 | 0.639 | — | 0.18 | 29.96 | 0.28 | 0.380 | -257.3 |
| 1724 | 46-56 | 7.32 | 0.639 | — | 0.17 | 29.76 | 0.28 | 0.381 | -257.2 |
| | Sampled at 1725 | | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0107 (K) Time

Project Number: FR1681

Date: 6/18/10

| ~~DPT~~ JRD Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 0847 | 8-12 | 6.61 | 0.686 | — | 1.12 | 25.25 | 0.33 | 0.439 | -21.4 |
| 0849 | 8-12 | 6.60 | 0.669 | — | 1.03 | 24.95 | 0.32 | 0.431 | -35.6 |
| 0851 | 8-12 | 6.60 | 0.657 | — | 0.98 | 24.83 | 0.32 | 0.426 | -47.2 |
| | Sampled at 0852 | | | | | | | | |
| 0859 | 16-20 | 6.67 | 0.923 | — | 0.61 | 25.81 | 0.44 | 0.585 | -115.7 |
| 0901 | 16-20 | 6.76 | 0.901 | — | 0.54 | 25.20 | 0.43 | 0.573 | -114.7 |
| 0903 | 16-20 | 6.78 | 0.869 | — | 0.54 | 24.57 | 0.42 | 0.562 | -107.6 |
| | Sampled at 0904 | | | | | | | | |
| 0914 | 26-30 | 6.91 | 1.169 | — | 0.97 | 28.35 | 0.54 | 0.717 | -131.7 |
| 0916 | 26-30 | 6.90 | 1.161 | — | 0.50 | 27.16 | 0.55 | 0.721 | -128.8 |
| 0918 | 26-30 | 6.88 | 1.148 | — | 0.55 | 26.71 | 0.42 | 0.720 | -122.8 |
| | Sampled at 0919 | | | | | | | | |
| 0929 | 31-35 | 7.02 | 1.265 | — | 0.42 | 26.82 | 0.60 | 0.794 | -137.1 |
| 0931 | 31-35 | 6.97 | 1.260 | — | 0.38 | 26.52 | 0.61 | 0.794 | -128.1 |
| 0933 | 31-35 | 6.92 | 1.244 | — | 0.37 | 26.12 | 0.60 | 0.789 | -116.3 |
| | Sampled at 0934 | | | | | | | | |
| 1002 | 36-40 | 6.88 | 1.527 | — | 0.39 | 32.09 | 0.71 | 0.945 | -165.5 |
| 1004 | 36-40 | 7.01 | 1.732 | — | 0.31 | 31.54 | 0.77 | 1.016 | -178.1 |
| 1006 | 36-40 | 7.04 | 1.776 | — | 0.31 | 31.05 | 0.80 | 1.049 | -183.8 |
| | Sampled at 1007 | | | | | | | | |
| 1017 | 41-45 | 7.16 | 1.760 | — | 0.17 | 31.07 | 0.82 | 1.097 | -216.5 |
| 1019 | 41-45 | 7.18 | 2.006 | — | 0.17 | 29.19 | 0.97 | 1.263 | -207.1 |
| 1021 | 41-45 | 7.15 | 2.133 | — | 0.20 | 27.93 | 1.03 | 1.333 | -192.3 |
| | Sampled at 1022 | | | | | | | | |
| 1036 | 46-50 | 6.96 | 2.356 | — | 1.06 | 27.68 | 1.04 | 1.326 | -108.1 |
| 1038 | 46-50 | 6.92 | 2.107 | — | 0.38 | 26.81 | 1.02 | 1.310 | -107.3 |
| 1040 | 46-50 | 6.90 | 2.060 | — | 0.32 | 26.37 | 1.02 | 1.304 | -105.2 |
| | Sampled at 1041 | | | | | | | | |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: Time DPT0108 (L)

Project Number: FR1681

Date: 6/18/10

| ~~DPT~~ FRO Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1128 | 8-12 | 7.07 | 0.807 | — | 1.41 | 26.70 | 0.37 | 0.493 | -49.6 |
| 1130 | 8-12 | 6.88 | 0.762 | — | 1.05 | 26.04 | 0.36 | 0.480 | -45.9 |
| 1132 | 8-12 | 6.78 | 0.744 | — | 0.90 | 25.70 | 0.35 | 0.474 | -42.9 |
| | Sampled at | 1133 | | | | | | | |
| 1139 | 16-20 | 6.43 | 0.997 | — | 1.00 | 30.20 | 0.47 | 0.626 | -110.9 |
| 1141 | 16-20 | 6.61 | 1.065 | — | 0.76 | 29.70 | 0.48 | 0.636 | -117.7 |
| 1143 | 16-20 | 6.78 | 1.034 | — | 0.68 | 27.59 | 0.48 | 0.638 | -110.5 |
| | Sampled at | 1144 | | | | | | | |
| 1151 | 26-30 | 6.85 | 1.016 | — | 0.68 | 31.97 | 0.42 | 0.569 | -169.4 |
| 1153 | 26-30 | 7.14 | 0.979 | — | 0.32 | 29.48 | 0.44 | 0.599 | -171.7 |
| 1155 | 26-30 | 7.23 | 0.973 | — | 0.25 | 27.11 | 0.46 | 0.604 | -158.3 |
| | Sampled at | 1156 | | | | | | | |
| 1205 | 31-35 | 7.22 | 0.984 | — | 0.19 | 28.32 | 0.45 | 0.602 | -173.9 |
| 1207 | 31-35 | 7.22 | 0.985 | — | 0.20 | 28.36 | 0.45 | 0.602 | -174.3 |
| 1209 | 31-35 | 7.23 | 0.989 | — | 0.18 | 28.50 | 0.45 | 0.603 | -175.0 |
| | Sampled at | 1210 | | | | | | | |
| 1222 | 36-40 | 7.05 | 1.220 | — | 0.31 | 28.40 | 0.58 | 0.773 | -161.2 |
| 1224 | 36-40 | 6.99 | 1.263 | — | 0.30 | 27.46 | 0.59 | 0.775 | -145.0 |
| 1226 | 36-40 | 6.93 | 1.242 | — | 0.31 | 27.01 | 0.59 | 0.767 | -136.3 |
| | Sampled at | 1227 | | | | | | | |
| 1239 | 41-45 | 6.89 | 1.432 | — | 0.15 | 31.84 | 0.63 | 0.849 | -180.4 |
| 1241 | 41-45 | 6.99 | 1.430 | — | 0.14 | 29.50 | 0.68 | 0.864 | -158.9 |
| 1243 | 41-45 | 6.97 | 1.422 | — | 0.16 | 27.75 | 0.70 | 0.911 | -145.1 |
| | Sampled at | 1244 | | | | | | | |
| 1329 | 46-50 | 7.22 | 1.252 | — | 0.58 | 32.03 | 0.54 | 0.728 | -220.5 |
| 1331 | 46-50 | 7.21 | 1.265 | — | 0.55 | 31.04 | 0.73 | 0.735 | -224.6 |
| 1333 | 46-50 | 7.20 | 1.252 | — | 0.56 | 30.36 | 0.56 | 0.737 | -225.4 |
| | Sampled at | 1334 | | | | | | | |
| 1349 | 56-60 | 7.25 | 1.294 | — | 0.50 | 30.77 | 0.63 | 0.858 | -237.6 |
| 1351 | 56-60 | 7.30 | 1.557 | — | 0.25 | 31.02 | 0.70 | 0.914 | -239.3 |
| 1353 | 56-60 | 7.31 | 1.570 | — | 0.23 | 31.01 | 0.70 | 0.931 | -240.0 |
| | Sampled at | 1354 | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: Time DPT0109 (M)

Project Number: FR1681

Date: 6.21.10

| ~~DPT~~ Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0714 | 8-12 | 6.49 | 0.579 | — | 1.55 | 23.76 | 0.28 | 0.382 | -100.1 |
| 0716 | 8-12 | 6.51 | 0.571 | — | 1.98 | 23.75 | 0.28 | 0.377 | -100.2 |
| 0717 | 8-12 | 6.52 | 0.564 | — | 2.37 | 23.85 | 0.28 | 0.374 | -99.8 |
| | Sampled at 0718 | | | | | | | | |
| 0728 | 16-20 | 6.66 | 0.714 | — | 0.59 | 24.48 | 0.37 | 0.498 | -120.7 |
| 0730 | 16-20 | 6.76 | 0.763 | — | 0.35 | 24.28 | 0.38 | 0.500 | -122.6 |
| 0732 | 16-20 | 6.81 | 0.753 | — | 0.37 | 24.16 | 0.37 | 0.494 | -120.5 |
| | Sampled at 0733 | | | | | | | | |
| 0742 | 26-30 | 7.09 | 0.630 | — | 0.30 | 24.89 | 0.29 | 0.393 | -145.8 |
| 0744 | 26-30 | 7.10 | 0.597 | — | 0.29 | 25.01 | 0.28 | 0.377 | -147.7 |
| 0746 | 26-30 | 7.10 | 0.562 | — | 0.27 | 25.06 | 0.26 | 0.354 | -149.0 |
| | Sampled at 0747 | | | | | | | | |
| 0757 | 31-35 | 7.09 | 0.447 | — | 0.74 | 25.14 | 0.21 | 0.276 | -170.9 |
| 0759 | 31-35 | 7.17 | 0.417 | — | 0.71 | 25.20 | 0.19 | 0.263 | -171.2 |
| 0801 | 31-35 | 7.17 | 0.400 | — | 0.67 | 25.22 | 0.19 | 0.255 | -171.6 |
| | Sampled at 0802 | | | | | | | | |
| 0818 | 36-40 | 7.22 | 0.298 | — | 0.13 | 25.84 | 0.13 | 0.182 | -188.7 |
| 0820 | 36-40 | 7.22 | 0.280 | — | 0.15 | 25.85 | 0.13 | 0.177 | -188.9 |
| 0822 | 36-40 | 7.22 | 0.275 | — | 0.19 | 25.76 | 0.13 | 0.174 | -189.3 |
| | Sampled at 0823 | | | | | | | | |
| 0839 | 41-45 | 7.24 | 0.246 | — | 0.35 | 26.79 | 0.11 | 0.154 | -200.1 |
| 0841 | 41-45 | 7.24 | 0.246 | — | 0.11 | 26.85 | 0.11 | 0.154 | -200.5 |
| 0843 | 41-45 | 7.24 | 0.245 | — | 0.11 | 26.80 | 0.11 | 0.154 | -209.7 |
| | Sampled at 0844 | | | | | | | | |
| 0900 | 46-50 | 7.26 | 0.240 | — | 0.20 | 27.41 | 0.11 | 0.149 | -211.2 |
| 0902 | 46-50 | 7.26 | 0.149 | — | 0.10 | 27.47 | 0.11 | 0.148 | -211.3 |
| 0904 | 46-50 | 7.26 | 0.148 | — | 0.08 | 27.30 | 0.11 | 0.148 | -211.3 |
| | Sampled at 0905 | | | | | | | | |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0110 (N)

Project Number: FR1681

Date: 6/21/10

| Time DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1009 | 31-35 | 7.33 | 0.719 | — | 0.80 | 29.38 | 0.32 | 0.429 | -143.0 |
| 1011 | 31-35 | 7.26 | 0.709 | — | 0.30 | 29.03 | 0.32 | 0.424 | -137.5 |
| 1013 | 31-35 | 7.21 | 0.688 | — | 0.24 | 28.81 | 0.30 | 0.407 | -130.1 |
| | Sampled at 1014 | | | | | | | | |
| 1025 | 36-40 | 7.22 | 0.571 | — | 0.38 | 30.14 | 0.22 | 0.304 | -194.4 |
| 1027 | 36-40 | 7.29 | 0.576 | — | 0.20 | 30.39 | 0.25 | 0.348 | -185.8 |
| 1029 | 36-40 | 7.30 | 0.591 | — | 0.19 | 30.06 | 0.26 | 0.349 | -182.1 |
| | Sampled at 1030 | | | | | | | | |
| 1045 | 41-45 | 7.30 | 0.559 | — | 0.87 | 31.17 | 0.23 | 0.311 | -224.0 |
| 1047 | 41-45 | 7.31 | 0.632 | — | 0.70 | 30.96 | 0.29 | 0.398 | -206.7 |
| 1049 | 41-45 | 7.33 | 0.687 | — | 0.42 | 30.62 | 0.30 | 0.401 | -201.4 |
| | Sampled at 1050 | | | | | | | | |
| 1102 | 46-50 | 7.31 | 0.671 | — | 0.50 | 31.44 | 0.29 | 0.390 | -221.0 |
| 1104 | 46-50 | 7.34 | 0.674 | — | 0.29 | 31.50 | 0.29 | 0.388 | -222.7 |
| 1106 | 46-50 | 7.34 | 0.665 | — | 0.23 | 31.50 | 0.28 | 0.380 | -223.9 |
| | Sampled at 1107 | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: Trans DPT0111 (0)

Date: 6/21/10

| ~~DPT~~ JRO Location | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ m g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 0.34 | | |
| 1145 | 8-12 | 6.92 | 0.725 | — | 0.38 | 26.65 | ~~0.485~~ | 0.455 | -71.2 |
| 1147 | 8-12 | 6.89 | 0.716 | — | 0.37 | 26.41 | 0.34 | 0.451 | -68.0 |
| 1149 | 8-12 | 6.81 | 0.711 | — | 0.33 | 26.29 | 0.34 | 0.450 | -67.0 |
| | Sampled at 1150 | | | | | | | | |
| 1155 | 16-20 | 6.66 | 1.251 | — | 0.84 | 30.61 | 0.55 | 0.732 | -127.5 |
| 1157 | 16-20 | 6.83 | 1.207 | — | 0.56 | 28.07 | 0.55 | 0.729 | -127.5 |
| 1159 | 16-20 | 6.91 | 1.153 | — | 0.53 | 26.84 | 0.52 | 0.700 | -117.4 |
| | Sampled at 1200 | | | | | | | | |
| 1208 | 26-30 | 7.14 | 1.307 | — | 0.39 | 30.17 | 0.59 | 0.778 | -163.8 |
| 1210 | 26-30 | 7.14 | 1.301 | — | 0.31 | 28.29 | 0.59 | 0.779 | -155.8 |
| 1212 | 26-30 | 7.15 | 1.253 | — | 0.32 | 27.60 | 0.58 | 0.761 | -147.4 |
| | Sampled at 1213 | | | | | | | | |
| 1222 | 31-35 | 7.19 | 1.464 | — | 0.25 | 30.69 | 0.67 | 0.883 | -175.4 |
| 1224 | 31-35 | 7.20 | 1.450 | — | 0.25 | 28.80 | 0.66 | 0.868 | -179.0 |
| 1226 | 31-35 | 7.20 | 1.424 | — | 0.27 | 28.47 | 0.66 | 0.861 | -181.5 |
| | Sampled at 1227 | | | | | | | | |
| 1316 | 36-40 | 7.19 | 1.070 | — | 0.40 | 34.38 | 0.53 | 0.779 | -222.2 |
| 1318 | 36-40 | 7.22 | 1.458 | — | 0.47 | 30.57 | 0.66 | 0.865 | -222.1 |
| 1320 | 36-40 | 7.22 | 1.507 | — | 0.48 | 29.99 | 0.68 | 0.891 | -223.7 |
| | Sampled at 1321 | | | | | | | | |
| 1346 | 41-45 | 7.32 | 1.197 | — | 0.18 | 32.21 | 0.53 | 0.714 | -256.4 |
| 1348 | 41-45 | 7.32 | 1.333 | — | 0.17 | 31.98 | 0.61 | 0.819 | -256.6 |
| 1350 | 41-45 | 7.32 | 1.475 | — | 0.18 | 31.38 | 0.67 | 0.882 | -256.7 |
| | Sampled at 1357 | | | | | | | | |
| 1411 | 46-50 | 7.33 | 1.518 | — | 0.23 | 30.66 | 0.67 | 0.885 | -259.3 |
| 1413 | 46-50 | 7.35 | 1.510 | — | 0.22 | 30.70 | 0.64 | 0.824 | -259.5 |
| 1415 | 46-50 | 7.36 | 1.329 | — | 0.19 | 30.81 | 0.57 | 0.754 | -259.6 |
| | Sampled at 1416 | | | | | | | | |
| 1443 | 56-60 | 7.39 | 2.227 | — | 0.14 | 30.63 | 1.07 | 1.395 | -269.1 |
| 1445 | 56-60 | 7.39 | 2.531 | — | 0.14 | 30.11 | 1.18 | 1.520 | -269.3 |
| 1447 | 56-60 | 7.40 | 2.594 | — | 0.14 | 29.66 | 1.13 | 1.435 | -269.7 |
| | Sampled at 1448 | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0112 (P)

Date: 6/21/10

| ~~DPT~~ Time Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 1542 | 8-12 | 6.95 | 0.955 | — | 0.38 | 27.02 | 0.45 | 0.593 | -59.8 |
| 1544 | 8-12 | 6.84 | 0.925 | — | 0.44 | 26.35 | 0.44 | 0.585 | -57.3 |
| 1546 | 8-12 | 6.80 | 0.917 | — | 0.43 | 26.14 | 0.44 | 0.582 | -56.1 |
| | Sampled at 1547 | | | | | | | | |
| 1551 | 16-20 | 6.71 | 1.090 | — | 0.50 | 29.51 | 0.48 | 0.643 | -125.9 |
| 1553 | 16-20 | 6.79 | 1.034 | — | 0.45 | 28.47 | 0.47 | 0.621 | -134.5 |
| 1555 | 16-20 | 6.82 | 1.006 | — | 0.43 | 27.87 | 0.46 | 0.612 | -137.8 |
| | Sampled at 1556 | | | | | | | | |
| 1605 | 26-30 | 6.97 | 0.991 | — | 0.09 | 28.40 | 0.45 | 0.596 | -177.5 |
| 1607 | 26-30 | 6.99 | 0.947 | — | 0.08 | 28.45 | 0.43 | 0.575 | -180.3 |
| 1609 | 26-30 | 7.00 | 0.938 | — | 0.09 | 28.33 | 0.43 | 0.571 | -181.1 |
| | Sampled at 1610 | | | | | | | | |
| ~~1703~~ | 31-35 | No readings | | — | | | | | |
| ~~1705~~ | 31-35 | Taken due | | — | | | | | |
| ~~1707~~ | 31-35 | to low recovery | | — | | | | | |
| | Sampled at 1627 | | | | | | | | |
| 1651 | 36-40 | 7.15 | 0.576 | — | 0.16 | 32.06 | 0.24 | 0.328 | -227.6 |
| 1653 | 36-40 | 7.14 | 0.567 | — | 0.15 | 31.37 | 0.24 | 0.327 | -227.6 |
| 1655 | 36-40 | 7.15 | 0.558 | — | 0.13 | 30.65 | 0.24 | 0.326 | -227.3 |
| | Sampled at 1656 | | | | | | | | |
| 1710 | 41-45 | 7.15 | 0.524 | — | 0.06 | 29.69 | 0.23 | 0.313 | -231.6 |
| 1712 | 41-45 | 7.15 | 0.524 | — | 0.04 | 29.67 | 0.23 | 0.312 | -232.1 |
| 1714 | 41-45 | 7.15 | 0.521 | — | 0.04 | 29.44 | 0.23 | 0.312 | -232.3 |
| | Sampled at 1715 | | | | | | | | |
| 1726 | 46-50 | 7.20 | 0.922 | — | 0.07 | 29.69 | 0.40 | 0.529 | -244.3 |
| 1728 | 46-50 | 7.22 | 0.870 | — | 0.03 | 29.86 | 0.38 | 0.503 | -245.2 |
| 1730 | 46-50 | 7.22 | 0.832 | — | 0.03 | 29.97 | 0.36 | 0.481 | -245.6 |
| | Sampled at 1731 | | | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0113 (Q)

Date: 6/22/10

Time

| ~~DPT~~ Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 0808 | 8-12 | 7.32 | 0.566 | — | 1.29 | 25.90 | 0.26 | 0.348 | -68.6 |
| 0810 | 8-12 | 7.20 | 0.537 | — | 0.87 | 25.42 | 0.25 | 0.343 | -73.9 |
| 0812 | 8-12 | 7.16 | 0.528 | — | 0.75 | 25.15 | 0.25 | 0.341 | -76.5 |
| | Sampled at 0813 | | | | | | | | |
| 0818 | 16-20 | 6.93 | 0.687 | — | 0.52 | 26.33 | 0.33 | 0.439 | -135.8 |
| 0820 | 16-20 | 7.10 | 0.617 | — | 0.34 | 24.61 | 0.30 | 0.397 | -133.9 |
| 0822 | 16-20 | 7.10 | 0.597 | — | 0.31 | 24.37 | 0.29 | 0.391 | -129.5 |
| | Sampled at 0823 | | | | | | | | |
| 0829 | 26-30 | 7.19 | 0.728 | — | 0.16 | 28.07 | 0.34 | 0.459 | -191.0 |
| 0831 | 26-30 | 7.32 | 0.796 | — | 0.12 | 28.14 | 0.37 | 0.493 | -206.8 |
| 0833 | 26-30 | 7.34 | 0.812 | — | 0.11 | 28.36 | 0.37 | 0.500 | -210.1 |
| | Sampled at 0834 | | | | | | | | |
| 0845 | 31-35 | 7.57 | 0.906 | — | 0.09 | 28.21 | 0.42 | 0.561 | -245.5 |
| 0847 | 31-35 | 7.57 | 0.914 | — | 0.10 | 27.47 | 0.43 | 0.567 | -245.4 |
| 0849 | 31-35 | 7.56 | 0.906 | — | 0.12 | 26.96 | 0.43 | 0.566 | -244.8 |
| | Sampled at 0850 | | | | | | | | |
| 0919 | 36-40 | 7.63 | 0.656 | — | 0.10 | 29.93 | 0.28 | 0.371 | -267.2 |
| 0921 | 36-40 | 7.63 | 0.603 | — | 0.10 | 29.76 | 0.26 | 0.353 | -267.3 |
| 0923 | 36-40 | 7.63 | 0.583 | — | 0.11 | 29.57 | 0.25 | 0.345 | -267.3 |
| | Sampled at 0924 | | | | | | | | |
| 0940 | 41-45 | 7.63 | 0.494 | — | 0.06 | 29.90 | 0.21 | 0.289 | -269.0 |
| 0942 | 41-45 | 7.62 | 0.473 | — | 0.07 | 29.56 | 0.20 | 0.280 | -268.8 |
| 0944 | 41-45 | 7.62 | 0.453 | — | 0.08 | 29.10 | 0.20 | 0.272 | -268.9 |
| | Sampled at 0945 | | | | | | | | |
| 1001 | 46-50 | 7.63 | 0.425 | — | 0.22 | 29.54 | 0.18 | 0.249 | -274.1 |
| 1003 | 46-50 | 7.63 | 0.413 | — | 0.07 | 29.55 | 0.18 | 0.245 | -274.1 |
| 1005 | 46-50 | 7.63 | 0.408 | — | 0.07 | 29.44 | 0.18 | 0.244 | -274.1 |
| | Sampled at 1006 | | | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: Time DPT0114 (R)

Date: 6/22/10

| DPT Location JRR | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ m g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 1050 | 8-12 | 7.02 | 0.811 | — | 0.42 | 25.91 | 0.38 | 0.513 | -64.2 |
| 1052 | 8-12 | 6.97 | 0.796 | — | 0.38 | 25.65 | 0.38 | 0.508 | -62.1 |
| 1054 | 8-12 | 6.89 | 0.781 | — | 0.34 | 25.39 | 0.38 | 0.503 | -59.6 |
| | Sampled at 1055 | | | | | | | | |
| 1100 | 16-20 | 6.67 | 0.943 | — | 0.50 | 27.17 | 0.44 | 0.589 | -112.5 |
| 1102 | 16-20 | 6.79 | 0.927 | — | 0.42 | 26.12 | 0.44 | 0.583 | -113.7 |
| 1104 | 16-20 | 6.84 | 0.902 | — | 0.39 | 25.54 | 0.44 | 0.577 | -109.0 |
| | Sampled at 1105 | | | | | | | | |
| 1112 | 26-30 | 6.87 | 1.193 | — | 0.27 | 29.16 | 0.58 | 0.786 | -156.9 |
| 1114 | 26-30 | 6.84 | 1.289 | — | 0.19 | 26.83 | 0.62 | 0.810 | -127.5 |
| 1116 | 26-30 | 6.80 | 1.272 | — | 0.20 | 26.43 | 0.61 | 0.795 | -116.1 |
| | Sampled at 1117 | | | | | | | | |
| 1127 | 31-35 | 7.01 | 1.449 | — | 0.31 | 30.17 | 0.69 | 0.921 | -174.2 |
| 1129 | 31-35 | 6.95 | 1.577 | — | 0.16 | 28.00 | 0.76 | 1.004 | -167.7 |
| 1131 | 31-35 | 6.95 | 1.633 | — | 0.16 | 27.22 | 0.77 | 1.011 | -168.7 |
| | Sampled at 1132 | | | | | | | | |
| 1200 | 36-40 | 7.11 | 1.577 | — | 0.51 | 30.33 | 0.71 | 0.945 | -218.8 |
| 1202 | 36-40 | 7.22 | 1.595 | — | 0.38 | 28.56 | 0.77 | 1.001 | -217.0 |
| 1204 | 36-40 | 7.27 | 1.642 | — | 0.36 | 27.79 | 0.79 | 1.025 | -211.4 |
| | Sampled at 1205 | | | | | | | | |
| 1215 | 41-45 | 7.32 | 1.405 | — | 0.20 | 29.86 | 0.69 | 0.916 | -219.2 |
| 1217 | 41-45 | 7.36 | 1.564 | — | 0.32 | 28.02 | 0.75 | 0.975 | -208.0 |
| 1219 | 41-45 | 7.37 | 1.578 | — | 0.28 | 27.24 | 0.76 | 0.987 | -198.0 |
| | Sampled at 1220 | | | | | | | | |
| 1332 | 46-50 | 7.20 | 1.042 | — | 0.23 | 35.84 | 0.41 | 0.547 | -145.7 |
| 1334 | 46-50 | 7.21 | 0.940 | — | 0.18 | 34.93 | 0.38 | 0.507 | -157.6 |
| 1336 | 46-50 | 7.22 | 0.900 | — | 0.15 | 34.33 | 0.36 | 0.491 | -162.8 |
| | Sampled at 1337 | | | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: Time DPT0115(S)

Project Number: FR1681

Date: 6/22/10

| ~~DPT~~ TRD ~~Location~~ | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 1420 | 8-12 | 7.74 | 0.545 | — | 1.08 | 29.45 | 0.23 | 0.316 | -66.0 |
| 1422 | 8-12 | 7.59 | 0.510 | — | 0.50 | 27.93 | 0.23 | 0.310 | -71.4 |
| 1424 | 8-12 | 7.51 | 0.496 | — | 0.40 | 27.22 | 0.23 | 0.308 | -73.8 |
| | Sampled at | 1425 | | | | | | | |
| 1431 | 16-20 | 6.96 | 0.674 | — | 0.50 | 30.11 | 0.30 | 0.406 | -124.9 |
| 1433 | 16-20 | 7.05 | 0.681 | — | 0.34 | 29.80 | 0.30 | 0.399 | -135.3 |
| 1435 | 16-20 | 7.09 | 0.659 | — | 0.35 | 29.31 | 0.29 | 0.391 | -142.2 |
| | Sampled at | 1436 | | | | | | | |
| 1442 | 26-30 | 7.35 | 0.665 | — | 0.32 | 28.69 | 0.29 | 0.386 | -178.4 |
| 1444 | 26-30 | 7.36 | 0.620 | — | 0.19 | 29.20 | 0.27 | 0.365 | -179.6 |
| 1446 | 26-30 | 7.36 | 0.600 | — | 0.18 | 29.19 | 0.26 | 0.358 | -180.4 |
| | Sampled at | 1447 | | | | | | | |
| 1501 | 31-35 | 7.46 | 0.497 | — | 0.33 | 30.10 | 0.21 | 0.278 | -198.7 |
| 1503 | 31-35 | 7.46 | 0.449 | — | 0.23 | 30.27 | 0.19 | 0.257 | -199.4 |
| 1505 | 31-35 | 7.47 | 0.427 | — | 0.22 | 30.16 | 0.18 | 0.249 | -199.9 |
| | Sampled at | 1506 | | | | | | | |
| 1529 | 36-40 | 7.50 | 0.385 | — | 0.51 | 31.89 | 0.16 | 0.219 | -217.3 |
| 1531 | 36-40 | 7.51 | 0.379 | — | 0.26 | 31.91 | 0.16 | 0.216 | -217.6 |
| 1533 | 36-40 | 7.51 | 0.369 | — | 0.21 | 31.19 | 0.15 | 0.214 | -217.9 |
| | Sampled at | 1534 | | | | | | | |
| 1547 | 41-45 | 7.53 | 0.344 | — | 0.15 | 30.49 | 0.15 | 0.202 | -222.3 |
| 1549 | 41-45 | 7.53 | 0.344 | — | 0.15 | 30.56 | 0.15 | 0.202 | -222.4 |
| 1551 | 41-45 | 7.53 | 0.342 | — | 0.07 | 30.47 | 0.14 | 0.201 | -222.5 |
| | Sampled at | 1552 | | | | | | | |
| 1602 | 46-50 | 7.50 | 0.632 | — | 0.05 | 30.03 | 0.27 | 0.356 | -232.1 |
| 1604 | 46-50 | 7.52 | 0.560 | — | 0.05 | 30.01 | 0.23 | 0.312 | -232.0 |
| 1606 | 46-50 | 7.54 | 0.501 | — | 0.06 | 29.88 | 0.21 | 0.292 | -231.9 |
| | Sampled at | 1607 | | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM** DPT0116 **Project Number:** FR1681

**DPT Location:** NASA - CRHE DPT00 (DW) **Date:** 8.2.10

| Time | DPT Location | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity PPT % (DW) | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|---|
| 0908 | DPT0116 | 012.0 | 6.53 | 1.232 | - | 3.60 | 27.38 | 0.60 | 0.787 | -204.8 |
| 0910 | DPT0116 | 010.0 | 6.67 | 1.186 | - | 1.79 | 27.43 | 0.58 | 0.767 | -227.3 |
| 0912 | DPT0116 | 010.0 | 6.71 | 1.175 | - | 1.23 | 27.44 | 0.58 | 0.762 | -230.9 |
| 0922 (DW) 0932 (SW) | DPT0116 | 018.0 | 7.39 | 0.933 | - | 0.96 | 27.29 | 0.45 | 0.599 | -204.5 |
| 0924 0934 (SW) | DPT0116 | 018.0 | 7.37 | 0.889 | - | 0.23 | 27.29 | 0.43 | 0.572 | -196.4 |
| 0926 0936 | DPT0116 | 018.0 | 7.36 | 0.853 | - | 0.16 | 27.17 | 0.41 | 0.552 | -205.0 |
| 0942 | DPT0116 | 028.0 | 7.36 | 1.179 | - | 0.36 | 29.05 | 0.62 | 0.840 | -202.0 |
| 0944 | DPT0116 | 028.0 | 7.37 | 1.381 | - | 0.17 | 28.58 | 0.69 | 0.901 | -212.3 |
| 0946 | DPT0116 | 028.0 | 7.32 | 1.373 | - | 0.14 | 28.68 | 0.68 | 0.890 | -221.3 |
| 0956 | 033.0 | 7.44 | 1.293 | - | 0.30 | 29.45 | 0.64 | 0.841 | -214.1 |
| 0958 | 033.0 | 7.36 | 1.296 | - | 0.13 | 28.62 | 0.64 | 0.841 | -217.9 |
| 1000 | 033.0 | 7.30 | 1.292 | - | 0.12 | 28.23 | 0.64 | 0.839 | -212.6 |
| 1024 | 038.0 | 7.40 | 1.361 | - | 0.31 | 29.43 | 0.68 | 0.887 | -252.0 |
| 1026 | 038.0 | 7.36 | 1.379 | - | 0.11 | 29.34 | 0.68 | 0.897 | -245.8 |
| 1028 | 038.0 | 7.34 | 1.385 | - | 0.09 | 29.17 | 0.69 | 0.901 | -242.5 |
| 1046 | 043.0 | 7.42 | 1.362 | - | 0.15 | 30.92 | 0.69 | 0.914 | -248.5 |
| 1048 | 043.0 | 7.41 | 1.538 | - | 0.11 | 29.99 | 0.78 | (DW) 1.037 | -260.6 |
| 1050 | 043.0 | 7.32 | 1.680 | - | 0.08 | 29.68 | 0.85 | 1.102 | -262.8 |
| 1109 | 048.0 | 7.45 | 2.142 | - | 0.14 | 30.87 | 1.12 | 1.443 | -262.6 |
| 1111 | 048.0 | 7.36 | 2.339 | - | 0.10 | 30.63 | 1.21 | 1.550 | -253.1 |
| 1113 | 048.0 | 7.32 | 2.534 | - | 0.08 | 30.07 | 1.30 | 1.658 | -243.8 |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0117

Date: 8.2.10

Time

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt% | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1137 | 010.0 | 6.84 | 1.143 | - | 2.27 | 31.51 | 0.56 | 0.739 | -128.4 |
| 1139 | 010.0 | 6.79 | 1.121 | - | 1.38 | 31.74 | 0.55 | 0.725 | -131.9 |
| 1141 | 010.0 | 6.66 | 1.076 | - | 0.49 | 30.53 | 0.52 | 0.693 | -137.4 |
| 1151 | 018.0 | 7.31 | 1.359 | - | 0.85 | 30.96 | 0.67 | 0.885 | -279.3 |
| 1153 | 018.0 | 7.24 | 1.378 | - | 0.23 | 29.86 | 0.68 | 0.894 | -252.0 |
| 1155 | 018.0 | 7.19 | 1.370 | - | 0.16 | 29.53 | 0.68 | 0.891 | -311.2 |
| 1252 | 028.0 | 7.22 | 1.535 | - | 0.09 | 34.25 | 0.76 | 1.002 | -230.8 |
| 1254 | 028.0 | 7.22 | 1.545 | - | 0.07 | 33.02 | 0.77 | 1.003 | -226.7 |
| 1256 | 028.0 | 7.18 | 1.540 | - | 0.07 | 32.75 | 0.76 | 0.998 | -226.4 |
| 1312 | 033.0 | 7.11 | 1.710 | - | 0.10 | 30.98 | 0.85 | 1.110 | -213.5 |
| 1314 | 033.0 | 7.04 | 1.706 | - | 0.08 | 30.95 | 0.85 | 1.109 | -204.4 |
| 1316 | 033.0 | 7.01 | 1.700 | - | 0.08 | 30.99 | 0.85 | 1.103 | -192.8 |
| 1337 | 038.0 | 7.34 | 1.472 | - | 0.03 | 32.24 | 0.73 | 0.958 | -262.4 |
| 1339 | 038.0 | 7.34 | 1.475 | - | 0.03 | 32.22 | 0.73 | 0.960 | -263.3 |
| 1341 | 038.0 | 7.34 | 1.478 | - | 0.03 | 32.19 | 0.73 | 0.962 | -263.7 |
| 1401 | 043.0 | 7.42 | 1.920 | - | 0.08 | 31.06 | 0.99 | 1.301 | -301.2 |
| 1403 | 043.0 | 7.38 | 2.152 | - | 0.08 | 29.70 | 1.09 | 1.401 | -286.3 |
| 1405 | 043.0 | 7.40 | 2.157 | - | 0.06 | 29.36 | 1.09 | 1.397 | -295.8 |
| 1424 | 048.0 | 7.45 | 1.790 | - | 0.03 | 33.01 | 0.91 | 1.198 | -258.7 |
| 1426 | 048.0 | 7.28 | 2.074 | - | 0.03 | 32.55 | 1.09 | 1.413 | -243.0 |
| 1428 | 048.0 | 7.27 | 2.661 | - | 0.03 | 32.29 | 1.30 | 1.666 | -250.3 |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: Time DPT0118

Project Number: FR1681

Date: 8.2.10

| DPT Location | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1458 | 010.0 | 6.59 | 1.683 | - | 0.26 | 29.34 | 0.84 | 1.089 | -135.7 |
| 1500 | 010.0 | 6.52 | 1.656 | - | 0.15 | 28.90 | 0.83 | 1.075 | -142.7 |
| 1502 | 010.0 | 6.41 | 1.646 | - | 0.16 | 28.62 | 0.82 | 1.067 | -147.6 |
| 1513 | 018.0 | 7.11 | 1.700 | - | 0.04 | 30.46 | 0.85 | 1.105 | -204.1 |
| 1515 | 018.0 | 7.10 | 1.701 | - | 0.05 | 29.88 | 0.85 | 1.105 | -196.1 |
| 1517 | 018.0 | 7.06 | 1.682 | - | 0.04 | 29.21 | 0.84 | 1.093 | -188.0 |
| 1530 | 028.0 | 7.18 | 2.145 | - | 0.06 | 33.97 | 1.10 | 1.421 | -215.9 |
| 1532 | 028.0 | 7.13 | 2.302 | - | 0.06 | 33.01 | 1.17 | 1.581 | -218.9 |
| 1534 | 028.0 | 7.06 | 2.333 | - | 0.05 | 32.15 | 1.18 | 1.517 | -204.6 |
| 1548 | 033.0 | 7.18 | 2.078 | - | 0.06 | 30.64 | 1.08 | 1.391 | -214.2 |
| 1550 | 033.0 | 6.97 | 2.203 | - | 0.06 | 28.86 | 1.12 | 1.433 | -193.2 |
| 1552 | 033.0 | 6.89 | 2.192 | - | 0.06 | 28.75 | 1.11 | 1.424 | -186.3 |
| 1610 | 038.0 | 7.22 | 1.899 | - | 0.11 | 30.26 | 0.96 | 1.237 | -247.9 |
| 1612 | 038.0 | 7.15 | 1.905 | - | 0.08 | 30.16 | 0.96 | 1.240 | -247.7 |
| 1614 | 038.0 | 7.09 | 1.914 | - | 0.06 | 29.68 | 0.96 | 1.244 | -237.0 |
| 1630 | 043.0 | 7.34 | 2.116 | - | 0.09 | 31.35 | 1.10 | 1.422 | -224.2 |
| 1632 | 043.0 | 7.25 | 2.291 | - | 0.05 | 30.44 | 1.18 | 1.508 | -222.3 |
| 1634 | 043.0 | 7.16 | 2.395 | - | 0.07 | 29.87 | 1.22 | 1.559 | -209.6 |
| 1653 | 048.0 | 7.38 | 3.275 | - | 0.04 | 30.59 | 1.75 | 2.207 | -231.6 |
| 1655 | 048.0 | 7.28 | 3.622 | - | 0.04 | 30.36 | 1.90 | 2.371 | -221.0 |
| 1657 | 048.0 | 7.22 | 3.762 | - | 0.04 | 30.15 | 1.96 | 2.439 | -209.1 |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT019

Date: 8.3.10

| Time DPT Location | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0822 | 010.0 | 6.58 | 1.670 | - | 0.22 | 28.13 | 0.83 | 1.079 | -132.9 |
| 0824 | 010.0 | 6.60 | 1.626 | - | 0.19 | 28.03 | 0.81 | 1.055 | -140.6 |
| 0826 | 010.0 | 6.60 | 1.608 | - | 0.21 | 27.91 | 0.80 | 1.044 | -146.2 |
| 0835 | 014.0 | 6.95 | 1.944 | - | 0.85 | 28.15 | 1.00 | 1.288 | -164.6 |
| 0837 | 014.0 | 6.98 | 1.946 | - | 0.32 | 27.81 | 0.98 | 1.259 | -157.7 |
| 0839 | 014.0 | 6.91 | 1.897 | - | 0.23 | 27.53 | 0.96 | 1.230 | -150.2 |
| 0849 | 018.0 | 6.96 | 2.178 | - | 0.44 | 27.66 | 1.11 | 1.418 | -164.2 |
| 0851 | 018.0 | 6.92 | 2.182 | - | 0.25 | 27.05 | 1.11 | 1.415 | -156.3 |
| 0853 | 018.0 | 6.84 | 2.135 | - | 0.21 | 26.38 | 1.08 | 1.384 | -145.9 |
| 0906 | ~~018.0~~ 023.0 | 6.95 | 2.237 | - | 0.24 | 28.14 | 1.13 | 1.449 | -173.4 |
| 0908 | 023.0 | 6.90 | 2.265 | - | 0.19 | 28.06 | 1.15 | 1.473 | -173.9 |
| 0910 | 023.0 | 6.80 | 2.242 | - | 0.16 | 27.45 | 1.14 | 1.454 | -156.9 |
| 0926 | 028.0 | 7.14 | 1.986 | - | 0.14 | 29.08 | 0.99 | 1.276 | -208.7 |
| 0928 | 028.0 | 7.14 | 2.041 | - | 0.11 | 29.25 | 1.03 | 1.330 | -217.2 |
| 0930 | 028.0 | 7.11 | 2.046 | - | 0.11 | 28.90 | 1.03 | 1.328 | -214.8 |
| 0945 | 033.0 | 7.23 | 2.076 | - | 0.39 | 29.74 | 1.06 | 1.360 | -198.0 |
| 0947 | 033.0 | 7.13 | 2.190 | - | 0.10 | 29.30 | 1.12 | 1.429 | -199.1 |
| 0949 | 033.0 | 7.13 | 2.215 | - | 0.08 | 29.06 | 1.13 | 1.441 | -186.7 |
| 1005 | 038.0 | 7.26 | 2.791 | - | 0.11 | 29.74 | 1.84 | 1.925 | -250.3 |
| 1007 | 038.0 | 7.27 | 3.174 | - | 0.07 | 29.65 | 1.70 | 2.182 | -259.9 |
| 1009 | 038.0 | 7.28 | 3.550 | - | 0.06 | 29.27 | 1.87 | 2.331 | -241.8 |
| 1028 | 043.0 | 7.28 | 2.899 | - | ~~0.20~~ 0.22 | 31.00 | 1.54 | 1.954 | -300.8 |
| 1030 | 043.0 | 7.29 | 3.471 | - | 0.07 | 30.94 | 1.86 | 2.338 | -311.8 |
| 1032 | 043.0 | 7.30 | 3.967 | - | 0.06 | 30.84 | 2.10 | 2.604 | -321.3 |
| 1053 | 048.0 | 7.31 | 4.122 | - | 0.31 | 32.09 | 2.17 | 2.693 | -339.2 |
| 1055 | 048.0 | 7.31 | 4.270 | - | 0.06 | 31.98 | 2.25 | 2.788 | -350.0 |
| 1057 | 048.0 | 7.31 | 4.519 | - | 0.04 | 31.71 | 2.40 | 2.953 | -356.6 |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0120

Date: 3 Aug 2010

Time

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt% | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1245 | 010.0 | 6.57 | 2.198 | - | 0.05 | 32.19 | 1.11 | 1.413 | -129.3 |
| 1247 | 010.0 | 6.53 | 2.169 | - | 0.03 | 31.96 | 1.09 | 1.406 | -129.4 |
| 1249 | 010.0 | 6.38 | 2.136 | - | 0.05 | 30.86 | 1.08 | 1.386 | -122.8 |
| 1258 | 014.0 | 6.60 | 2.374 | - | 0.40 | 32.45 | 1.24 | 1.629 | -143.7 |
| 1300 | 014.0 | 6.68 | 2.532 | - | 0.10 | 31.99 | 1.29 | 1.645 | -149.7 |
| 1302 | 014.0 | 6.68 | 2.522 | - | 0.06 | 31.68 | 1.28 | 1.637 | -152.9 |
| 1312 | 018.0 | 6.78 | 2.505 | - | 0.18 | 33.83 | 1.26 | 1.617 | -164.9 |
| 1314 | 018.0 | 6.82 | 2.550 | - | 0.09 | 31.79 | 1.30 | 1.654 | -166.6 |
| 1316 | 018.0 | 6.75 | 2.507 | - | 0.08 | 30.45 | 1.28 | 1.629 | -151.3 |
| 1328 | 023.0 | 6.82 | 2.504 | - | 0.42 | 33.31 | 1.25 | 1.633 | -140.6 |
| 1330 | 023.0 | 6.80 | 2.677 | - | 0.10 | 32.85 | 1.36 | 1.740 | -147.6 |
| 1332 | 023.0 | 6.78 | 2.656 | - | 0.08 | 31.30 | 1.35 | 1.720 | -150.6 |
| 1349 | 028.0 | 6.90 | 2.320 | - | 0.20 | 31.97 | 1.17 | 1.501 | -181.0 |
| 1351 | 028.0 | 6.82 | 2.304 | - | 0.08 | 30.80 | 1.17 | 1.500 | -157.1 |
| 1353 | 028.0 | 6.81 | 2.301 | - | 0.08 | 30.47 | 1.17 | 1.493 | -165.1 |
| 1409 | 033.0 | 7.12 | 2.121 | - | 0.22 | 31.93 | 1.10 | 1.116 | -178.7 |
| 1411 | 033.0 | 6.96 | 2.264 | - | 0.09 | 28.86 | 1.15 | 1.469 | -157.8 |
| 1413 | 033.0 | 6.88 | 2.244 | - | 0.07 | 29.78 | 1.14 | 1.457 | -148.1 |
| 1430 | 038.0 | 7.27 | 3.090 | - | 0.09 | 32.97 | 1.63 | 2.057 | -242.3 |
| 1432 | 038.0 | 7.22 | 3.340 | - | 0.07 | 32.65 | 1.81 | 2.287 | -246.1 |
| 1434 | 038.0 | 7.14 | 3.738 | - | 0.05 | 32.79 | 1.95 | 2.442 | -250.6 |
| 1454 | 043.0 | 7.32 | 3.277 | - | 0.11 | 32.82 | 1.71 | 2.165 | -226.5 |
| 1456 | 043.0 | 7.31 | 3.895 | - | 0.06 | 32.29 | 2.04 | 2.553 | -240.0 |
| 1458 | 043.0 | 7.18 | 4.393 | - | 0.04 | 31.96 | 2.34 | 2.902 | -224.7 |
| 1515 | 048.0 | 7.37 | 3.523 | - | 0.01 | 32.48 | 1.85 | 2.316 | -265.0 |
| 1517 | 048.0 | 7.35 | 3.823 | - | 0.00 | 32.20 | 2.07 | 2.625 | -277.2 |
| 1519 | 048.0 | 7.27 | 4.992 | - | 0.00 | 30.71 | 2.68 | 3.282 | -268.6 |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT021

Date: 8.3.10 / 8.4.10

Time

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt% | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 8.3.10 1600 | 010P | 6.54 | 1.922 | - | 0.02 | 28.47 | 0.97 | 1.250 | -90.7 |
| 1602 | 010P | 6.48 | 1.927 | - | 0.04 | 28.92 | 0.97 | 1.253 | -86.1 |
| 1604 | 010.0 | 6.50 | 1.904 | - | 0.07 | 30.88 | 0.96 | 1.243 | -99.3 |
| 1617 | 018.0 | 6.84 | 2.163 | - | 0.30 | 31.23 | 1.11 | 1.422 | -163.1 |
| 1619 | 018.0 | 6.80 | 2.133 | - | 0.09 | 29.86 | 1.08 | 1.379 | -153.8 |
| 1621 | 018.0 | 6.70 | 2.044 | - | 0.07 | 28.98 | 1.03 | 1.323 | -138.3 |
| 1632 | 018.0 | 6.96 | 1.967 | - | 0.13 | 29.24 | 1.00 | 1.284 | -147.3 |
| 1634 | 018.0 | 6.91 | 1.989 | - | 0.10 | 29.27 | 1.01 | 1.296 | -136.7 |
| 1636 | 018.0 | 6.87 | 2.000 | - | 0.08 | 29.35 | 1.01 | 1.297 | -134.6 |
| 1647 | 023.0 | 6.90 | 1.898 | - | 0.11 | 30.10 | 0.95 | 1.227 | -139.0 |
| 1649 | 023.0 | 6.84 | 1.843 | - | 0.08 | 30.29 | 0.93 | 1.198 | -127.6 |
| 1651 | 023.0 | 6.85 | 1.826 | - | 0.06 | 30.23 | 0.92 | 1.186 | -134.9 |
| 8.4.10 0750 | 028.0 | 6.78 | 1.446 | - | 0.87 | 26.35 | 0.72 | 0.941 | -139.8 |
| 0752 | 028.0 | 6.79 | 1.432 | - | 0.61 | 26.18 | 0.71 | 0.929 | -138.4 |
| 0754 | 028.0 | 6.74 | 1.403 | - | 0.50 | 26.25 | 0.70 | 0.907 | -131.3 |
| 0810 | 033.0 | 7.13 | 1.457 | - | 0.58 | 27.00 | 0.73 | 0.953 | -206.4 |
| 0812 | 033.0 | 7.05 | 1.512 | - | 0.50 | 26.94 | 0.76 | 0.986 | -193.3 |
| 0814 | 033.0 | 6.95 | 1.516 | - | 0.45 | 26.95 | 0.76 | 0.985 | -189.1 |
| 0830 | 038.0 | 7.16 | 2.391 | - | 0.36 | 27.26 | 1.28 | 1.638 | -214.6 |
| 0832 | 038.0 | 6.95 | 2.700 | - | 0.33 | 26.27 | 1.40 | 1.759 | -180.2 |
| 0834 | 038.0 | 6.86 | 2.710 | - | 0.32 | 25.80 | 1.40 | 1.762 | -164.3 |
| 0851 | 043.0 | 7.26 | 2.589 | - | 0.18 | 28.46 | 1.35 | 1.729 | -215.6 |
| 0853 | 043.0 | 7.17 | 2.868 | - | 0.15 | 28.08 | 1.49 | 1.889 | -198.0 |
| 0855 | 043.0 | 7.10 | 3.017 | - | 0.14 | 27.58 | 1.57 | 1.966 | -177.7 |
| 0912 | 048.0 | 7.16 | 2.912 | - | 0.18 | 28.74 | 1.49 | 1.866 | -203.2 |
| 0914 | 048.0 | 7.38 | 2.327 | - | 0.09 | 29.24 | 1.21 | 1.549 | -239.7 |
| 0915 | 048.0 | 7.34 | 2.706 | - | 0.09 | 29.18 | 1.40 | 1.774 | -248.6 |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0122

Project Number: FR1681

Date: 8.4.10

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ Mg/L | Temp deg. C | Salinity ppt % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0957 | 010.0 | 6.58 | 1.269 | - | 1.11 | 30.02 | 0.63 | 0.823 | -97.8 |
| 0959 | 010.0 | 6.56 | 1.263 | - | 0.67 | 30.08 | 0.62 | 0.820 | -100.0 |
| 1001 | 010.0 | 6.54 | 1.254 | - | 0.31 | 30.61 | 0.62 | 0.815 | -105.0 |
| 1011 | 014.0 | 6.86 | 1.326 | - | 0.41 | 30.31 | 0.65 | 0.858 | -138.8 |
| 1013 | 014.0 | 6.83 | 1.300 | - | 0.22 | 29.40 | 0.64 | 0.842 | -134.3 |
| 1015 | 014.0 | 6.79 | 1.272 | - | 0.15 | 29.08 | 0.63 | 0.826 | -130.9 |
| 1024 | 018.0 | 6.92 | 1.392 | - | 0.13 | 29.04 | 0.69 | 0.903 | -138.7 |
| 1026 | 018.0 | 6.83 | 1.311 | - | 0.10 | 27.62 | 0.65 | 0.849 | -118.5 |
| 1028 | 018.0 | 6.78 | 1.298 | - | 0.08 | 28.98 | 0.64 | 0.844 | -114.9 |
| 1040 | 023.0 | 6.95 | 1.508 | - | 0.28 | 31.96 | 0.75 | 0.983 | -176.1 |
| 1042 | 023.0 | 6.91 | 1.516 | - | 0.09 | 31.87 | 0.75 | 0.986 | -183.7 |
| 1044 | 023.0 | 6.89 | 1.519 | - | 0.07 | 31.63 | 0.75 | 0.987 | -184.0 |
| 1057 | 028.0 | 6.99 | 1.451 | - | 0.08 | 31.94 | 0.72 | 0.951 | -228.0 |
| 1059 | 028.0 | 6.87 | 1.472 | - | 0.08 | 30.56 | 0.73 | 0.957 | -216.8 |
| 1101 | 028.0 | 6.81 | 1.452 | - | 0.08 | 29.79 | 0.72 | 0.940 | -213.4 |
| 1115 | 033.0 | 7.18 | 1.443 | - | 0.17 | 31.40 | 0.72 | 0.944 | -200.5 |
| 1117 | 033.0 | 7.10 | 1.462 | - | 0.08 | 30.55 | 0.73 | 0.952 | -194.9 |
| 1119 | 033.0 | 6.95 | 1.453 | - | 0.08 | 29.52 | 0.72 | 0.944 | -176.2 |
| 1136 | 038.0 | 7.19 | 2.048 | - | 0.06 | 32.01 | 1.24 0.96 | 1.442 | -236.3 |
| 1138 | 038.0 | 7.08 | 2.408 | - | 0.06 | 30.14 | 1.24 | 1.594 | -220.9 |
| 1140 | 038.0 | 7.02 | 2.529 | - | 0.05 | 29.66 | 1.30 | 1.652 | -213.6 |
| 1158 | 043.0 | 7.18 | 2.937 | - | 0.22 | 31.42 | 1.54 | 1.951 | -233.6 |
| 1200 | 043.0 | 7.12 | 3.090 | - | 0.08 | 30.71 | 1.60 | 2.051 | -224.7 |
| 1202 | 043.0 | 7.09 | 3.118 | - | 0.06 | 30.51 | 1.61 | 2.070 | -215.7 |
| 1221 | 048.0 | 7.30 | 2.818 | - | 0.01 | 32.59 | 1.49 | 1.905 | -239.2 |
| 1223 | 048.0 | 7.26 | 3.205 | - | 0.01 | 30.73 | 1.68 | 2.120 | -233.7 |
| 1225 | 048.0 | 7.17 | 3.412 | - | 0.01 | 29.40 | 1.78 | 2.225 | -220.1 |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT 0123

Date: 4 Aug 2010 / 5 Aug 2010

Time

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 8.4.10 | | | | | | | | | |
| 1502 | 010.0 | 6.84 | 1.355 | - | 0.00 | 32.51 | 0.67 | 0.879 | -147.3 |
| 1504 | 010.0 | 6.83 | 1.349 | - | 0.04 | 32.54 | 0.67 | 0.877 | -152.9 |
| 1506 | 010.0 | 6.81 | 1.348 | - | 0.03 | 32.55 | 0.66 | 0.876 | -157.3 |
| 1517 | 014.0 | 7.13 | 1.138 | - | 0.11 | 29.28 | 0.55 | 0.724 | -181.1 |
| 1519 | 014.0 | 6.89 | 1.085 | - | 0.06 | 29.15 | 0.53 | 0.705 | -153.6 |
| 1521 | 014.0 | 6.84 | 1.077 | - | 0.06 | 29.01 | 0.53 | 0.696 | -143.1 |
| 1535 | 018.0 | 7.47 | 1.020 | - | 0.06 | 32.03 | 0.50 | 0.663 | -240.4 |
| 1537 | 018.0 | 7.41 | 1.013 | - | 0.04 | 30.97 | 0.49 | 0.657 | -239.7 |
| 1539 | 018.0 | 7.34 | 1.007 | - | 0.04 | 30.72 | 0.49 | 0.654 | -225.6 |
| 1556 | 023.0 | 7.43 | 1.099 | - | 0.15 | 32.21 | 0.54 | 0.716 | -261.4 |
| 1558 | 023.0 | 7.47 | 1.087 | - | 0.08 | 33.79 | 0.53 | 0.704 | -261.7 |
| 1600 | 023.0 | 7.36 | 1.076 | - | 0.05 | 33.65 | 0.52 | 0.698 | -262.4 |
| 1615 | 028.0 | 7.19 | 1.270 | - | 0.08 | 30.19 | 0.62 | 0.823 | -289.6 |
| 1617 | 028.0 | 7.19 | 1.268 | - | 0.04 | 29.62 | 0.62 | 0.822 | -299.2 |
| 1619 | 028.0 | 7.19 | 1.264 | - | 0.06 | 29.76 | 0.61 | 0.808 | -309.4 |
| 1633 | 033.0 | 7.23 | 1.516 | - | 0.09 | 30.25 | 0.76 | 0.996 | -343.0 |
| 1635 | 033.0 | 7.28 | 1.568 | - | 0.07 | 29.11 | 0.78 | 1018 | -349.1 |
| 1637 | 033.0 | 7.27 | 1.557 | - | 0.07 | 27.75 | 0.78 | 1.009 | -355.9 |
| 1651 | 038.0 | 7.30 | 2.485 | - | 0.08 | 27.62 | 1.28 | 1.625 1.623 | -394.9 |
| 1653 | 038.0 | 7.32 | 2.497 | - | 0.09 | 27.09 | 1.28 | 1.622 | -411.9 |
| 1655 | 038.0 | 7.31 | 2.491 | - | 0.07 | 26.86 | 1.28 | 1.623 | -424.9 |
| 8.5.10 | | | | | | | | | |
| 0738 | 043.0 | 6.81 | 2.021 | - | 1.46 | 26.44 | 1.03 | 1.326 | -176.4 |
| 0740 | 043.0 | 6.84 | 2.073 | - | 1.06 | 25.31 | 1.06 | 1.350 | -172.6 |
| 0742 | 043.0 | 6.84 | 2.083 | - | 1.06 | 25.28 | 1.06 | 1.357 | -169.2 |
| 0800 | 048.0 | 7.19 | 1.905 | - | 0.91 | 26.05 | 1.00 | 1.293 | -165.7 |
| 0802 | 048.0 | 7.13 | 2.144 | - | 0.66 | 26.04 | 1.10 | 1.416 | -164.2 |
| 0804 | 048.0 | 7.07 | 2.260 | - | 0.54 | 26.06 | 1.16 | 1.474 | -134.9 |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0124

Date: 8.5.16

Time

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0901 | 010.0 | 6.66 | 0.627 | - | 3.47 | 31.57 | ~~0.615~~ 0.45 | 0.615 | -101.2 |
| 0903 | 010.0 | 6.55 | 0.897 | - | 1.15 | 31.25 | 0.43 | 0.561 | -102.1 |
| 0905 | 010.0 | 6.53 | 0.861 | - | 0.72 | 31.23 | 0.43 | 0.572 | -104.0 |
| 0927 | 014.0 | 6.74 | 1.106 | - | 0.42 | 28.96 | 0.54 | 0.717 | -120.3 |
| 0929 | 014.0 | 6.67 | 1.072 | - | 0.35 | 28.57 | 0.53 | 0.696 | -112.4 |
| 0931 | 014.0 | 6.82 | 1.066 | - | 0.28 | 29.24 | 0.52 | 0.694 | -111.7 |
| 0940 | 018.0 | 6.86 | 1.199 | - | ~~0.54~~ | 29.03 | 0.59 ~~0.77~~ | 0.774 | -137.3 |
| 0942 | 018.0 | 6.77 | 1.166 | - | 0.31 0.24 | 28.53 | 0.57 | 0.755 | -127.5 |
| 0944 | 018.0 | 6.74 | 1.146 | - | 0.20 | 29.25 | 0.56 | 0.746 | -125.8 |
| 0954 | 023.0 | 6.89 | 1.199 | - | 0.40 | 32.56 | 0.59 | 0.785 | -163.9 |
| 0956 | 023.0 | 6.88 | 1.211 | - | 0.22 | 32.58 | 0.59 | 0.788 | -166.0 |
| 0958 | 023.0 | 6.82 | 1.204 | - | 0.15 | 30.48 | 0.59 | 0.780 | -150.7 |
| 1010 | 028.0 | 6.88 | 1.239 | - | 0.18 | 29.03 | 0.60 | 0.793 | -146.8 |
| 1012 | 028.0 | 6.81 | 1.205 | - | 0.15 | 28.94 | 0.59 | 0.783 | -141.3 |
| 1014 | 028.0 | 6.81 | 1.204 | - | 0.13 | 29.54 | 0.59 | 0.783 | -134.0 |
| 1025 | 033.0 | 7.06 | 1.241 | - | 0.12 | 31.40 | 0.61 | 0.816 | -202.9 |
| 1027 | 033.0 | 7.03 | 1.277 | - | 0.09 | 30.94 | 0.63 | 0.831 | -205.8 |
| 1029 | 033.0 | 6.98 | 1.272 | - | 0.08 | 30.73 | 0.63 | 0.827 | -176.3 |
| 1041 | 038.0 | 7.19 | 1.835 | - | 0.30 | 31.54 | 0.95 | 1.239 | -169.4 |
| 1043 | 038.0 | 7.10 | 2.040 | - | 0.04 | 30.29 | 1.04 | 1.324 | ~~2164.2~~ |
| 1045 | 038.0 | 7.03 | 2.125 | - | 0.04 | 29.85 | 1.08 | 1.384 | -161.1 |
| 1058 | 043.0 | 7.20 | 2.073 | - | 0.06 | 31.24 | 1.10 | 1.427 | -201.2 |
| 1100 | 043.0 | 7.13 | 2.382 | - | 0.07 | 29.72 | 1.22 | 1.565 | -186.2 |
| 1102 | 043.0 | 7.07 | 2.468 | - | 0.06 | 28.96 | 1.26 | 1.605 | -175.5 |
| 1116 | 048.0 | 7.22 | 2.285 | - | 0.02 | 32.34 | 1.21 | 1.551 | -197.8 |
| 1118 | 048.0 | 7.18 | 2.663 | - | 0.01 | 30.64 | 1.37 | 1.752 | -187.3 |
| 1120 | 048.0 | 7.11 | 2.803 | - | 0.01 | 30.21 | 1.44 | 1.829 | -160.9 |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0125

Date: 8.5.10

| Time DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity PPT% | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1157 | 010.0 | 6.42 | 0.788 | - | 0.04 | 32.02 | 0.37 | 0.492 | -143.4 |
| 1159 | 010.0 | 6.28 | 0.717 | - | 0.01 | 31.52 | 0.34 | 0.462 | -157.1 |
| 1201 | 010.0 | 6.26 | 0.690 | - | 0.03 | 31.17 | 0.33 | 0.445 | -169.3 |
| 1246 | 018.0 | 7.02 | 0.876 | - | 0.07 | 30.32 | 0.43 | 0.571 | -267.4 |
| 1248 | 018.0 | 7.16 | 0.870 | - | 0.06 | 29.41 | 0.42 | 0.565 | -245.4 |
| 1250 | 018.0 | 7.11 | 0.873 | - | 0.06 | 29.60 | 0.42 | 0.568 | -231.7 |
| 1310 | 028.0 | 7.28 | 1.023 | - | 0.07 | 30.42 | 0.49 | 0.650 | -299.2 |
| 1312 | 028.0 | 7.10 | 0.991 | - | 0.06 | 29.63 | 0.48 | 0.643 | -280.2 |
| 1314 | 028.0 | 6.88 | 0.977 | - | 0.05 | 29.70 | 0.48 | 0.635 | -259.2 |
| 1331 | 033.0 | 7.11 | 0.964 | - | 0.22 | 32.37 | 0.47 | 0.623 | -263.9 |
| 1333 | 033.0 | 7.09 | 0.975 | - | 0.09 | 31.20 | 0.48 | 0.625 | -269.9 |
| 1335 | 033.0 | 7.00 | 0.972 | - | 0.08 | 30.76 | 0.47 | 0.630 | -263.5 |
| 1354 | 038.0 | 7.02 | 1.164 | - | 0.13 | 28.68 | 0.57 | 0.753 | -237.3 |
| 1356 | 038.0 | 6.88 | 1.135 | - | 0.08 | 29.04 | 0.56 | 0.737 | -207.7 |
| 1358 | 038.0 | 6.79 | 1.125 | - | 0.07 | 27.75 | 0.55 | 0.730 | -190.1 |
| 1415 | 043.0 | 7.01 | 1.225 | - | 0.14 | 32.40 | 0.64 | 0.865 | -214.0 |
| 1417 | 043.0 | 7.21 | 1.747 | - | 0.7006 | 31.41 | 0.91 | 2.108 | -265.0 |
| 1419 | 043.0 | 7.24 | 2.033 | - | 0.06 | 30.93 | 1.03 | 1.336 | -289.2 |
| 1437 | 048.0 | 7.24 | 2.272 | - | 0.05 | 31.69 | 1.18 | 1.529 | -371.4 |
| 1439 | 048.0 | 7.24 | 2.572 | - | 0.05 | 30.89 | 1.30 | 1.660 | -378.3 |
| 1441 | 048.0 | 7.23 | 2.669 | - | 0.05 | 30.76 | 1.37 | 1.735 | -393.6 |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0126

Date: 8.5.10

Time

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1534 | 010.0 | 6.68 | 0.856 | - | 0.00 | 27.98 | 0.42 | 0.555 | -79.1 |
| 1536 | 010.0 | 6.53 | 0.850 | - | 0.02 | 28.59 | 0.41 | 0.553 | -74.5 |
| 1538 | 010.0 | 6.48 | 0.853 | - | 0.03 | 28.94 | 0.42 | 0.556 | -81.2 |
| 1547 | 018.0 | 6.97 | 0.976 | - | 0.76 | 28.01 | 0.48 | 0.640 | -183.4 |
| 1549 | 018.0 | 7.04 | 0.957 | - | 0.19 | 27.01 | 0.47 | 0.620 | -167.4 |
| 1551 | 018.0 | 6.88 | 0.942 | - | 0.12 | 26.94 | 0.46 | 0.612 | -158.0 |
| 1603 | 028.0 | 6.91 | 1.957 | - | 0.08 | 29.04 | 0.99 | 1.284 | -180.3 |
| 1605 | 028.0 | 6.90 | 2.045 | - | 0.07 | 29.10 | 1.04 | 1.332 | -170.6 |
| 1607 | 028.0 | 6.92 | 2.067 | - | 0.05 | 29.41 | 1.05 | 1.345 | -179.2 |
| 1620 | 033.0 | 7.20 | 2.117 | - | 0.23 | 29.88 | 1.05 | 1.386 | -176.9 |
| 1622 | 033.0 | 7.12 | 2.166 | - | 0.06 | 28.85 | 1.10 | 1.413 | -171.4 |
| 1624 | 033.0 | 7.05 | 2.189 | - | 0.05 | 28.65 | 1.11 | 1.424 | -162.7 |
| 1639 | 038.0 | 7.35 | 1.842 | - | 0.01 | 29.15 | 0.95 | 1.238 | -239.4 |
| 1641 | 038.0 | 7.27 | 1.979 | - | 0.01 | 29.09 | 1.00 | 1.300 | -237.0 |
| 1643 | 038.0 | 7.16 | 2.073 | - | 0.02 | 29.63 | 1.05 | 1.354 | -231.9 |
| 1707 | 043.0 | 7.27 | 2.010 | - | 0.03 | 27.06 | 1.03 | 1.333 | -178.0 |
| 1709 | 043.0 | 7.07 | 2.074 | - | 0.01 | 26.17 | 1.05 | 1.348 | -145.9 |
| 1711 | 043.0 | 6.87 | 2.067 | - | 0.00 | 26.48 | 1.05 | 1.344 | -133.6 |
| 0728 | 048.0 | 6.99 | 2.025 | - | 0.62 | 25.38 | 1.03 | 1.319 | -191.8 |
| 0730 | 048.0 | 7.00 | 2.050 | - | 8:55 | 25.35 | 1.04 | 1.335 | -191.5 |
| 0732 | 048.0 | 6.99 | 2.059 | - | 0.50 | 25.34 | 1.05 | 1.339 | -189.1 |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0127

Project Number: FR1861

Date: 8.6.10

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0817 | 033.0 | 6.99 | 0.904 | - | 1.72 | 27.38 | 0.44 | ~~0.575~~ | -112.5 |
| 0819 | 033.0 | 6.94 | 0.875 | - | 2.36 | 26.98 | 0.43 | 0.568 | -110.5 |
| 0821 | 033.0 | 6.90 | 0.852 | - | 1.29 | 26.70 | 0.41 | 0.552 | -109.3 |
| 0837 | 038.0 | 6.83 | 1.115 | - | 1.49 | 29.13 | 0.57 | 0.751 | -160.4 |
| 0839 | 038.0 | 6.85 | 1.169 | - | 1.02 | 28.95 | 0.68 | 0.759 | -158.5 |
| 0841 | 038.0 | 6.80 | 1.160 | - | 1.01 | 28.78 | 0.57 | 0.752 | -152.1 |
| 0858 | 043.0 | 7.08 | 1.492 | - | 0.64 | 28.93 | 0.76 | 1.014 | -195.3 |
| 0900 | 043.0 | 6.99 | 1.661 | - | 0.83 | 28.44 | 0.84 | 1.086 | -172.3 |
| 0902 | 043.0 | 6.92 | 1.681 | - | 0.84 | 28.10 | 0.84 | 1.090 | -159.7 |
| 0920 | 048.0 | 7.10 | 1.738 | - | 0.76 | 29.79 | 0.92 | 1.201 | -193.1 |
| 0922 | 048.0 | 7.21 | 1981 | - | 0.63 | 28.88 | 1.01 | 1.294 | -193.3 |
| 0924 | 048.0 | 7.19 | 2.019 | - | 0.58 | 28.92 | 1.02 | 1.314 | -186.1 |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0128

Project Number: FR1689

Date: 6 Aug 2010

| DPT Location (Time) | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt% | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1000 | 033.0 | 6.90 | 1.050 | - | 0.25 | 28.98 | 0.51 | 0.681 | -140.0 |
| 1002 | 033.0 | 6.80 | 1.034 | - | 0.24 | 28.99 | 0.51 | 0.670 | -138.1 |
| 1004 | 033.0 | 6.72 | 1.023 | - | 0.17 | 29.09 | 0.50 | 0.664 | ~~-140.8~~ -126.6 |
| 1023 | 038.0 | 7.11 | 0.810 | - | 0.58 | 28.77 | 0.39 | 0.527 | -190.6 |
| 1025 | 038.0 | 7.13 | 0.786 | - | 0.36 | 28.74 | 0.38 | 0.511 | -184.9 |
| 1027 | 038.0 | 7.08 | 0.785 | - | 0.33 | 28.47 | 0.38 | 0.509 | -179.5 |
| 1044 | 043.0 | 7.21 | 1.006 | - | 0.31 | 30.16 | 0.50 | 0.662 | -215.5 |
| 1046 | 043.0 | 7.17 | 1.045 | - | 0.28 | 30.07 | 0.51 | 0.676 | -209.0 |
| 1048 | 043.0 | 7.10 | 0.994 | - | 0.22 | 29.07 | 0.48 | 0.643 | -195.1 |
| 1102 | 048.0 | 7.01 | 1.373 | - | 0.26 | 30.69 | 0.83 | 1.117 | -204.2 |
| 1104 | 048.0 | 7.13 | 2.072 | - | 0.20 | 28.67 | 1.06 | 1.367 | -198.2 |
| 1106 | 048.0 | 7.05 | 2.160 | - | 0.20 | 27.60 | 1.10 | 1.402 | -169.0 |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0129

Project Number: FR1681

Date: 6 Aug 2010

| Time / DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt-% | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1148 | 010.0 | 6.55 | 0.692 | - | 2.56 | 30.70 | 0.33 | 0.442 | -106.9 |
| 1150 | 010.0 | 6.44 | 0.660 | - | 1.64 | 30.70 | 0.32 | 0.428 | -116.7 |
| 1152 | 010.0 | 6.42 | 0.650 | - | 1.56 | 30.68 | 0.31 | 0.420 | -121.3 |
| 1201 | 018.0 | 6.95 | 1.130 | - | 1.67 | 32.20 | 0.56 | 0.745 | -212.7 |
| 1203 | 018.0 | 7.03 | 1.162 | - | 1.50 | 31.60 | 0.57 | 0.752 | -210.7 |
| 1205 | 018.0 | 7.01 | 1.163 | - | 0.95 | 31.64 | 0.57 | 0.756 | -204.3 |
| 1216 | 028.0 | 7.00 | 1.094 | - | 1.00 | 32.68 | 0.53 | 0.710 | -201.3 |
| 1218 | 028.0 | 6.96 | 1.094 | - | 0.73 | 32.48 | 0.53 | 0.711 | -200.3 |
| 1220 | 028.0 | 6.91 | 1.090 | - | 0.64 | 32.66 | 0.53 | 0.708 | -192.7 |
| 1232 | 033.0 | 6.92 | 1.108 | - | 0.49 | 34.34 | 0.54 | 0.724 | -202.3 |
| 1234 | 033.0 | 6.82 | 1.121 | - | 0.41 | 31.47 | 0.55 | 0.729 | -172.9 |
| 1236 | 033.0 | 6.75 | 1.091 | - | 0.42 | 30.39 | 0.53 | 0.705 | -160.0 |
| 1253 | 038.0 | 6.84 | 1.092 | - | 0.68 | 29.78 | 0.52 | 0.692 | -178.0 |
| 1255 | 038.0 | 6.83 | 1.042 | - | 0.48 | 29.55 | 0.51 | 0.679 | -183.9 |
| 1257 | 038.0 | 6.83 | 1.037 | - | 0.44 | 29.35 | 0.51 | 0.925 | -189.1 |
| 1311 | 043.0 | 6.90 | 1.325 | - | 0.66 | 29.27 | 0.70 | 0.925 | -218.6 |
| 1501 | 048.0 | 7.06 | 1.539 | - | 0.38 | 30.30 | 0.69 | 0.907 | -268.8 |
| 1503 | 048.0 | 7.06 | 1.589 | - | 0.32 | 29.56 | 0.80 | 1.069 | -270.6 |
| 1505 | 048.0 | 7.03 | 1.716 | - | 0.25 | 29.49 | 0.86 | 1.108 | -274.9 |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: Time DPT 0130

Date: 8.6.10

| DPT Location | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1535 | 033.0 | 7.11 | 1.411 | – | 4.83 | 31.97 | 0.70 | 0.918 | -173.0 |
| 1537 | 033.0 | 7.02 | 1.408 | – | 0.64 | 31.61 | 0.70 | 0.915 | -161.0 |
| 1539 | 033.0 | 6.94 | 1.396 | – | 0.26 | 31.05 | 0.69 | 0.906 | -154.7 |
| 1557 | 038.0 | 7.15 | 1.413 | – | 0.55 | 31.85 | 0.71 | 0.939 | -202.8 |
| 1559 | 038.0 | 7.07 | 1.499 | – | 0.29 | 29.74 | 0.74 | 0.973 | -181.4 |
| 1601 | 038.0 | 6.93 | 1.500 | – | 0.22 | 30.02 | 0.75 | 0.975 | -169.8 |
| 1624 | 043.0 | 7.29 | 1.440 | – | 0.33 | 31.06 | 0.72 | 0.945 | -216.1 |
| 1626 | 043.0 | 7.28 | 1.493 | – | 0.25 | 31.04 | 0.75 | 0.977 | -218.9 |
| 1628 | 043.0 | 7.23 | 1.541 | – | 0.16 | 31.87 | 0.77 | 1.004 | -217.0 |
| 1644 | 048.0 | 7.41 | 1.339 | – | 0.15 | 31.68 | 0.69 | 0.915 | -252.0 |
| 1646 | 048.0 | 7.38 | 1.587 | – | 0.17 | 29.77 | 0.80 | 1.042 | -237.4 |
| 1648 | 048.0 | 7.18 | 1.622 | – | 0.16 | 30.17 | 0.81 | 1.054 | -224.5 |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: Time DPT0131 (CR)

Date: 8/9/10

| ~~DPT~~ TRD Location | Sample Depth ft | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0830 | 31-35 | 7.02 | 1.725 | — | 1.95 | 28.18 | 0.87 | 1.123 | -199.6 |
| 0832 | 31-35 | 7.05 | 1.729 | — | 1.85 | 28.12 | 0.87 | 1.125 | -201.4 |
| 0834 | 31-35 | 7.06 | 1.733 | — | 1.74 | 27.97 | 0.87 | 1.127 | -203.2 |
| | Sampled at 0835 | | | | | | | | |
| | SW | | | | | | | | |
| 0852 | 36-40 | 7.20 | 1.722 | — | 1.02 | 28.38 | 0.87 | 1.121 | -235.8 |
| 0854 | 36-40 | 7.20 | 1.733 | — | 0.94 | 28.34 | 0.88 | 1.142 | -230.9 |
| 0856 | 36-40 | 7.19 | 1.782 | — | 0.91 | 28.27 | 0.91 | 1.173 | -229.8 |
| | Sampled at 0857 | | | | | | | | |
| | | | | | | | | | |
| 0911 | 41-45 | 7.33 | 1.672 | — | 0.61 | 28.27 | 0.85 | 1.102 | -266.2 |
| 0913 | 41-45 | 7.35 | 1.725 | — | 0.60 | 28.12 | 0.89 | 1.154 | -268.9 |
| 0915 | 41-45 | 7.34 | 1.824 | — | 0.62 | 27.81 | 0.94 | 1.220 | -263.6 |
| | Sampled at 0916 | | | | | | | | |
| | | | | | | | | | |
| 0939 | 46-50 | 7.28 | 1.871 | — | 0.51 | 29.10 | 0.89 | 1.142 | -303.0 |
| 0941 | 46-50 | 7.37 | 1.756 | — | 0.47 | 28.98 | 0.90 | 1.168 | -299.7 |
| 0943 | 46-50 | 7.39 | 1.873 | — | 0.46 | 28.78 | 1.00 | 1.297 | -301.1 |
| | Sampled at 0944 | | | | | | | | |
| | | | | | | | | | |
| 1625 | 61-65 | 7.37 | 3.106 | — | 0.54 | 29.13 | 1.63 | 2.052 | -230.6 |
| 1627 | 61-65 | 7.36 | 3.184 | — | 0.55 | 28.76 | 1.66 | 2.093 | -232.3 |
| 1629 | 61-65 | 7.36 | 3.240 | — | 0.44 | 28.48 | 1.69 | 2.119 | -232.4 |
| | Sampled at 1630 | | | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0132 (0)

Project Number: FR1681

Date: 8/9/10

| Time DPT Location | Sample Depth ft | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ m g/L | Temp deg. C | Salinity ppt %/RS | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1016 | 8-12 | 6.69 | 0.737 | — | 1.40 | 31.19 | 0.35 | 0.473 | -91.3 |
| 1018 | 8-12 | 6.62 | 0.722 | — | 0.81 | 31.22 | 0.35 | 0.467 | -90.8 |
| 1020 | 8-12 | 6.59 | 0.716 | — | 0.69 | 31.21 | 0.34 | 0.464 | -90.3 |
| | Sampled at 1021 | | | | | | | | |
| 1025 | 16-20 | 6.82 | 0.832 | — | 0.66 | 30.46 | 0.41 | 0.544 | -195.2 |
| 1027 | 16-20 | 7.01 | 0.838 | — | 0.60 | 30.44 | 0.41 | 0.545 | -200.8 |
| 1029 | 16-20 | 7.06 | 0.839 | — | 0.56 | 30.47 | 0.41 | 0.546 | -202.4 |
| | Sampled at 1030 | | | | | | | | |
| 1037 | 26-30 | 7.31 | 0.752 | — | 0.43 | 30.72 | 0.34 | 0.461 | -254.4 |
| 1039 | 26-30 | 7.40 | 0.695 | — | 0.33 | 30.28 | 0.33 | 0.457 | -252.9 |
| 1041 | 26-30 | 7.38 | 0.693 | — | 0.42 | 30.34 | 0.33 | 0.457 | -253.3 |
| | Sampled at 1042 | | | | | | | | |
| 1053 | 31-35 | 7.43 | 0.692 | — | 0.36 | 31.58 | 0.34 | 0.457 | -288.9 |
| 1055 | 31-35 | 7.40 | 0.709 | — | 0.37 | 31.44 | 0.34 | 0.464 | -290.2 |
| 1057 | 31-35 | 7.41 | 0.714 | — | 0.36 | 31.41 | 0.34 | 0.467 | -277.4 |
| | Sampled at 1058 | | | | | | | | |
| 1110 | 36-40 | 7.37 | 0.718 | — | 0.35 | 31.50 | 0.35 | 0.480 | -288.7 |
| 1112 | 36-40 | 7.36 | 0.747 | — | 0.40 | 31.10 | 0.36 | 0.492 | -287.4 |
| 1114 | 36-40 | 7.33 | 0.763 | — | 0.42 | 30.89 | 0.37 | 0.498 | -286.3 |
| | Sampled at 1115 | | | | | | | | |
| 1130 | 41-45 | 7.25 | 0.367 | — | 0.45 | 31.91 | 0.73 | 0.964 | -295.1 |
| 1132 | 41-45 | 7.23 | 1.558 | — | 0.41 | 31.76 | 0.80 | 1.052 | -290.5 |
| 1134 | 41-45 | 7.20 | 1.660 | — | 0.39 | 31.62 | 0.85 | 1.118 | -288.2 |
| | Sampled at 1135 | | | | | | | | |
| 1145 | 46-50 | 7.20 | 1.745 | — | 0.23 | 31.77 | 0.85 | 1.120 | -313.6 |
| 1147 | 46-50 | 7.31 | 1.835 | — | 0.24 | 31.69 | 0.98 | 1.246 | -305.6 |
| 1149 | 46-50 | 7.24 | 1.988 | — | 0.24 | 31.56 | 1.01 | 1.312 | -299.8 |
| | Sampled at 1150 | | | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0133 (U)

Date: 8/9/10



| ~~DPT~~ Time Location | Sample Depth ft | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ m g/L | Temp deg. C | Salinity ppt %(w) | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1345 | 8-12 | 6.70 | 0.943 | — | 0.81 | 31.23 | 0.46 | 0.608 | -121.4 |
| 1347 | 8-12 | 6.61 | 0.931 | — | 0.36 | 30.95 | 0.45 | 0.602 | -120.8 |
| 1349 | 8-12 | 6.57 | 0.922 | — | 0.27 | 30.93 | 0.45 | 0.595 | -119.5 |
| | Sampled at 1350 | | | | | | | | |
| 1356 | 12-16 | 6.45 | 1.012 | — | 0.39 | 31.18 | 0.52 | 0.694 | -140.5 |
| 1358 | 12-16 | 6.63 | 1.079 | — | 0.32 | 30.72 | 0.53 | 0.707 | -140.2 |
| 1400 | 12-16 | 6.65 | 1.090 | — | 0.30 | 30.30 | 0.53 | 0.708 | -137.0 |
| | Sampled at 1401 | | | | | | | | |
| 1405 | 16-20 | 6.75 | 1.177 | — | 0.44 | 31.09 | 0.58 | 0.768 | -151.9 |
| 1407 | 16-20 | 6.75 | 1.182 | — | 0.39 | 30.78 | 0.58 | 0.766 | -153.2 |
| 1409 | 16-20 | 6.75 | 1.177 | — | 0.38 | 30.55 | 0.58 | 0.764 | -151.7 |
| | Sampled at 1410 | | | | | | | | |
| 1417 | 21-25 | 6.80 | 1.217 | — | 0.39 | 31.65 | 0.60 | 0.791 | -174.1 |
| 1419 | 21-25 | 6.79 | 1.221 | — | 0.38 | 31.30 | 0.60 | 0.795 | -174.0 |
| 1421 | 21-25 | 6.78 | 1.224 | — | 0.36 | 31.32 | 0.60 | 0.797 | -169.9 |
| | Sampled at 1422 | | | | | | | | |
| 1430 | 26-30 | 6.93 | 1.129 | — | 0.39 | 31.98 | 0.54 | 0.715 | -205.1 |
| 1432 | 26-30 | 6.93 | 1.107 | — | 0.37 | 31.88 | 0.54 | 0.720 | -204.0 |
| 1434 | 26-36 | 6.92 | 1.111 | — | 0.36 | 31.45 | 0.54 | 0.721 | -195.5 |
| | Sampled at 1435 | | | | | | | | |
| 1444 | 31-35 | 6.97 | 1.182 | — | 0.26 | 31.49 | 0.58 | 0.775 | -218.4 |
| 1446 | 31-35 | 6.97 | 1.198 | — | 0.25 | 31.49 | 0.59 | 0.784 | -219.3 |
| 1448 | 31-35 | 6.96 | 1.214 | — | 0.25 | 31.42 | 0.60 | 0.793 | -211.2 |
| | Sampled at 1449 | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0133 (U) CONT.

Project Number: FR1681

Date: 8/9/10



| DPT Location (Time) | Sample Depth ft | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1502 | 36-40 | 6.96 | 1.711 | — | 0.26 | 31.25 | 0.95 | 1.241 | -243.8 |
| 1504 | 36-40 | 7.00 | 1.935 | — | 0.29 | 30.96 | 0.98 | 1.272 | -244.7 |
| 1506 | 36-40 | 6.99 | 1.969 | — | 0.28 | 30.92 | 1.00 | 1.289 | -245.6 |
| | Sampled at 1507 | | | | | | | | |
| 1521 | 41-45 | 7.15 | 1.776 | — | 0.19 | 32.88 | 0.91 | 1.192 | -280.5 |
| 1523 | 41-45 | 7.11 | 1.872 | — | 0.18 | 33.02 | 0.97 | 1.265 | -268.8 |
| 1525 | 41-45 | 7.08 | 1.994 | — | 0.19 | 33.04 | 1.05 | 1.367 | -267.2 |
| | Sampled at 1526 | | | | | | | | |
| 1538 | 46-50 | 7.22 | 1.905 | — | 0.19 | 31.55 | 1.01 | 1.327 | -303.8 |
| 1540 | 46-50 | 7.25 | 2.143 | — | 0.16 | 30.94 | 1.14 | 1.487 | -305.9 |
| 1542 | 46-50 | 7.24 | 2.377 | — | 0.17 | 29.59 | 1.23 | 1.590 | -299.2 |
| | Sampled at 1543 | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0134 (V)

Project Number: FR1681

Date: 8/9/10 & 8/10/10

| ~~DPT~~ Time Location | Sample Depth ft | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt %RP | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 8/9/10 | | | | | | | | | |
| 1648 | 8-12 | 6.59 | 0.842 | — | 1.03 | 33.02 | 0.40 | 0.544 | -120.4 |
| 1650 | 8-12 | 6.55 | 0.834 | — | 0.68 | 32.96 | 0.40 | 0.541 | -118.6 |
| 1652 | 8-12 | 6.52 | 0.831 | — | 0.64 | 32.92 | 0.40 | 0.539 | -117.5 |
| | Sampled at | | 1653 | | | | | | |
| | | | | | | | | | |
| 1656 | 12-16 | 6.61 | 0.994 | — | 0.33 | 31.85 | 0.50 | 0.674 | -165.2 |
| 1658 | 12-16 | 6.69 | 1.043 | — | 0.30 | 31.65 | 0.51 | 0.679 | -164.0 |
| 1700 | 12-16 | 6.70 | 1.042 | — | 0.30 | 31.44 | 0.51 | 0.674 | -157.9 |
| | Sampled at | | 1701 | | | | | | |
| | | | | | | | | | |
| 1705 | 16-20 | 6.75 | 1.071 | — | 0.29 | 32.02 | 0.53 | 0.709 | -187.7 |
| 1707 | 16-20 | 6.82 | 1.094 | — | 0.28 | 31.39 | 0.54 | 0.712 | -190.7 |
| 1709 | 16-20 | 6.83 | 1.097 | — | 0.25 | 31.27 | 0.54 | 0.714 | -190.0 |
| | Sampled at | | 1710 | | | | | | |
| | | | | | | | | | |
| 1717 | 21-25 | 6.84 | 1.086 | — | 0.24 | 32.12 | 0.52 | 0.686 | -227.3 |
| 1719 | 21-25 | 6.88 | 1.047 | — | 0.25 | 31.03 | 0.51 | 0.679 | -217.0 |
| 1721 | 21-25 | 6.84 | 1.044 | — | 0.28 | 30.56 | 0.51 | 0.681 | -213.2 |
| | Sampled at | | 1722 | | | | | | |
| 8/10/10 | | | | | | | | | |
| 0738 | 26-30 | 6.80 | 1.039 | — | 2.02 | 27.22 | 0.51 | 0.675 | -134.6 |
| 0740 | 26-30 | 6.77 | 1.040 | — | 1.81 | 27.08 | 0.51 | 0.676 | -135.3 |
| 0742 | 26-30 | 6.76 | 1.038 | — | 1.67 | 26.98 | 0.51 | 0.673 | -141.3 |
| | Sampled at | | 0743 | | | | | | |
| | | | | | | | | | |
| 0752 | 31-35 | 6.87 | 1.032 | — | 0.76 | 27.46 | 0.52 | 0.699 | -187.0 |
| 0754 | 31-35 | 6.96 | 1.098 | — | 0.69 | 27.61 | 0.54 | 0.720 | -189.8 |
| 0756 | 31-35 | 6.98 | 1.111 | — | 0.68 | 27.61 | 0.55 | 0.724 | -192.3 |
| | Sampled at | | 0757 | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0134 (V)

Project Number: FR1681

Date: 8/10/10

| ~~DPT~~ Time Location | Sample Depth ft | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt %Rd | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0808 | 36-40 | 7.04 | 1.655 | — | 0.44 | 27.93 | 0.84 | 1.093 | -221.6 |
| 0810 | 36-40 | 7.00 | 1.696 | — | 0.44 | 27.92 | 0.86 | 1.110 | -219.0 |
| 0812 | 36-40 | 6.99 | 1.723 | — | 0.45 | 27.91 | 0.87 | 1.130 | -219.4 |
| | Sampled at | | 0813 | | | | | | |
| | | | | | | | | | |
| 0826 | 41-45 | 7.16 | 1.625 | — | 0.37 | 28.30 | 0.84 | 1.111 | -259.1 |
| 0828 | 41-45 | 7.18 | 1.776 | — | 0.36 | 28.28 | 0.91 | 1.184 | -257.1 |
| 0830 | 41-45 | 7.17 | 1.851 | — | 0.35 | 28.22 | 0.96 | 1.247 | -252.5 |
| | Sampled at | | 0831 | | | | | | |
| | | | | | | | | | |
| 0845 | 46-50 | 7.22 | 1.792 | — | 0.22 | 28.52 | 0.90 | 1.183 | -303.3 |
| 0847 | 46-50 | 7.28 | 1.893 | — | 0.21 | 28.41 | 0.99 | 1.297 | -297.5 |
| 0849 | 46-50 | 7.26 | 2.053 | — | 0.19 | 28.39 | 1.06 | 1.361 | -296.4 |
| | Sampled at | | 0850 | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: Time DPT0135 (X)

Project Number: ER1681

Date: 8/10/10

| ~~DPT~~ Location | Sample Depth ft | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ m g/L | Temp deg. C | Salinity ppt % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0933 | 8-12 | 6.71 | 0.781 | — | 1.18 | 29.87 | 0.38 | 0.509 | -88.4 |
| 0935 | 8-12 | 6.59 | 0.776 | — | 0.49 | 29.98 | 0.37 | 0.492 | -90.4 |
| 0937 | 8-12 | 6.55 | 0.748 | — | 0.34 | 29.98 | 0.38 | 0.480 | -92.5 |
| | Sampled at 0938 | | | | | | | | |
| 0946 | 16-20 | 6.65 | 1.157 | — | 0.17 | 29.47 | 0.58 | 0.763 | -175.3 |
| 0948 | 16-20 | 6.70 | 1.183 | — | 0.17 | 29.38 | 0.58 | 0.771 | -173.3 |
| 0950 | 16-20 | 6.70 | 1.189 | — | 0.17 | 29.36 | 0.59 | 0.774 | -171.5 |
| | Sampled at 0951 | | | | | | | | |
| 0955 | 26-30 | 6.96 | 1.186 | — | 0.17 | 29.39 | 0.59 | 0.773 | -206.3 |
| 0957 | 26-30 | 6.95 | 1.194 | — | 0.18 | 28.80 | 0.59 | 0.778 | -197.1 |
| 0959 | 26-30 | 6.87 | 1.197 | — | 0.19 | 28.71 | 0.59 | 0.778 | -193.3 |
| | Sampled at 1000 | | | — | | | | | |
| 1008 | 31-35 | 7.03 | 1.170 | — | 0.18 | 28.62 | 0.58 | 0.768 | -224.2 |
| 1010 | 31-35 | 7.01 | 1.190 | — | 0.18 | 28.50 | 0.59 | 0.779 | -217.1 |
| 1012 | 31-35 | 6.97 | 1.203 | — | 0.17 | 28.44 | 0.60 | 0.786 | -213.5 |
| | Sampled at 1013 | | | | | | | | |
| 1034 | 36-40 | 7.03 | 1.335 | — | 0.15 | 28.80 | 0.66 | 0.872 | -254.5 |
| 1036 | 36-40 | 7.02 | 1.346 | — | 0.16 | 28.77 | 0.67 | 0.878 | -250.7 |
| 1038 | 36-40 | 7.01 | 1.355 | — | 0.15 | 28.74 | 0.67 | 0.884 | -249.8 |
| | Sampled at 1039 | | | | | | | | |
| 1047 | 41-45 | 7.04 | 1.229 | — | 0.13 | 29.59 | 0.57 | 0.750 | -282.5 |
| 1049 | 41-45 | 7.29 | 1.298 | — | 0.16 | 29.31 | 0.65 | 0.856 | -286.0 |
| 1051 | 41-45 | 7.29 | 1.345 | — | 0.17 | 29.17 | 0.68 | 0.897 | -279.4 |
| | Sampled at 1052 | | | | | | | | |
| 1107 | 46-50 | 7.38 | 1.162 | — | 0.11 | 29.14 | 0.59 | 0.791 | -336.4 |
| 1109 | 46-50 | 7.40 | 1.271 | — | 0.11 | 28.90 | 0.64 | 0.849 | -335.7 |
| 1111 | 46-50 | 7.40 | 1.325 | — | 0.11 | 28.98 | 0.68 | 0.873 | -335.7 |
| | Sampled at 1112 | | | | | | | | |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: Time DPT0136 (On west side of Contractors Rd)

Date: 8/10/10

| ~~DPT~~ JRD Location | Sample Depth ft | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt %/00 | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1141 | 31-35' | 7.09 | 1.091 | — | 1.67 | 29.50 | 0.53 | 0.702 | -155.6 |
| 1143 | 31-35' | 6.97 | 1.075 | — | 0.54 | 29.22 | 0.52 | 0.695 | -149.1 |
| 1145 | 31-35' | 6.91 | 1.065 | — | 0.39 | 29.08 | 0.52 | 0.689 | -144.7 |
| | Sampled at | 1146 | | | | | | | |
| 1155 | 36-40' | 6.87 | 1.139 | — | 0.25 | 29.61 | 0.58 | 0.769 | -186.0 |
| 1157 | 36-40 | 6.86 | 1.198 | — | 0.22 | 29.66 | 0.59 | 0.784 | -185.9 |
| 1159 | 36-40 | 6.84 | 1.213 | — | 0.21 | 29.68 | 0.60 | 0.792 | -183.7 |
| | Sampled at | 1200 | | | | | | | |
| 1305 | 41-45' | 6.76 | 1.195 | — | 0.40 | 30.62 | 0.59 | 0.776 | -135.3 |
| 1307 | 41-45 | 6.70 | 1.911 | — | 0.38 | 30.31 | 0.58 | 0.772 | -127.7 |
| 1309 | 41-45 | 6.66 | 1.185 | — | 0.38 | 30.02 | 0.58 | 0.768 | -122.0 |
| | Sampled at | 1310 | | | | | | | |
| 1325 | 46-50' | 6.82 | 1.553 | — | 0.28 | 30.45 | 0.84 | 1.111 | -191.7 |
| 1327 | 46-50 | 6.98 | 1.767 | — | 0.21 | 29.74 | 0.91 | 1.176 | -191.3 |
| 1329 | 46-50 | 7.01 | 1.835 | — | 0.18 | 29.67 | 0.93 | 1.205 | -190.2 |
| | Sampled at | 1330 | | | | | | | |
| 1351 | 61-65' | 7.03 | 2.553 | — | 0.12 | 31.39 | 1.50 | 1.922 | -223.0 |
| 1353 | 61-65' | 7.15 | 3.021 | — | 0.11 | 31.24 | 1.58 | 2.014 | -224.8 |
| 1355 | 61-65' | 7.17 | 3.142 | — | 0.12 | 31.17 | 1.63 | 2.059 | -230.0 |
| | Sampled at | 1356 | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0137 (S)

Project Number: FR1681

Date: 8/10/10

| ~~DPT~~ Location | Sample Depth ft | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt %/00 | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| Time | | | | | | | | | |
| 1451 | 31-35 | 7.22 | 1.200 | — | 0.74 | 30.32 | 0.59 | 0.775 | -203.3 |
| 1453 | 31-35 | 7.15 | 1.188 | — | 0.28 | 30.09 | 0.58 | 0.772 | -195.7 |
| 1455 | 31-35 | 7.09 | 1.186 | — | 0.22 | 30.02 | 0.58 | 0.770 | -192.1 |
| | Sampled at | | 1456 | | | | | | |
| 1511 | 36-40 | 7.14 | 1.273 | — | 0.15 | 31.62 | 0.68 | 0.904 | -221.5 |
| 1513 | 36-40 | 7.20 | 1.504 | — | 0.14 | 31.41 | 0.77 | 1.013 | -224.4 |
| 1515 | 36-40 | 7.21 | 1.584 | — | 0.13 | 31.11 | 0.80 | 1.040 | -225.9 |
| | Sampled at | | 1516 | | | | | | |
| 1554 | 41-45 | 7.31 | 1.854 | — | 0.12 | 30.60 | 0.98 | 1.280 | -259.8 |
| 1556 | 41-45 | 7.25 | 1.985 | — | 0.12 | 29.26 | 1.04 | 1.339 | -245.9 |
| 1558 | 41-45 | 7.19 | 2.071 | — | 0.10 | 28.78 | 1.05 | 1.352 | -236.3 |
| | Sampled at | | 1559 | | | | | | |
| 1610 | 46-50 | 7.24 | 1.978 | — | 0.13 | 28.77 | 1.02 | 1.313 | -234.0 |
| 1612 | 46-50 | 7.22 | 2.058 | — | 0.12 | 28.72 | 1.05 | 1.359 | -233.7 |
| 1614 | 46-50 | 7.21 | 2.114 | — | 0.12 | 28.66 | 1.08 | 1.389 | -232.8 |
| | Sampled at | | 1615 | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM** Project Number: FR1681

DPT Location: DPT0138 (westernmost? near RR tracks) Date: 8/11/10

Time

| DPT Location | Sample Depth ft | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity ppt %sat | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 0756 | 8-12 | 6.97 | 0.775 | — | 2.60 | 28.04 | 0.37 | 0.496 | -150.0 |
| 0758 | 8-12 | 7.03 | 0.742 | — | 2.22 | 27.89 | 0.36 | 0.479 | -148.9 |
| 0800 | 8-12 | 7.04 | 0.733 | — | 1.99 | 27.79 | 0.35 | 0.474 | -147.5 |
| | Sampled at | 0801 | | | | | | | |
| 0807 | 16-20 | 6.94 | 1.111 | — | 0.77 | 28.53 | 0.58 | 0.788 | -179.6 |
| 0809 | 16-20 | 6.96 | 1.233 | — | 0.64 | 28.41 | 0.62 | 0.814 | -178.0 |
| 0811 | 16-20 | 6.96 | 1.255 | — | 0.57 | 28.38 | 0.62 | 0.816 | -177.5 |
| | Sampled at | 0812 | | | | | | | |
| 0825 | 26-30 | 7.01 | 1.591 | — | 0.27 | 27.90 | 0.82 | 1.082 | -201.5 |
| 0827 | 26-30 | 7.05 | 1.689 | — | 0.27 | 27.53 | 0.86 | 1.114 | -198.0 |
| 0829 | 26-30 | 7.04 | 1.727 | — | 0.29 | 27.40 | 0.87 | 1.127 | -196.0 |
| | Sampled at | 0830 | | | | | | | |
| 0841 | 31-35 | 7.08 | 1.781 | — | 0.18 | 28.30 | 0.90 | 1.164 | -217.4 |
| 0843 | 31-35 | 7.11 | 1.820 | — | 0.17 | 27.74 | 0.92 | 1.197 | -210.9 |
| 0845 | 31-35 | 7.10 | 1.849 | — | 0.19 | 27.27 | 0.94 | 1.207 | -197.3 |
| | Sampled at | 0846 | | | | | | | |
| 0900 | 36-40 | 7.28 | 1.503 | — | 0.19 | 29.11 | 0.76 | 0.989 | -240.9 |
| 0902 | 36-40 | 7.31 | 1.533 | — | 0.18 | 28.99 | 0.77 | 1.012 | -237.1 |
| 0904 | 36-40 | 7.27 | 1.565 | — | 0.18 | 28.96 | 0.79 | 1.027 | -240.1 |
| | Sampled at | 0905 | | | | | | | |
| 0920 | 41-45 | 7.46 | 1.427 | — | 0.14 | 30.47 | 0.71 | 0.933 | -296.3 |
| 0922 | 41-45 | 7.48 | 1.457 | — | 0.13 | 30.52 | 0.74 | 0.967 | -297.1 |
| 0924 | 41-45 | 7.49 | 1.502 | — | 0.14 | 30.50 | 0.75 | 0.985 | -296.5 |
| | Sampled at | 0925 | | | | | | | |
| 0941 | 46-56 | 7.48 | 1.548 | — | 0.13 | 30.80 | 0.79 | 1.036 | -331.4 |
| 0943 | 46-50 | 7.49 | 1.633 | — | 0.13 | 30.96 | 0.83 | 1.092 | -330.9 |
| 0945 | 46-50 | 7.49 | 1.711 | — | 0.13 | 30.75 | 0.87 | 1.141 | -330.0 |
| | Sampled at | 0946 | | | | | | | |
| | | | | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM** Project Number: FR1681

DPT Location: Time DPT0139 (next to RR tracks - east) Date: 8/11/10

| ~~DPT~~ TRD Location | Sample Depth ft | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ m g/L | Temp deg. C | Salinity ppt %@@ | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1019 | 8-12 | 6.82 | 0.936 | — | 1.10 | 29.86 | 0.45 | 0.600 | -107.0 |
| 1021 | 8-12 | 6.77 | 0.917 | — | 0.98 | 29.76 | 0.44 | 0.592 | -105.4 |
| 1023 | 8-12 | 6.75 | 0.908 | — | 0.92 | 29.73 | 0.44 | 0.588 | -104.3 |
| | Sampled at 1024 | | | | | | | | |
| 1029 | 16-20 | 6.92 | 1.279 | — | 0.46 | 30.22 | 0.64 | 0.843 | -188.2 |
| 1031 | 16-20 | 7.02 | 1.310 | — | 0.36 | 30.20 | 0.65 | 0.857 | -193.0 |
| 1033 | 16-20 | 7.07 | 1.322 | — | 0.34 | 30.14 | 0.66 | 0.862 | -194.2 |
| | Sampled at 1034 | | | | | | | | |
| 1041 | 26-30 | 7.07 | 1.559 | — | 0.22 | 30.96 | 0.78 | 1.015 | -207.7 |
| 1043 | 26-30 | 7.07 | 1.570 | — | 0.21 | 30.52 | 0.79 | 1.027 | -204.5 |
| 1045 | 26-30 | 7.06 | 1.585 | — | 0.22 | 30.30 | 0.79 | 1.034 | -206.0 |
| | Sampled at 1046 | | | | | | | | |
| 1055 | 31-35 | 7.04 | 1.309 | — | 0.15 | 31.99 | 0.64 | 0.836 | -225.8 |
| 1057 | 31-35 | 6.97 | 1.280 | — | 0.15 | 31.98 | 0.63 | 0.830 | -226.7 |
| 1059 | 31-35 | 6.97 | 1.277 | — | 0.15 | 31.75 | 0.63 | 0.829 | -226.7 |
| | Sampled at 1100 | | | | | | | | |
| 1113 | 36-40 | 6.91 | 1.279 | — | 0.14 | 32.34 | 0.64 | 0.851 | -280.7 |
| 1115 | 36-40 | 6.96 | 1.317 | — | 0.14 | 32.10 | 0.65 | 0.860 | -280.1 |
| 1117 | 36-40 | 6.97 | 1.327 | — | 0.15 | 32.15 | 0.66 | 0.865 | -279.7 |
| | Sampled at 1118 | | | | | | | | |
| 1133 | 41-45 | 6.98 | 1.630 | — | 0.11 | 31.24 | 0.84 | 1.097 | -327.0 |
| 1135 | 41-45 | 7.02 | 1.726 | — | 0.10 | 31.40 | 0.89 | 1.170 | -323.9 |
| 1137 | 41-45 | 7.03 | 1.834 | — | 0.12 | 30.14 | 0.94 | 1.220 | -320.6 |
| | Sampled at 1138 | | | | | | | | |
| 1157 | 46-50 | 7.03 | 1.436 | — | 0.09 | 32.92 | 0.72 | 0.970 | -319.0 |
| 1159 | 46-50 | 7.05 | 1.598 | — | 0.11 | 31.31 | 0.84 | 1.102 | -321.2 |
| 1201 | 46-50 | 7.05 | 1.759 | — | 0.11 | 31.38 | 0.90 | 1.170 | -323.0 |
| | Sampled at 1202 | | | | | | | | |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0140(W)

Project Number: FR1681

Date: 8/11/10



| Time ~~DPT Location~~ | Sample Depth ft | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ m g/L | Temp deg. C | Salinity ppt % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1411 | 8-12 | 6.75 | 0.906 | — | 1.93 | 31.00 | 0.44 | 0.586 | -74.3 |
| 1413 | 8-12 | 6.67 | 0.895 | — | 1.41 | 30.86 | 0.43 | 0.579 | -74.0 |
| 1415 | 8-12 | 6.63 | 0.889 | — | 1.23 | 30.68 | 0.43 | 0.576 | -71.7 |
| | Sampled at | 1416 | | | | | | | |
| 1422 | 12-16 | 6.54 | 0.973 | — | 1.00 | 31.04 | 0.48 | 0.636 | -109.3 |
| 1424 | 12-16 | 6.60 | 0.981 | — | 0.95 | 30.52 | 0.48 | 0.634 | -106.7 |
| 1426 | 12-16 | 6.60 | 0.970 | — | 0.92 | 30.35 | 0.47 | 0.628 | -104.8 |
| | Sampled at | 1427 | | | | | | | |
| 1430 | 16-20 | 6.63 | 1.030 | — | 0.71 | 30.07 | 0.50 | 0.669 | -134.5 |
| 1432 | 16-20 | 6.72 | 1.025 | — | 0.60 | 29.97 | 0.50 | 0.666 | -138.7 |
| 1434 | 16-20 | 6.72 | 1.026 | — | 0.58 | 29.71 | 0.50 | 0.667 | -138.7 |
| | Sampled at | 1435 | | | | | | | |
| 1438 | 21-25 | 6.73 | 1.039 | — | 0.46 | 31.10 | 0.51 | 0.674 | -153.9 |
| 1440 | 21-25 | 6.74 | 1.034 | — | 0.44 | 30.23 | 0.50 | 0.669 | -152.1 |
| 1442 | 21-25 | 6.74 | 1.024 | — | 0.43 | 29.88 | 0.50 | 0.662 | -150.4 |
| | Sampled at | 1443 | | | | | | | |
| 1451 | 26-30 | 6.82 | 1.054 | — | 0.32 | 30.35 | 0.52 | 0.685 | -183.1 |
| 1453 | 26-30 | 6.93 | 1.050 | — | 0.29 | 30.07 | 0.51 | 0.679 | -183.7 |
| 1455 | 26-30 | 6.93 | 1.043 | — | 0.32 | 30.00 | 0.51 | 0.679 | -182.3 |
| | Sampled at | 1456 | | | | | | | |
| 1503 | 31-35 | 7.04 | 1.508 | — | 0.17 | 31.40 | 0.76 | 0.995 | -227.7 |
| 1505 | 31-35 | 7.06 | 1.543 | — | 0.17 | 30.97 | 0.77 | 1.007 | -226.3 |
| 1507 | 31-35 | 7.06 | 1.556 | — | 0.17 | 30.92 | 0.78 | 1.016 | -216.5 |
| | Sampled at | 1508 | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

Project Number: FR1681

DPT Location: DPT0140 (W)

Date: 8/11/10



| Time DPT Location | Sample Depth ft | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ m g/L | Temp deg. C | Salinity ppt ‰ | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1517 | 36-40 | 7.19 | 1.918 | — | 0.11 | 30.13 | 0.97 | 1.264 | -252.8 |
| 1519 | 36-40 | 7.17 | 1.956 | — | 0.12 | 29.91 | 0.99 | 1.278 | -247.4 |
| 1521 | 36-40 | 7.14 | 1.980 | — | 0.13 | 29.82 | 1.00 | 1.296 | -243.7 |
| | Sampled at 1522 | | | | | | | | |
| 1529 | 41-45 | 7.18 | 1.812 | — | 0.11 | 31.06 | 0.95 | 1.259 | -259.1 |
| 1531 | 41-45 | 7.22 | 2.007 | — | 0.11 | 30.07 | 1.04 | 1.358 | -255.5 |
| 1533 | 41-45 | 7.20 | 2.014 | — | 0.12 | 29.29 | 1.02 | 1.318 | -251.4 |
| | Sampled at 1534 | | | | | | | | |
| 1545 | 46-50 | 7.19 | 1.935 | — | 0.11 | 31.56 | 0.98 | 1.277 | -193.7 |
| 1547 | 46-50 | 7.24 | 2.017 | — | 0.10 | 31.64 | 1.04 | 1.346 | -198.7 |
| 1549 | 46-50 | 7.26 | 2.146 | — | 0.11 | 30.07 | 1.10 | 1.411 | -189.3 |
| | Sampled at FR 1550 | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-0141

Project Number: FR1681

Date: 10/11/10

| ~~DPT Location~~ Time | Sample Depth | pH std units | Conductivity M S/cm | Turbidity NTUs | Diss. $O_2$ M g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0859 | B-12 | 7.04 | 0.907 | — | 0.50 | 25.10 | 0.44 | 0.583 | -378.5 | |
| 0901 | 8-12 | 6.95 | 0.895 | — | 0.45 | 25.05 | 0.44 | 0.581 | -439.8 | |
| 0903 | 8-12 | 6.92 | 0.893 | — | 0.43 | 24.92 | 0.44 | 0.582 | -456.4 | |
| | sampled at | | 0903 | | | | | | | |
| 0913 | 16-20 | 7.32 | 0.803 | — | 0.42 | 25.55 | 0.39 | 0.514 | -253.1 | |
| 0915 | 16-20 | 7.31 | 0.799 | — | 0.36 | 25.68 | 0.35 | 0.512 | -314.7 | |
| 0917 | 16-20 | 7.29 | 0.793 | — | 0.42 | 25.64 | 0.38 | 0.509 | -326.9 | |
| | sampled at | | 0917 | | | | | | | |
| 0928 | 26-30 | 7.16 | 1.578 | — | 0.34 | 25.23 | 0.79 | 1.029 | -306.8 | |
| 0930 | 26-30 | 7.10 | 1.599 | — | 0.28 | 25.16 | 0.80 | 1.037 | -363.4 | ]- removed flow thru cell due to clogging |
| 0932 | 26-30 | 7.08 | 1.590 | — | 0.30 | 25.32 | 0.79 | 1.027 | -167.9 | |
| | sampled at | | 0932 | | | | | | | |
| 0949 | 31-35 | 7.24 | 1.775 | — | 0.54 | 25.09 | 0.92 | 1.189 | -390.9 | |
| 0951 | 31-35 | 7.05 | 1.914 | — | 0.18 | 25.06 | 0.97 | 1.249 | -481.1 | |
| 0953 | 31-35 | 6.97 | 1.934 | — | 0.19 | 25.11 | 0.98 | 1.255 | -460.2 | |
| | sampled at | | 0953 | | | | | | | |
| 1010 | 36-40 | 7.01 | 1.795 | — | 0.20 | 25.18 | 0.90 | 1.165 | -430.4 | |
| 1012 | 36-40 | 6.93 | 1.782 | — | 0.21 | 24.91 | 0.90 | 1.160 | -349.6 | |
| 1014 | 36-40 | 6.91 | 1.780 | — | 0.27 | 25.01 | 0.90 | 1.157 | -290.5 | |
| | sampled at | | 1014 | | | | | | | |
| 1028 | 41-45 | 7.00 | 1.720 | — | 0.50 | 25.34 | 0.88 | 1.144 | -349.3 | |
| 1030 | 41-45 | 6.95 | 1.833 | — | 0.18 | 25.39 | 0.93 | 1.194 | -421.5 | |
| 1032 | 41-45 | 6.93 | 1.860 | — | 0.22 | 25.47 | 0.93 | 1.199 | -390.8 | |
| | sampled at | | 1032 | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: time DPT-0141

Project Number: FR1681

Date: 10/11/10

| ~~DPT~~ Location | Sample Depth | pH std units | Conductivity m S/cm | Turbidity NTUs | Diss. $O_2$ m g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1051 | 46-50 | 7.14 | 2.010 | — | 0.60 | 25.79 | 1.00 | 1.285 | -192.5 |
| 1053 | 46-50 | 7.06 | 1.981 | — | 0.19 | 25.68 | 0.99 | 1.270 | -261.4 |
| 1055 | 46-50 | 7.01 | 1.972 | — | 0.15 | 25.61 | 0.99 | 1.265 | -303.4 |
| | sampled | at | 1055 | | | | | | |

Note: Insert units if not provided on sheet.

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~~C, D, T39, E~~ JA

**DPT GEOCHEMICAL DATA FORM**

DPT Location: ~~Time~~ DPT-0142

Project Number: FR 16881

Date: 10/11/10

| ~~DPT Location~~ | Sample Depth | pH std units | Conductivity MS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 1130 | 8-12 | 6.86 | 0.893 | — | 0.20 | 28.99 | 0.40 | 0.532 | -397.5 |
| 1132 | 8-12 | 6.80 | 0.873 | — | 0.19 | 29.04 | 0.39 | 0.524 | -422.7 |
| 1134 | 8-12 | 6.74 | 0.853 | — | 0.15 | 29.34 | 0.38 | 0.510 | -446.2 |
| | sampled at | | 1134 | | | | | | |
| | | | | | | | | | |
| 1144 | 16-20 | 6.83 | 1.118 | — | 0.15 | 30.47 | 0.50 | 0.669 | -471.0 |
| 1146 | 16-20 | 6.84 | 1.163 | — | 0.12 | 30.17 | 0.52 | 0.690 | -489.1 |
| 1148 | 16-20 | 6.80 | 1.169 | — | 0.13 | 30.05 | 0.52 | 0.693 | -484.0 |
| | sampled at | | 1148 | | | | | | |
| | | | | | | | | | |
| 1259 | 26-30 | 7.02 | 1.316 | — | 0.18 | 28.34 | 0.61 | 0.806 | -416.8 |
| 1301 | 26-30 | 6.93 | 1.325 | — | 0.15 | 28.32 | 0.62 | 0.811 | -411.7 |
| 1303 | 26-30 | 6.86 | 1.319 | — | 0.12 | 27.65 | 0.62 | 0.815 | -316.0 |
| | sampled at | | 1303 | | | | | | |
| | | | | | | | | | |
| 1319 | 31-35 | 7.11 | 1.103 | — | 0.10 | 27.09 | 0.86 | 1.113 | -455.4 |
| 1321 | 31-35 | 7.00 | 1.785 | — | 0.10 | 27.10 | 0.86 | 1.790 | -457.2 |
| 1323 | 31-35 | 6.96 | 1.815 | — | 0.09 | 27.90 | 0.87 | 1.120 | -441.4 |
| | sampled at | | 1323 | | | | | | |
| | | | | | | | | | |
| 1337 | 36-40 | 7.19 | 2.033 | — | 0.18 | 30.55 | 0.95 | 1.236 | -224.9 |
| 1339 | 36-40 | 7.12 | 2.094 | — | 0.08 | 30.00 | 0.96 | 1.244 | -249.5 |
| 1341 | 36-40 | 7.09 | 2.114 | — | 0.05 | 29.91 | 0.98 | 1.260 | -429.1 |
| | sampled at | | 1341 | | | | | | |
| | | | | | | | | | |
| 1357 | 41-45 | 7.26 | 2.057 | — | 0.11 | 29.62 | 0.97 | 1.255 | -267.4 |
| 1359 | 41-45 | 7.16 | 2.106 | — | 0.07 | 29.17 | 0.99 | 1.275 | -342.0 |
| 1401 | 41-45 | 7.05 | 2.128 | — | 0.05 | 28.70 | 0.99 | 1.294 | -420.4 |
| | sampled at | | 1401 | | | | | | |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT-0142

Project Number: FR1681

Date: 10/11/10

| ~~DPT~~ Time ~~Location~~ | Sample Depth | pH std units | Conductivity mS/cm | Turbidity NTUs | Diss. $O_2$ mg/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| 1419 | 46-50 | 7.24 | 2.197 | — | 0.12 | 28.95 | 1.05 | 1.351 | -263.6 |
| 1421 | 46-50 | 7.15 | 2.271 | — | 0.06 | 28.69 | 1.08 | 1.390 | -342.0 |
| 1423 | 46-50 | 7.12 | 2.306 | — | 0.04 | 28.67 | 1.10 | 1.410 | -373.3 |
| | sampled at | | 1423 | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: Time DPT-0143

Project Number: FR1681

Date: 10/11/10

| ~~DPT Location~~ | Sample Depth | pH std units | Conductivity M S/cm | Turbidity NTUs | Diss. $O_2$ M g/L | Temp deg. C | Salinity % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 1531 | 26-30 | 7.08 | 1.267 | — | 0.40 | 31.17 | 0.56 | 0.738 | -250.6 |
| 1533 | 26-30 | 6.92 | 1.259 | — | 0.17 | 30.85 | 0.55 | 0.732 | -279.9 |
| 1535 | 26-30 | 6.81 | 1.231 | — | 0.16 | 30.63 | 0.54 | 0.721 | -283.6 |
| | sampled at | | 1535 | | | | | | |
| | | | | | | | | | |
| 1548 | 31-35 | 6.88 | 1.208 | — | 0.20 | 30.70 | 0.53 | 0.716 | -153.5 |
| 1550 | 31-35 | 6.87 | 1.197 | — | 0.11 | 29.60 | 0.54 | 0.710 | -144.0 |
| 1552 | 31-35 | 6.78 | 1.165 | — | 0.11 | 29.50 | 0.53 | 0.703 | -135.8 |
| | sampled at | | 1552 | | | | | | |
| | | | | | | | | | |
| 1605 | 36-40 | 7.01 | 1.458 | — | 0.30 | 30.80 | 0.68 | 0.895 | -259.6 |
| 1607 | 36-40 | 7.01 | 1.530 | — | 0.08 | 29.67 | 0.69 | 0.910 | -259.3 |
| 1609 | 36-40 | 6.91 | 1.501 | — | 0.09 | 28.82 | 0.69 | 0.907 | -285.5 |
| | sampled at | | 1609 | | | | | | |
| | | | | | | | | | |
| 1625 | 41-45 | 7.21 | 1.879 | — | 0.18 | 29.50 | 0.89 | 1.168 | -187.3 |
| 1627 | 41-45 | 7.16 | 1.982 | — | 0.09 | 28.87 | 0.94 | 1.209 | -176.4 |
| 1629 | 41-45 | 7.09 | 1.998 | — | 0.11 | 28.41 | 0.95 | 1.219 | -160.3 |
| | sampled at | | 1629 | | | | | | |
| | | | | | | | | | |
| 1647 | 46-50 | 7.19 | 2.226 | — | 0.30 | 30.38 | 1.05 | 1.359 | -207.5 |
| 1649 | 46-50 | 7.21 | 2.406 | — | 0.04 | 30.18 | 1.11 | 1.426 | -221.7 |
| 1651 | 46-50 | 7.20 | 2.412 | — | 0.05 | 29.89 | 1.11 | 1.436 | -206.1 |
| | sampled at | | 1651 | | | | | | |
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Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: FR1681 / CRHE

Date: 10/11/10 – DPT-0144

| ~~Time~~ | ~~DPT Location~~ Time | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1710 | 8-12 | 7.05 | 0.912 | — | 0.18 | 30.17 | 0.40 | 0.535 | -149.1 | |
| 1712 | ~~1710~~ | 8-12 | 7.12 | 0.899 | — | 0.16 | 30.06 | 0.40 | 0.533 | -160.8 | |
| 1714 | ~~1710~~ | 8-12 | 7.17 | 0.895 | — | 0.59 | 30.09 | 0.39 | 0.528 | -148.5 | |
| | | sampled at | | 1714 | | | | | | | |
| 10/12/10 | | | | | | | | | | | |
| | 0736 | 16-20 | 6.42 | 1.369 | — | 0.27 | 24.55 | 0.69 | 0.897 | -128.7 | |
| | 0738 | 16-20 | 6.49 | 1.349 | — | 0.26 | 24.44 | 0.68 | 0.884 | -85.9 | |
| | 0740 | 16-20 | 6.50 | 1.342 | — | 0.26 | 24.43 | 0.68 | 0.880 | -95.9 | |
| | | sampled at | | 0740 | | | | | | | |
| | 0753 | 26-30 | 6.74 | 1.542 | — | 0.60 | 21.97 | 0.87 | 1.125 | -164.9 | |
| | 0755 | 26-30 | 6.90 | 1.767 | — | 0.22 | 23.17 | 0.96 | 1.230 | -176.3 | |
| | 0757 | 26-30 | 6.91 | 1.911 | — | 0.21 | 23.77 | 0.98 | 1.281 | -171.9 | |
| | | sampled at | | 0757 | | | | | | | |
| | 0822 | 31-35 | 7.24 | 1.337 | — | 0.70 | 24.69 | 0.69 | 0.901 | -115.2 | |
| | 0824 | 31-35 | 6.92 | 1.434 | — | 0.22 | 25.17 | 0.72 | 0.931 | -105.4 | |
| | 0826 | 31-35 | 6.87 | 1.436 | — | 0.22 | 25.02 | 0.72 | 0.933 | -104.6 | |
| | | sampled at | | 0826 | | | | | | | |
| | 0843 | 36-40 | 6.83 | 1.530 | — | 0.13 | 25.59 | 0.76 | 0.982 | -137.0 | |
| | 0845 | 36-40 | 6.82 | 1.527 | — | 0.14 | 25.59 | 0.76 | 0.981 | -136.0 | |
| | 0847 | 36-40 | 6.80 | 1.523 | — | 0.16 | 25.54 | 0.75 | 0.979 | -134.4 | |
| | | sampled at | | 0847 | | | | | | | |
| | 0906 | 41-45 | 7.10 | 1.774 | — | 0.43 | 25.44 | 0.91 | 1.183 | -177.0 | |
| | 0908 | 41-45 | 7.09 | 1.894 | — | 0.20 | 25.81 | 0.96 | 1.231 | -179.6 | |
| | 0910 | 41-45 | 7.03 | 1.981 | — | 0.11 | 26.16 | 0.99 | 1.270 | -186.8 | |
| | | sampled at | | 0910 | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681

Date: 10/12/10 DPT-0144

| ~~Time~~ | Time ~~DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0930 | 46-50 | 7.10 | 1.845 | — | 0.23 | 25.86 | 0.94 | 1.220 | -162.7 | |
| | 0932 | 46-50 | 7.12 | 1.939 | — | 0.16 | 26.03 | 0.97 | 1.253 | -167.7 | |
| | 0934 | 46-50 | 7.05 | 1.996 | — | 0.10 | 26.28 | 0.99 | 1.268 | -156.1 | |
| | | sampled at | | 0934 | | | | | | | |
| | | | | | | | | | | | |
| | 0959 | 51-55 | 7.29 | 2.535 | — | 0.23 | 27.15 | 1.26 | 1.605 | -204.1 | |
| | 1001 | 51-55 | 7.21 | 2.599 | — | 0.18 | 27.17 | 1.29 | 1.643 | -205.7 | |
| | 1003 | 51-55 | 7.20 | 2.564 | — | 0.13 | 27.11 | 1.34 | 1.694 | -205.0 | |
| | | sampled at | | 1003 | | | | | | | |
| | | | | | | | | | | | |
| | 1028 | 61-65 | 7.41 | 3.662 | — | 0.37 | 27.56 | 1.99 | 2.557 | -228.1 | |
| | 1030 | 61-65 | 7.39 | 4.269 | — | 0.13 | 27.05 | 2.19 | 2.699 | -225.7 | |
| | 1032 | 61-65 | 7.39 | 4.371 | — | 0.10 | 27.07 | 2.23 | 2.743 | -224.3 | |
| | | sampled at | | 1032 | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRITE / FR1681

Date: 10/12/10 DPT-0145

| ~~Time~~ | Time ~~DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1115 | 8-12 | 7.00 | 1.116 | — | 0.51 | 28.36 | 0.51 | 0.672 | -144.7 | |
| | 1117 | 8-12 | 7.01 | 1.095 | — | 0.20 | 28.61 | 0.50 | 0.665 | -160.1 | |
| | 1119 | 8-12 | 6.79 | 1.042 | — | 0.13 | 28.59 | 0.47 | 0.627 | -176.1 | |
| | | sampled at | | 1119 | | | | | | | |
| | | | | | | | | | | | |
| | 1128 | 16-20 | 7.09 | 1.660 | — | 0.51 | 29.35 | 0.77 | 1.010 | -167.4 | |
| | 1130 | 16-20 | 6.96 | 1.693 | — | 0.11 | 28.80 | 0.79 | 1.024 | -167.8 | |
| | 1132 | 16-20 | 6.92 | 1.011 | — | 0.10 | 28.68 | 0.77 | 1.006 | -162.1 | |
| | | sampled at | | 1132 | | | | | | | |
| | | | | | | | | | | | |
| | 1141 | 26-30 | 7.08 | 1.640 | — | 0.58 | 29.33 | 0.75 | 0.980 | -157.2 | |
| | 1143 | 26-30 | 6.95 | 1.672 | — | 0.11 | 29.09 | 0.78 | 1.020 | -153.1 | |
| | 1145 | 26-30 | 6.87 | 1.742 | — | 0.11 | 28.88 | 0.82 | 1.063 | -147.3 | |
| | | sampled at | | 1145 | | | | | | | |
| | | | | | | | | | | | |
| | 1157 | 31-35 | 7.10 | 1.724 | — | 0.40 | 29.52 | 0.81 | 1.054 | -170.7 | |
| | 1159 | 31-35 | 7.05 | 1.799 | — | 0.11 | 29.25 | 0.83 | 1.084 | -174.9 | |
| | 1201 | 31-35 | 7.01 | 1.799 | — | 0.10 | 29.11 | 0.83 | 1.083 | -171.4 | |
| | | sampled at | | 1201 | | | | | | | |
| | | | | | | | | | | | |
| | 1301 | 36-40 | 7.25 | 1.805 | — | 0.96 | 28.75 | 0.83 | 1.064 | -142.5 | |
| | 1303 | 36-40 | 7.14 | 1.720 | — | 0.76 | 28.11 | 0.81 | 1.052 | -131.1 | |
| | 1305 | 36-40 | 7.09 | 1.708 | — | 0.70 | 28.07 | 0.81 | 1.046 | -127.9 | |
| | | sampled at | | 1305 | | | | | | | |
| | | | | | | | | | | | |
| | 1319 | 41-45 | 7.31 | 2.179 | — | 0.93 | 29.95 | 1.05 | 1.378 | -186.4 | |
| | 1321 | 41-45 | 7.26 | 2.399 | — | 0.20 | 29.73 | 1.13 | 1.444 | -196.6 | |
| | 1323 | 41-45 | 7.25 | 2.458 | — | 0.18 | 29.48 | 1.15 | 1.476 | -195.4 | |
| | | sampled at | | 1323 | | | | | | | |
| | | | | | | | | | | | |
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Notes:

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1684

Date: 10/12/10 DPT-0145

| ~~Time~~ | Time ~~DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1338 | 46-50 | 7.25 | 2.956 | — | 0.22 | 30.90 | 1.22 | 1.572 | -189.4 | |
| | 1340 | 46-50 | 7.22 | 2.848 | — | 0.15 | 30.72 | 1.33 | 1.698 | -191.0 | |
| | 1342 | 46-50 | 7.18 | 2.989 | — | 0.13 | 30.60 | 1.39 | 1.766 | -185.0 | |
| | | sampled at | | 1342 | | | | | | | |
| | | | | | | | | | | | |
| | 1402 | 51-55 | 7.35 | 3.336 | — | 0.37 | 28.93 | 1.65 | 2096 | -166.3 | |
| | 1404 | 51-55 | 7.30 | 3.461 | — | 0.17 | 27.74 | 1.71 | 2.130 | -143.9 | |
| | 1406 | 51-55 | 7.25 | 3.400 | — | 0.15 | 27.35 | 1.69 | 2.109 | -127.1 | |
| | | sampled at | | 1406 | | | | | | | |
| | | | | | | | | | | | |
| | 1433 | 61-65 | 7.36 | 3.899 | — | 0.37 | 30.07 | 1.92 | 2.415 | -171.9 | |
| | 1435 | 61-65 | 7.32 | 4.257 | — | 0.15 | 29.56 | 2.07 | 2.574 | -185.6 | |
| | 1437 | 61-65 | 7.33 | 4.395 | — | 0.12 | 29.26 | 2.15 | 2.661 | -196.1 | |
| | | sampled at | | 1437 | | | | | | | |

Notes:

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681

Date: 10/12/10 DPT-0139

| ~~Time~~ | Time ~~DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1514 | 51-55 | 7.30 | 2.728 | — | 0.34 | 27.90 | 1.35 | 1.748 | -164.1 | |
| | 1516 | 51-55 | 7.09 | 2.935 | — | 0.26 | 27.08 | 1.46 | 1.831 | -145.0 | |
| | 1518 | 51-55 | 6.93 | 2.868 | — | 0.14 | 26.96 | 1.42 | 1.793 | -129.5 | |
| | | Sampled at 1518 | | | | | | | | | |
| | | | | | | | | | | | |
| | 1534 | 61-65 | 7.18 | 4.206 | — | 0.64 | 28.70 | 2.10 | 2.608 | -145.6 | |
| | 1536 | 61-65 | 7.07 | 4.388 | — | 0.15 | 28.22 | 2.19 | 2.696 | -157.7 | |
| | 1538 | 61-65 | 7.12 | 4.476 | — | 0.09 | 28.29 | 2.23 | 2.746 | -166.6 | |
| | | Sampled at 1538 | | | | | | | | | |

Notes:

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681

Date: 10/12/10 DPT-0146

| ~~Time~~ | Time ~~DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1613 | 26-30 | 7.13 | 1.197 | — | 0.48 | 28.42 | 0.55 | 0.731 | -107.2 | |
| | 1615 | 26-30 | 6.82 | 1.170 | — | 0.22 | 28.14 | 0.54 | 0.710 | -106.5 | |
| | 1617 | 26-30 | 6.72 | 1.135 | — | 0.15 | 28.00 | 0.53 | 0.695 | -105.0 | |
| | | sampled at | | 1617 | | | | | | | |
| | | | | | | | | | | | |
| | 1627 | 31-35 | 6.67 | 1.176 | — | 0.75 | 29.07 | 0.55 | 0.730 | -138.1 | |
| | 1629 | 31-35 | 6.72 | 1.248 | — | 0.18 | 28.79 | 0.57 | 0.759 | -145.1 | |
| | 1631 | 31-35 | 6.71 | 1.253 | — | 0.17 | 28.66 | 0.58 | 0.760 | -142.9 | |
| | | sampled at | | 1631 | | | | | | | |
| | | | | | | | | | | | |
| | 1642 | 36-40 | 6.90 | 1.444 | — | 0.85 | 28.65 | 0.66 | 0.869 | -124.0 | |
| | 1645 | 36-40 | 6.72 | 1.405 | — | 0.21 | 27.74 | 0.66 | 0.859 | -110.2 | |
| | 1647 | 36-40 | 6.64 | 1.368 | — | 0.19 | 27.38 | 0.65 | 0.846 | -99.4 | |
| | | sampled at | | 1647 | | | | | | | |
| | | | | | | | | | | | |
| | 1659 | 41-45 | 7.19 | 2.179 | — | 0.34 | 30.46 | 1.02 | 1.324 | -155.7 | |
| | 1701 | 41-45 | 6.97 | 2.303 | — | 0.18 | 30.05 | 1.08 | 1.391 | -159.1 | |
| | 1703 | 41-45 | 6.95 | 2.410 | — | 0.13 | 29.82 | 1.13 | 1.453 | -158.7 | |
| | | sampled | at | 1703 | | | | | | | |
| | | | | | | | | | | | |
| | 1718 | 46-50 | 7.21 | 2.421 | — | 0.21 | 30.91 | ~~1.17~~ 1.15 (SR) | 1.447 | -168.7 | |
| | 1720 | 46-50 | 6.98 | 2.595 | — | 0.16 | 30.59 | 1.21 | 1.550 | -172.5 | |
| | 1722 | 46-50 | 6.98 | 2.717 | — | 0.12 | 30.15 | 1.27 | 1.624 | -173.8 | |
| | | sampled | at | 1722 | | | | | | | |
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Notes:

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681

Date: 10/13/10 DPT-0147

| ~~Time~~ | Time ~~DPT~~ Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0849 | 26-30 | 7.16 | 0.8335 | — | 0.72 | 25.96 | 0.38 | 0.502 | -176.2 | |
| | 0851 | 26-30 | 6.98 | 0.760 | — | 0.21 | 25.60 | 0.36 | 0.483 | -177.2 | |
| | 0853 | 26-30 | 6.93 | 0.746 | — | 0.17 | 25.53 | 0.36 | 0.478 | -175.5 | |
| | | sampled at | | 0853 | | | | | | | |
| | 0905 | 31-35 | 7.29 | 0.759 | — | 0.60 | 25.14 | 0.37 | 0.496 | -179.2 | |
| | 0907 | 31-35 | 7.18 | 0.775 | — | 0.14 | 25.46 | 0.37 | 0.500 | -186.2 | |
| | 0909 | 31-35 | 7.15 | 0.780 | — | 0.11 | 25.52 | 0.38 | 0.502 | -185.6 | |
| | | sampled at | | 0909 | | | | | | | |
| | 0922 | 36-40 | 7.19 | 0.922 | — | 0.11 | 25.60 | 0.45 | 0.604 | -206.2 | |
| | 0924 | 36-40 | 7.16 | 0.999 | — | 0.08 | 25.82 | 0.48 | 0.640 | -204.6 | |
| | 0926 | 36-40 | 7.14 | 0.992 | — | 0.08 | 25.77 | 0.48 | 0.634 | -199.5 | |
| | | sampled at | | 0926 | | | | | | | |
| | 0941 | 41-45 | 7.28 | 1.572 | — | 0.12 | 25.53 | 0.82 | 1.072 | -198.4 | |
| | 0943 | 41-45 | 7.18 | 1.788 | — | 0.12 | 25.77 | 0.90 | 1.169 | -198.3 | |
| | 0945 | 41-45 | 7.12 | 1.923 | — | 0.09 | 25.86 | 0.96 | 1.235 | -190.6 | |
| | | sampled at | | 0945 | | | | | | | |
| | 1000 | 46-50 | 7.30 | 1.973 | — | 0.41 | 27.10 | 0.98 | 1.279 | -192.3 | |
| | 1002 | 46-50 | 7.17 | 2.223 | — | 0.09 | 27.06 | 1.10 | 1.417 | -184.1 | |
| | 1004 | 46-50 | 7.08 | 2.293 | — | 0.09 | 26.99 | 1.13 | 1.441 | -173.2 | |
| | | sampled at | | 1004 | | | | | | | |

Notes:

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mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1881

Date: 10/13/10 DPT-0148

| ~~Time~~ | Time ~~DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color/ Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1042 | 8-12 | 7.61 | 1,180 | — | 3.42 | 29.35 | 0.53 | 0.704 | -115.9 | |
| | 1044 | 8-12 | 7.08 | 1,122 | — | 4.25 | 29.14 | 0.51 | 0.674 | -109.6 | |
| | 1046 | 8-12 | 7.03 | 1,104 | — | 3.57 | 28.72 | 0.50 | 0.668 | -90.0 | |
| | | sampled at | | 1046 | | | | | | | |
| | | | | | | | | | | | |
| | 1056 | 16-20 | 7.10 | 2.205 | — | 0.75 | 29.03 | 1.06 | 1,367 | -158.9 | |
| | 1058 | 16-20 | 6.94 | 2.298 | — | 0.10 | 28.78 | 1.09 | 1.394 | -146.2 | |
| | 1100 | 16-20 | 6.92 | 2.301 | — | 0.13 | 28.64 | 1.09 | 1.399 | -135.0 | |
| | | sampled at | | 1100 | | | | | | | |
| | | | | | | | | | | | |
| | 1110 | 26-30 | 7.09 | 1,786 | — | 0.30 | 28.96 | 0.84 | 1.091 | -158.7 | |
| | 1112 | 26-30 | 6.99 | 1,801 | — | 0.11 | 28.82 | 0.84 | 1.089 | -154.3 | |
| | 1114 | 26-30 | 6.90 | 1,792 | — | 0.10 | 28.59 | 0.84 | 1.090 | -146.2 | |
| | | sampled at | | 1114 | | | | | | | |
| | | | | | | | | | | | |
| | 1126 | 31-35 | 7.24 | 1.691 | — | 0.65 | 29.38 | 0.79 | 1.039 | -158.0 | |
| | 1128 | 31-35 | 6.94 | 1.622 | — | 0.11 | 28.54 | 0.81 | 1.055 | -154.5 | |
| | 1130 | 31-35 | 6.91 | 1.623 | — | 0.10 | 28.66 | 0.81 | 1.055 | -153.7 | |
| | | sampled | at | 1130 | | | | | | | |
| | | | | | | | | | | | |
| | 1149 | 36-40 | 7.42 | 2.007 | — | 0.31 | 30.32 | 0.93 | 1.219 | -182.8 | |
| | 1151 | 36-40 | 7.06 | 2.081 | — | 0.13 | 28.52 | 0.99 | 1.270 | -170.9 | |
| | 1153 | 36-40 | 6.96 | 2.068 | — | 0.09 | 28.19 | 0.98 | 1.266 | -159.3 | |
| | | sampled | at | 1153 | | | | | | | |
| | | | | | | | | | | | |
| | 1210 | 41-45 | 7.28 | 2.626 | — | 0.53 | 29.62 | 1.22 | 1,555 | -165.7 | |
| | 1212 | 41-45 | 7.04 | 2.621 | — | 0.12 | 28.39 | 1.26 | 1.603 | -151.4 | |
| | 1214 | 41-45 | 6.96 | 2.597 | — | 0.12 | 27.83 | 1.26 | 1.601 | -138.2 | |
| | | sampled | at | 1214 | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681

Date: 10/13/10 DPT-0148

| ~~Time~~ | ~~Time DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1228 | 46-50 | 7.18 | 2.649 | — | 0.74 | 30.15 | 1.24 | 1.585 | -181.4 | |
| | 1230 | 46-50 | 7.13 | 2.758 | — | 0.09 | 29.75 | 1.30 | 1.653 | -181.2 | |
| | 1232 | 46-50 | 7.10 | 2.818 | — | 0.09 | 29.83 | 1.32 | 1.680 | -178.2 | |
| | | sampled | at | 1232 | | | | | | | |

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE/ FR1681

Date: 10/13/10 DPT-0149

| ~~Time~~ | ~~DPT~~ Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1424 | 8-12 | ~~6.56~~ SR 7.34 | 0.971 | — | 0.64 | 28.80 | 0.44 | 0.580 | -94.8 | |
| | 1426 | 8-12 | 6.86 | 0.936 | — | 0.24 | 28.43 | 0.43 | 0.570 | -96.0 | |
| | 1428 | 8-12 | 6.81 | 0.929 | — | 0.24 | 28.43 | 0.42 | 0.566 | -97.4 | |
| | | sampled | at | 1428 | | | | | | | |
| | | | | | | | | | | | |
| | 1434 | 16-20 | 7.06 | 0.999 | — | 0.59 | 29.43 | 0.45 | 0.596 | -157.9 | |
| | 1436 | 16-20 | 7.01 | 0.983 | — | 0.23 | 28.84 | 0.44 | 0.593 | -155.5 | |
| | 1438 | 16-20 | 6.92 | 0.960 | — | 0.15 | 28.49 | 0.44 | 0.584 | -145.1 | |
| | | sampled | at | 1438 | | | | | | | |
| | | | | | | | | | | | |
| | 1446 | 26-30 | 7.15 | 1.050 | — | 0.31 | 28.90 | 0.48 | 0.640 | -146.0 | |
| | 1448 | 26-30 | 7.00 | 1.051 | — | 0.22 | 28.12 | 0.48 | 0.640 | -138.4 | |
| | 1450 | 26-30 | 6.88 | 1.019 | — | 0.15 | 27.69 | 0.47 | 0.628 | -127.1 | |
| | | sampled | at | 1450 | | | | | | | |
| | | | | | | | | | | | |
| | 1501 | 31-35 | 7.19 | 1.375 | — | 0.61 | 28.91 | 0.66 | 0.865 | -166.7 | |
| | 1503 | 31-35 | 7.07 | 1.459 | — | 0.13 | 28.52 | 0.68 | 0.892 | -170.9 | |
| | 1505 | 31-35 | 7.01 | 1.460 | — | 0.13 | 28.11 | 0.69 | 0.897 | -160.2 | |
| | | sampled | at | 1505 | | | | | | | |
| | | | | | | | | | | | |
| | 1517 | 36-40 | 7.25 | 1.609 | — | 0.33 | 29.37 | 0.78 | 1.051 | -164.0 | |
| | 1519 | 36-40 | 7.07 | 1.801 | — | 0.13 | 28.08 | 0.85 | 1.109 | -162.8 | |
| | 1521 | 36-40 | 7.03 | 1.811 | — | 0.11 | 27.92 | 0.86 | 1.117 | -155.4 | |
| | | sampled | at | 1521 | | | | | | | |
| | | | | | | | | | | | |
| | 1534 | 41-45 | 7.30 | 1.739 | — | 0.39 | 28.45 | 0.84 | 1.091 | -185.5 | |
| | 1536 | 41-45 | 7.17 | 1.839 | — | 0.25 | 28.36 | 0.88 | 1.145 | -199.7 | |
| | 1538 | 41-45 | 7.15 | 1.890 | — | 0.13 | 28.12 | 0.90 | 1.172 | -202.4 | |
| | | sampled | at | 1538 | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681

Date: 10/13/10 DPT-0149

| ~~Time~~ | ~~Time DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1555 | 46-50 | 7.12 | 2.137 | — | 0.12 | 28.14 | 1.03 | 1.329 | -201.6 | |
| | 1557 | 46-50 | 7.13 | 2.089 | — | 0.09 | 28.01 | 1.07 | 1.375 | -198.8 | |
| | 1559 | 46-50 | 7.08 | 2.365 | — | 0.07 | 27.93 | 1.14 | 1.459 | -186.2 | |
| | | Sampled at 1559 | | | | | | | | | |

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681

Date: 10/13/10 DPT-0150

| ~~Time~~ | ~~DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1636 | 26-30 | 7.23 | 1,340 | — | 0.35 | 28.37 | 0.62 | 0.821 | -162.0 | |
| | 1638 | 26-30 | 7.13 | 1,343 | — | 0.16 | 28.04 | 0.63 | 0.824 | -157.8 | |
| | 1640 | 26-30 | 7.06 | 1,336 | — | 0.11 | 27.86 | 0.63 | 0.823 | -152.2 | |
| | | sampled at | | 1640 | | | | | | | |
| 10/14/10 | | | | | | | | | | | |
| | 0736 | 31-35 | 6.90 | 1,347 | — | 0.45 | 23.69 | 0.66 | 0.861 | -130.9 | |
| | 0738 | 31-35 | 6.69 | 1,312 | — | 0.26 | 24.35 | 0.66 | 0.866 | -158.0 | |
| | 0740 | 31-35 | 6.74 | 1,317 | — | 0.19 | 24.35 | 0.67 | 0.867 | -162.4 | |
| | | sampled at | | 0740 | | | | | | | |
| | 0754 | 36-40 | 7.38 | 1,297 | — | 0.64 | 23.54 | 0.69 | 0.901 | -163.2 | |
| | 0756 | 36-40 | 7.32 | 1,391 | — | 0.30 | 24.12 | 0.72 | 0.939 | -177.8 | |
| | 0758 | 36-40 | 7.33 | 1,464 | — | 0.15 | 24.26 | 0.75 | 0.972 | -184.8 | |
| | | sampled at | | 0758 | | | | | | | |
| | 0813 | 41-45 | 7.40 | 1,359 | — | 0.32 | 24.07 | 0.70 | 0.916 | -166.7 | |
| | 0815 | 41-45 | 7.33 | 1,400 | — | 0.15 | 24.08 | 0.71 | 0.926 | -167.4 | |
| | 0817 | 41-45 | 7.30 | 1,398 | — | 0.13 | 24.06 | 0.71 | 0.925 | -159.8 | |
| | | sampled at | | 0817 | | | | | | | |
| | 0837 | 46-50 | 7.30 | 2,574 | — | 0.17 | 24.58 | 1.36 | 1.727 | -184.2 | |
| | 0839 | 46-50 | 7.30 | 2,661 | — | 0.14 | 24.60 | 1.40 | 1.764 | -186.1 | |
| | 0841 | 46-50 | 7.29 | 2,748 | — | 0.12 | 24.54 | 1.44 | 1.811 | -183.6 | |
| | | sampled at | | 0841 | | | | | | | |
| | 0909 | 51-55 | 7.41 | 3,361 | — | 0.51 | 24.39 | 1.81 | 2.246 | -190.7 | |
| | 0911 | 51-55 | 7.40 | 3,485 | — | 0.26 | 24.40 | 1.85 | 2.241 | -200.1 | |
| | 0913 | 51-55 | 7.42 | 3,476 | — | 0.14 | 24.36 | 1.85 | 2.289 | -206.6 | |
| | | sampled at | | 0913 | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681

Date: 10/14/10 DPT-0150

| ~~Time~~ | Time ~~DPT~~ Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0932 | 61-65 | 7.55 | 3.895 | — | 0.32 | 25.92 | 2.03 | 2.517 | -197.9 | |
| | 0934 | 61-65 | 7.50 | 3.994 | — | 0.11 | 25.93 | 2.08 | 2.565 | -207.4 | |
| | 0936 | 61-65 | 7.50 | 4.036 | — | 0.11 | 25.89 | 2.08 | 2.592 | -211.2 | |
| | | sampled | at | 0936 | | | | | | | |

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681

Date: 10/14/10 DPT-0151

| ~~Time~~ | Time ~~DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1028 | 26-30 | 7.80 | 0.694 | — | 0.50 | 26.98 | 0.32 | 0.433 | -176.0 | |
| | 1030 | 26-30 | 7.54 | 0.676 | — | 0.13 | 26.45 | 0.32 | 0.425 | -169.2 | |
| | 1032 | 26-30 | 7.40 | 0.667 | — | 0.10 | 26.39 | 0.31 | 0.421 | -165.0 | |
| | | sampled at | | 1032 | | | | | | | |
| | | | | | | | | | | | |
| | 1051 | 31-35 | 7.62 | 0.999 | — | 0.39 | 28.24 | 0.47 | 0.623 | -169.4 | |
| | 1053 | 31-35 | 7.48 | 0.997 | — | 0.13 | 27.54 | 0.47 | 0.617 | -177.1 | |
| | 1055 | 31-35 | 7.48 | 0.955 | — | 0.12 | 27.51 | 0.44 | 0.587 | -176.0 | |
| | | sampled at | | 1055 | | | | | | | |
| | | | | | | | | | | | |
| | 1113 | 36-40 | 7.47 | 2.217 | — | 0.13 | 27.61 | 1.09 | 1.392 | -166.7 | |
| | 1115 | 36-40 | 7.43 | 2.269 | — | 0.11 | 27.40 | 1.11 | 1.415 | -162.1 | |
| | 1117 | 36-40 | 7.39 | 2.280 | — | 0.10 | 27.48 | 1.11 | 1.416 | -157.6 | |
| | | sampled at | | 1117 | | | | | | | |
| | | | | | | | | | | | |
| | 1135 | 41-45 | 7.70 | 1.470 | — | 0.70 | 27.82 | 0.76 | 1.008 | -180.9 | |
| | 1137 | 41-45 | 7.60 | 1.709 | — | 0.12 | 27.80 | 0.83 | 1.088 | -199.5 | |
| | 1139 | 41-45 | 7.56 | 1.997 | — | 0.09 | 27.87 | 0.97 | 1.258 | -207.4 | |
| | | sampled at | | 1139 | | | | | | | |
| | | | | | | | | | | | |
| | 1156 | 46-50 | 7.65 | 2.368 | — | 0.29 | 28.94 | 1.14 | 1.461 | -167.9 | |
| | 1158 | 46-50 | 7.48 | 2.487 | — | 0.17 | 28.42 | 1.20 | 1.526 | -182.1 | |
| | 1200 | 46-50 | 7.46 | 2.541 | — | 0.12 | 28.19 | 1.23 | 1.560 | -185.7 | |
| | | sampled at | | 1200 | | | | | | | |
| | | | | | | | | | | | |
| | 1253 | 51-55 | 7.70 | 2.478 | — | 0.72 | 29.55 | 1.28 | 1.667 | -178.7 | |
| | 1255 | 51-55 | 7.56 | 3.136 | — | 0.17 | 28.66 | 1.54 | 1.962 | -196.7 | |
| | 1257 | 51-55 | 7.55 | 3.326 | — | 0.11 | 28.37 | 1.63 | 2.067 | -202.2 | |
| | | sampled at | | 1257 | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681

Date: 10/14/10 DPT-0151

| ~~Time~~ | Time ~~DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1320 | 61-65 | 7.55 | 4.046 | — | 0.32 | 27.05 | 2.08 | 2.575 | +179.6 | |
| | 1322 | 61-65 | 7.53 | 4.167 | — | 0.13 | 26.95 | 2.13 | 26.24 | -183.5 | |
| | 1324 | 61-65 | 7.49 | 4.231 | — | 0.13 | 27.22 | 2.14 | 27.24 | -176.2 | |
| | | sampled at | | 1324 | | | | | | | |

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681

Date: 10/14/10 DPT-0152

| ~~Time~~ | ~~Time DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1418 | 8-12 | 7.78 | 0.660 | — | 0.60 | 27.08 | 0.31 | 0.411 | -157.3 | |
| | 1420 | 8-12 | 7.66 | 0.655 | — | 0.20 | 27.09 | 0.30 | 0.409 | -167.9 | |
| | 1422 | 8-12 | 7.60 | 0.653 | — | 0.13 | 27.16 | 0.30 | 0.407 | -177.9 | |
| | | sampled at | | 1422 | | | | | | | |
| | | | | | | | | | | | |
| | 1433 | 16-20 | 7.52 | 0.669 | — | 0.25 | 27.57 | 0.33 | 0.440 | -167.8 | |
| | 1435 | 16-20 | 7.40 | 0.710 | — | 0.12 | 27.60 | 0.33 | 0.440 | -166.0 | |
| | 1437 | 16-20 | 7.37 | 0.704 | — | 0.10 | 27.29 | 0.33 | 0.438 | -164.5 | |
| | | sampled at | | 1437 | | | | | | | |
| | 1444 | 26-30 | 7.57 | 0.626 | — | 0.64 | 27.57 | 0.29 | 0.387 | -141.8 | |
| | 1446 | 26-30 | 7.51 | 0.617 | — | 0.31 | 26.77 | 0.29 | 0.387 | -155.8 | |
| | 1448 | 26-30 | 7.49 | 0.610 | — | 0.24 | 26.58 | 0.28 | 0.384 | -164.2 | |
| | | sampled | at | 1448 | | | | | | | |
| | | | | | | | | | | | |
| | 1507 | 31-35 | 7.58 | 0.676 | — | 0.39 | 26.38 | 0.32 | 0.432 | -195.6 | |
| | 1509 | 31-35 | 7.49 | 0.685 | — | 0.33 | 25.98 | 0.33 | 0.439 | -200.1 | |
| | 1511 | 31-35 | 7.45 | 0.695 | — | 0.33 | 25.99 | 0.33 | 0.442 | -198.0 | |
| | | sampled | at | 1511 | | | | | | | |
| | | | | | | | | | | | |
| | 1538 | 36-40 | 7.63 | 1.052 | — | 0.29 | 29.24 | 0.50 | 0.676 | -190.9 | |
| | 1540 | 36-40 | 7.48 | 1.173 | — | 0.14 | 28.94 | 0.55 | 0.741 | -189.3 | |
| | 1542 | 36-40 | 7.35 | 1.299 | — | 0.10 | 28.75 | 0.61 | 0.799 | -183.6 | |
| | | sampled | at | 1542 | | | | | | | |
| | | | | | | | | | | | |
| | 1557 | 41-45 | 7.47 | 1.595 | — | 0.31 | 29.63 | 0.77 | 1.034 | -208.8 | |
| | 1559 | 41-45 | 7.48 | 1.826 | — | 0.13 | 29.23 | 0.90 | 1.183 | -214.6 | |
| | 1601 | 41-45 | 7.40 | 2.142 | — | 0.10 | 28.88 | ~~1.0~~ | 1.347 | -210.0 | |
| | | sampled | at | 1601 | | | | 1.03 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

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mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE/FR1681

Date: 10/14/10 DPT-0152

| ~~Time~~ | Time ~~DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1618 | 46-50 | 7.33 | 2.069 | — | 0.60 | 29.30 | 0.95 | 1.228 | -221.2 | |
| | 1620 | 46-50 | 7.39 | 2.012 | — | 0.19 | 29.18 | 0.94 | 1.208 | -229.1 | |
| | 1622 | 46-50 | 7.42 | 2.009 | — | 0.11 | 29.08 | 0.94 | 1.212 | -235.2 | |
| | | sampled at | 1622 | | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE/FR1681

Date: 10/14/10 DPT-0153

| ~~Time~~ | Time ~~DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1706 | 28-30 | 7.30 | 1.781 | — | 0.38 | 27.30 | 0.86 | 1.119 | -151.2 | |
| | 1708 | 26-30 | 7.16 | 1.767 | — | 0.18 | 26.15 | 0.87 | 1.116 | -137.2 | |
| | 1710 | 26-30 | 7.03 | 1.738 | — | 0.12 | 25.95 | 0.86 | 1.108 | -129.7 | |
| | | sampled | at | 1710 | | | | | | | |
| 10/15/10 | | | | | | | | | | | |
| | 0816 | 31-35 | 6.48 | 1.731 | — | 0.19 | 22.45 | 0.92 | 1.183 | -179.2 | |
| | 0818 | 31-35 | 6.74 | 1.732 | — | 0.17 | 22.50 | 0.92 | 1.733 | -184.9 | |
| | 0820 | 31-35 | 6.79 | 1.733 | — | 0.14 | 22.52 | 0.92 | 1.183 | -187.3 | |
| | | sampled | at | 0820 | | | | | | | |
| | 0838 | 36-40 | 7.22 | 1.645 | — | 0.23 | 22.66 | 0.89 | 1.143 | -172.8 | |
| | 0840 | 36-40 | 7.15 | 1.735 | — | 0.15 | 22.91 | 0.92 | 1.185 | -183.8 | |
| | 0842 | 36-40 | 7.14 | 1.771 | — | 0.14 | 22.90 | 0.94 | 1.203 | -186.4 | |
| | | sampled | at | 0842 | | | | | | | |
| | 0901 | 41-45 | 7.37 | 1.606 | — | 0.40 | 23.04 | 0.88 | 1.139 | -173.2 | |
| | 0903 | 41-45 | 7.25 | 1.803 | — | 0.14 | 23.48 | 0.95 | 1.217 | -186.6 | |
| | 0905 | 41-45 | 7.21 | 1.849 | — | 0.11 | 23.52 | 0.97 | 1.238 | -182.4 | |
| | | sampled | at | 0905 | | | | | | | |
| | 0922 | 46-50 | 7.41 | 1.751 | — | 0.25 | 22.63 | 0.96 | 1.236 | -177.3 | |
| | 0924 | 46-50 | 7.37 | 1.954 | — | 0.14 | 23.00 | 1.07 | 1.372 | -185.9 | |
| | 0926 | 46-50 | 7.24 | 2.234 | — | 0.09 | 23.61 | 1.18 | 1.503 | -181.6 | |
| | | sampled | at | 0926 | | | | | | | |
| | 0944 | 51-55 | 7.24 | 2.198 | — | 0.16 | 22.74 | 1.15 | 1.453 | -196.2 | |
| | 0946 | 51-55 | 7.32 | 2.398 | — | 0.13 | 22.93 | 1.30 | 1.646 | -209.4 | |
| | 0948 | 51-55 | 7.33 | 2.608 | — | 0.11 | 23.11 | 1.43 | 1.797 | -214.7 | |
| | | sampled | at | 0948 | | | | | | | |

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TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRIFE | FR1681

Date: 10/15/10 DPT - 0153

| ~~Time~~ | Time ~~DPT~~ Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color~~ / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1010 | 61-65 | 7.39 | 2.339 | — | 0.22 | 23.53 | 1.29 | 1.650 | -192.6 | |
| | 1012 | 61-65 | 7.36 | 2.598 | — | 0.13 | 23.58 | 1.42 | 1.792 | -201.8 | |
| | 1014 | 61-65 | 7.34 | 2.884 | — | 0.07 | 23.86 | 1.56 | 1.956 | -212.1 | |
| | | sampled | at | 1014 | | | | | | | |

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681

Date: DPT-0154 10/15/10

| ~~Time~~ | Time ~~DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1048 | 8-12 | 7.48 | 0.936 | — | 0.33 | 25.54 | 0.45 | 0.603 | -99.1 | |
| | 1050 | 8-12 | 7.12 | 0.918 | — | 0.15 | 25.32 | 0.44 | 0.589 | -102.0 | |
| | 1052 | 8-12 | 7.06 | 0.908 | — | 0.14 | 25.28 | 0.44 | 0.586 | -104.0 | |
| | | sampled at | | 1052 | | | | | | | |
| | | | | | | | | | | | |
| | 1058 | 16-20 | 7.20 | 0.923 | — | 0.31 | 26.05 | 0.44 | 0.589 | -138.7 | |
| | 1100 | 16-20 | 7.11 | 0.925 | — | 0.13 | 26.00 | 0.44 | 0.590 | -142.7 | |
| | 1102 | 16-20 | 7.07 | 0.922 | — | 0.09 | 25.79 | 0.44 | 0.590 | -145.2 | |
| | | sampled at | | 1102 | | | | | | | |
| | | | | | | | | | | | |
| | 1112 | 26-30 | 7.00 | 1.699 | — | 0.13 | 26.22 | 0.58 | 0.759 | -175.2 | |
| | 1114 | 26-30 | 7.08 | 1.199 | — | 0.10 | 25.98 | 0.58 | 0.762 | -174.7 | |
| | 1116 | 26-30 | 7.08 | 1.172 | — | 0.11 | 25.39 | 0.58 | 0.755 | -167.4 | |
| | | sampled at | | 1116 | | | | | | | |
| | | | | | | | | | | | |
| | 1126 | 31-35 | 7.32 | 1.276 | — | 0.13 | 25.91 | 0.63 | 0.823 | -161.7 | |
| | 1128 | 31-35 | 7.30 | 1.300 | — | 0.12 | 26.01 | 0.64 | 0.834 | -167.5 | |
| | 1130 | 31-35 | 7.28 | 1.322 | — | 0.11 | 26.03 | 0.65 | 0.845 | -173.5 | |
| | | sampled at | | 1130 | | | | | | | |
| | | | | | | | | | | | |
| | 1141 | 36-40 | 7.61 | 1.159 | — | 0.18 | 25.94 | 0.58 | 0.765 | -149.0 | |
| | 1143 | 36-40 | 7.41 | 1.254 | — | 0.12 | 26.02 | 0.62 | 0.813 | -171.8 | |
| | 1145 | 36-40 | 7.33 | 1.326 | — | 0.08 | 26.22 | 0.65 | 0.848 | -177.0 | |
| | | sampled at | | 1145 | | | | | | | |
| | | | | | | | | | | | |
| | 1203 | 41-45 | 7.64 | 1.683 | — | 0.10 | 25.09 | 0.85 | 1.098 | -196.7 | |
| | 1205 | 41-45 | 7.61 | 1.689 | — | 0.08 | 24.72 | 0.86 | 1.104 | -184.4 | |
| | 1207 | 41-45 | 7.59 | 1.690 | — | 0.09 | 24.77 | 0.86 | 1.104 | -181.2 | |
| | | sampled at | | 1207 | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681

Date: DPT-0154 10/15/10

| Time | ~~DPT~~ Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1223 | 46-50 | 7.74 | 1.612 | — | 0.23 | 25.41 | 0.85 | 1.117 | -176.7 | |
| | 1225 | 46-50 | 7.63 | 1.842 | — | 0.13 | 25.32 | 0.95 | 1.222 | -179.7 | |
| | 1227 | 46-50 | 7.57 | 1.957 | — | 0.11 | 25.29 | 0.98 | 1.283 | -179.1 | |
| | | sampled at | 1227 | | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CRHE~~ CRHE / FA1681

Date: 10/15/10 DPT - 0155

| ~~Time~~ | ~~Time DPT Location~~ | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color / Notes~~ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1342 | 8-12 | 7.37 | 0.930 | — | 0.14 | 27.39 | 0.43 | 0.578 | -149.2 | |
| | 1344 | 8-12 | 7.18 | 0.932 | — | 0.13 | 27.59 | 0.43 | 0.577 | -152.4 | |
| | 1346 | 8-12 | 7.11 | 0.930 | — | 0.14 | 27.73 | 0.43 | 0.574 | -153.9 | |
| | | sampled at | | 1346 | | | | | | | |
| | | | | | | | | | | | |
| | 1353 | 16-20 | 7.10 | 0.835 | — | 0.25 | 27.11 | 0.41 | 0.553 | -140.4 | |
| | 1355 | 16-20 | 7.06 | 0.914 | — | 0.14 | 26.88 | 0.43 | 0.576 | -155.2 | |
| | 1357 | 16-20 | 7.03 | 0.928 | — | 0.13 | 26.92 | 0.43 | 0.583 | -156.3 | |
| | | sampled at | | 1357 | | | | | | | |
| | | | | | | | | | | | |
| | 1406 | 26-30 | 7.00 | 0.903 | — | 0.56 | 26.56 | 0.44 | 0.584 | -181.5 | |
| | 1408 | 26-30 | 7.04 | 0.973 | — | 0.15 | 27.33 | 0.49 | 0.654 | -195.2 | |
| | 1410 | 26-30 | 7.09 | 1.072 | — | 0.13 | 27.39 | 0.50 | 0.679 | -195.9 | |
| | | sampled at | | 1410 | | | | | | | |
| | | | | | | | | | | | |
| | 1430 | 31-35 | 7.20 | 1.093 | — | 0.10 | 27.13 | 0.52 | 0.692 | -198.1 | |
| | 1432 | 31-35 | 7.20 | 1.082 | — | 0.08 | 27.27 | 0.53 | 0.705 | -199.2 | |
| | 1434 | 31-35 | 7.23 | 1.135 | — | 0.08 | 26.98 | 0.54 | 0.713 | -199.2 | |
| | | sampled at | | 1434 | | | | | | | |
| | | | | | | | | | | | |
| | 1446 | 36-40 | 7.46 | 1.255 | — | 0.45 | 27.69 | 0.60 | 0.788 | -127.4 | |
| | 1448 | 36-40 | 7.31 | 1.288 | — | 0.30 | 27.52 | 0.61 | 0.806 | -163.4 | |
| | 1450 | 36-40 | 7.27 | 1.254 | — | 0.21 | 27.55 | 0.62 | 0.819 | -177.1 | |
| | | sampled at | | 1450 | | | | | | | |
| | | | | | | | | | | | |
| | 1507 | 41-45 | 7.45 | 1.487 | — | 0.51 | 26.75 | 0.75 | 0.992 | -154.3 | |
| | 1509 | 41-45 | 7.23 | 1.668 | — | 0.13 | 26.05 | 0.83 | 1.075 | -153.0 | |
| | 1511 | 41-45 | 7.17 | 1.695 | — | 0.10 | 25.86 | 0.84 | 1.087 | -154.7 | |
| | | sampled at | | 1511 | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681

Date: 10/15/10 DPT-0155

| ~~Time~~ | ~~Time~~ ~~DPT~~ Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | ~~Color~~ / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1524 | 46-50 | 7.85 | 1.196 | — | 0.37 | 27.20 | 0.57 | 0.747 | -159.0 | |
| | 1526 | 46-50 | 7.40 | 1.192 | — | 0.26 | 27.13 | 0.56 | 0.741 | -173.8 | |
| | 1528 | 46-50 | 7.32 | 1.415 | — | 0.09 | 27.33 | 0.70 | 0.921 | -185.4 | |
| | | Sampled at | | 1528 | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681 - Contractor's Road

Date: 10-19-2011

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0920 | ~~0275~~ | 26-30 | 6.86 | 0.643 | Not | 4.35 | 26.05 | 0.32 | 0.433 | -29.1 | Tan |
| 0922 | 0156 | (028.0) | 6.85 | 0.664 | Recorded | 0.50 | 25.95 | 0.32 | 0.428 | -59.6 | ↓ |
| 0929 | | — | 6.91 | 0.652 | | 0.24 | 25.78 | 0.31 | 0.421 | ~~-107.1~~ -144.6 | ↓ |
| 0933 | | 31-35 | 7.07 | 0.624 | | 2.64 | 26.05 | 0.36 | 0.491 | -113.3 | Tan |
| 0935 | | (033.0) | 6.99 | 0.767 | | 0.45 | 25.99 | 0.37 | 0.498 | -121.7 | ↓ |
| 0937 | | — | 6.99 | 0.765 | | 0.35 | 25.97 | 0.37 | 0.497 | -152.3 | ↓ |
| 0945 | | 36-40 | 7.09 | 0.576 | | 2.35 | 26.15 | 0.33 | 0.450 | -105.7 | Clear |
| 0947 | | (038.0) | 7.09 | 0.710 | | 0.43 | 26.07 | 0.35 | 0.463 | -119.7 | ↓ |
| 0949 | | — | 7.05 | 0.712 | | 0.34 | 25.94 | 0.34 | 0.462 | ~~-129.7~~ -166.7 | ↓ |
| 0959 | | 41-45 | 6.76 | 0.791 | | 2.19 | 26.47 | 0.39 | 0.523 | -118.9 | Gray |
| 1001 | | (043.0) | 6.97 | 0.819 | | 0.66 | 26.24 | 0.41 | 0.546 | -129.3 | ↓ |
| 1003 | | — | 6.95 | 0.855 | | 0.27 | 26.06 | 0.42 | 0.566 | -129.6 | ↓ |
| 1015 | | 46-50 | 6.85 | 0.712 | | 2.00 | 26.53 | 0.43 | 0.586 | -124.6 | Gray |
| 1017 | | (048.0) | 7.07 | 0.950 | | 0.52 | 26.26 | 0.47 | 0.629 | -137.7 | ↓ |
| 1019 | | — | 7.11 | 0.975 | ↓ | 0.40 | 26.11 | 0.48 | 0.638 | -157.4 | ↓ |
| | | | | decon | 5 screens | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)
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ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681 - Contractors Road

Date: 10-19-2011

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1102 | ~~0236~~ | 26-30 | 7.32 | 0.900 | Not | 3.84 | 28.66 | 0.44 | 0.589 | -81.8 | Gray |
| 1104 | 0157 | (028.0) | 7.01 | 0.907 | Recorded | 0.37 | 28.06 | 0.44 | 0.589 | -104.7 | ↓ |
| 1106 | ↓ | — | 6.95 | 0.906 | ↓ | 0.20 | 27.70 | 0.44 | 0.589 | -130.1 | ↓ |
| | | | | | | | | | | | |
| 1114 | | 31-35 | 6.88 | 0.525 | | 4.34 | 28.45 | 0.47 | 0.631 | -97.2 | Tan |
| 1116 | | (033.0) | 6.96 | 0.974 | | 0.76 | 28.17 | 0.48 | 0.634 | -126.3 | ↓ |
| 1118 | | — | 6.95 | 0.977 | | 0.28 | 28.07 | 0.48 | 0.636 | -162.1 | ↓ |
| | | | | | | | | | | | |
| 1226 | | 36-40 | 6.82 | 1.012 | | 3.07 | 29.50 | 0.49 | 0.655 | -115.9 | Gray |
| 1228 | | (038.0) | 6.99 | 1.003 | | 0.52 | 28.59 | 0.49 | 0.651 | -127.3 | ↓ |
| 1230 | | — | 6.99 | 1.002 | | 0.32 | 28.25 | 0.49 | 0.652 | -143.1 | ↓ |
| | | | | | | | | | | | |
| 1241 | | 41-45 | 6.79 | 1.254 | | 2.83 | 29.59 | 0.64 | 0.858 | -112.4 | Tan |
| 1243 | | (043.0) | 6.95 | 1.328 | | 0.41 | 29.26 | 0.66 | 0.862 | -126.4 | ↓ |
| 1245 | | — | 6.97 | 1.327 | | 0.27 | 29.00 | 0.66 | 0.868 | -144.2 | ↓ |
| | | | | | | | | | | | |
| 1258 | | 46-50 | 6.76 | 1.769 | | 2.08 | 28.90 | 0.94 | 1.188 | -116.6 | Tan |
| 1300 | | (048.0) | 6.46 | 1.869 | | 0.63 | 28.72 | 0.95 | 1.226 | -129.3 | ↓ |
| 1302 | | — | 7.00 | 1.895 | | 0.24 | 28.49 | 0.96 | 1.235 | -146.6 | ↓ |
| | | | | decon | 5 Screens | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681 - Contractors Road

Date: 10-19-2011

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1343 | 0158 | 26-30 | 6.47 | 1.310 | Not Recorded | 0.94 | 29.54 | 0.65 | 0.858 | -66.6 | Tan |
| 1345 | | (028.0) | 6.45 | 1.327 | | 0.28 | 29.16 | 0.660 | .864 | -77.5 | ↓ |
| 1347 | | — | 6.46 | 1.329 | | 0.30 | 29.00 | 0.66 | 0.863 | -100.8 | ↓ |
| 1359 | | 31-35 | 6.87 | 0.791 | | 5.32 | 29.02 | 0.73 | 0.959 | -96.8 | Tan |
| 1401 | | (033.0) | 6.82 | 1.503 | | 0.88 | 29.07 | 0.75 | 0.958 | -116.5 | ↓ |
| 1403 | | — | 6.79 | 1.521 | | 0.36 | 29.03 | 0.76 | 0.997 | -139.5 | ↓ |
| 1416 | | 36-40 | 6.82 | 1.483 | | 1.61 | 29.17 | 0.75 | 0.984 | -132.0 | Gray |
| 1418 | | (038.0) | 6.81 | 1.531 | | 0.48 | 28.48 | 0.77 | 1.001 | -125.7 | ↓ |
| 1420 | | — | 6.77 | 1.540 | | 0.48 | 27.45 | 0.76 | 0.988 | -101.5 | ↓ |
| 1431 | | 41-45 | 6.56 | 1.503 | | 1.14 | 28.01 | 0.69 | 0.894 | -105.3 | Gray |
| 1433 | | (043.0) | 6.68 | 1.344 | | 0.78 | 28.33 | 0.67 | 0.883 | -123.6 | ↓ |
| 1435 | | — | 6.74 | 1.377 | | 0.59 0.59 | 28.24 | 0.70 | 0.911 | -175.1 | ↓ |
| 1447 | | 46-50 | 6.76 | 1.529 | | 1.82 | 27.81 | 0.80 | 1.051 | -145.7 | Tan |
| 1449 | | (048.0) | 6.95 | 1.653 | | 0.45 | 27.83 | 0.85 | 1.112 | -151.2 | ↓ |
| 1451 | ↓ | — | 6.98 | 1.743 | ↓ | 0.33 | 27.48 | 0.89 | 1.152 | -158.1 | ↓ |

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NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681 - Contractors Road

Date: 10-19-2011

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1557 | 0159 | 26-30 | 6.59 | 1.220 | Not | 5.31 | 26.32 | 0.61 | 0.804 | -39.5 | Clear |
| 1559 | ↓ | (028.0) | 6.65 | Recorded | Recorded | 0.35 | 26.38 | 0.63 | 0.824 | -61.3 | ↓ |
| 1601 | | — | 6.64 | 1.272 | | 0.20 | 26.31 | 0.63 | 0.828 | -113.1 | |
| | | | | | | | | | | | |
| 1609 | | 31-35 | 6.40 | 0.718 | | 2.76 | 26.42 | 0.61 | 0.854 | -114.4 | Clear |
| 1611 | | (033.0) | 6.87 | 1.334 | | 0.74 | 26.44 | 0.67 | 0.873 | -124.1 | ↓ |
| 1613 | | — | 6.87 | 1.347 | | 0.41 | 26.30 | 0.67 | 0.878 | ~~-132.5~~ -146.9 DS | ↓ |
| | | | | | | | | | | | |
| 1624 | | 36-40 | 6.85 | 2.174 | | 1.05 | 26.33 | 1.16 | 1.480 | -132.7 | Clear |
| 1626 | | (038.0) | 6.95 | 2.332 | | 0.30 | 26.27 | 1.22 | 1.547 | -138.2 | ↓ |
| 1628 | | — | 6.94 | 2.418 | | 0.18 | 26.06 | 1.24 | 1.569 | -139.0 | ↓ |
| | | | | | | | | | | | |
| 1640 | | 41-45 | 6.96 | 2.478 | | 1.80 | 26.38 | 1.31 | 1.668 | -144.8 | Tan |
| 1642 | | (043.0) | 6.95 | 2.628 | | 0.25 | 25.97 | 1.38 | 1.740 | -143.8 | ↓ |
| 1644 | | — | 6.94 | 2.704 | | 0.20 | 25.75 | 1.41 | 1.773 | -140.6 | ↓ |
| | | | | | | | | | | | |
| 1653 | | 46-50 | 6.91 | 3.088 | | 2.58 | 25.34 | 1.62 | 2.030 | -109.6 | Gray |
| 1655 | ↓ | (048.0) | 6.94 | 3.133 | | 0.25 | 25.10 | 1.64 | 2.042 | -116.5 | ↓ |
| 1657 | ↓ | — | 6.95 | 3.143 | ↓ | 0.11 | 25.02 | 1.64 | 2.043 | -128.7 | ↓ |

Notes:
DPT = Direct Push Technology
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DO (mg/L) = Dissolved Oxygen (milligrams per liter)
Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681 - CRHE

Date: 10-20-2011

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0803 | 0160 | 26-30 | 6.27 | 0.492 | Not | 3.65 | 18.19 | 0.30 | 0.411 | 72.8 | Tan |
| 0805 | | (028.0) | 6.32 | 0.649 | Recorded | 0.81 | 20.82 | 0.32 | 0.423 | 12.8 | ↓ |
| 0807 | | — | 6.29 | 0.650 | | 0.26 | 21.36 | 0.32 | 0.421 | -138.4 | ↓ |
| | | | | | | | | | | | |
| 0816 | | 31-35 | 6.62 | 1.412 | | 2.10 | 18.12 | 0.73 | 0.944 | -120.3 | ~~Gray~~ DS |
| 0818 | | (033.0) | 6.90 | 1.480 | | 0.78 | 19.88 | 0.75 | 0.972 | -125.1 | Tan |
| 0820 | | — | 6.87 | 1.504 | | 0.25 | 21.40 | 0.76 | 0.980 | -128.8 | ↓ |
| | | | | | | | | | | | |
| 0829 | | 36-40 | 6.72 | 2.478 | | 1.01 | 18.03 | 1.30 | 1.645 | -118.8 | Tan |
| 0831 | | (038.0) | 6.78 | 2.566 | | 0.41 | 19.69 | 1.33 | 1.676 | -122.2 | ↓ |
| 0833 | | — | 6.76 | 2.586 | | 0.20 | 20.97 | 1.34 | 1.686 | -134.5 | ↓ |
| | | | | | | | | | | | |
| 0846 | | 41-45 | 6.78 | 2.604 | | 4.95 | 20.03 | 1.35 | 1.691 | -125.9 | Gray |
| 0848 | | (043.0) | 6.87 | 2.612 | | 0.67 | 21.55 | 1.36 | 1.706 | -128.1 | ↓ |
| 0850 | | — | 6.85 | 2.641 | | 0.27 | 22.34 | 1.37 | 1.723 | -145.3 | ↓ |
| | | | | | | | | | | | |
| 0906 | | 46-50 | 7.00 | 3.038 | | 0.82 | 19.33 | 1.64 | 2.053 | -157.0 | Gray |
| 0908 | | (048.0) | 7.05 | 3.234 | | 0.32 | 21.26 | 1.70 | 2.112 | -158.6 | ↓ |
| 0910 | | — | 7.06 | 3.285 | | 0.20 | 21.59 | 1.73 | 2.148 | -159.2 | ↓ |
| | ↓ | | decon 5 screens | | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: FR1681-CRHE

Date: 10-20-2011 Location T is DPT0161

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0946 | 0161 | 26-30 | 6.61 | 1.712 | Not Recorded | 1.78 | 23.47 | 0.87 | 1.118 | -30.0 | Tan |
| 0948 | | (028.0) | 6.61 | 1.731 | | 0.37 | 24.59 | 0.88 | 1.137 | -58.3 | ↓ |
| 0950 | | — | 6.62 | 1.769 | | 0.21 | 25.1 | 0.89 | 1.150 | -108.2 | ↓ |
| | | | | deion screens | | | | | | | |
| 1022 | | 31-35 | 6.85 | 1.745 | | 4.16 | 22.40 | 0.89 | 1.145 | -103.2 | Gray |
| 1024 | | (033.0) | 6.84 | 1.778 | | 0.91 | 23.24 | 0.90 | 1.162 | -108.1 | ↓ |
| 1026 | | — | 6.83 | 1.791 | | 0.91 | 23.98 | 0.91 | 1.168 | -147.0 | ↓ |
| | | | | | | | | | | | |
| 1036 | | 36-40 | 6.93 | 2.155 | | 5.32 | 22.99 | 1.15 | 1.464 | -133.6 | Tan |
| 1038 | | (038.0) | 6.73 | 2.278 | | 0.21 | 24.63 | 1.17 | 1.488 | -130.1 | ↓ |
| 1040 | | — | 6.72 | 2.288 | | 0.22 | 24.82 | 1.17 | 1.487 | -128.9 | ↓ |
| | | | | | | | | | | | |
| 1051 | | 41-45 | 6.99 | 2.654 | | 0.56 | 23.86 | 1.39 | 1.749 | -144.2 | Gray |
| 1053 | | (043.0) | 7.00 | 2.699 | | 0.19 | 24.50 | 1.39 | 1.751 | -145.6 | ↓ |
| 1055 | | — | 6.99 | 2.694 | | 0.14 | 25.34 | 1.40 | 1.760 | -146.8 | ↓ |
| | | | | | | | | | | | |
| 1110 | | 46-50 | 6.94 | 1.755 | | 1.42 | 21.97 | 0.93 | 2.085 | -161.4 | Gray |
| 1112 | | (048.0) | 6.99 | 3.406 | | 0.32 | 23.47 | 1.81 | 2.253 | -164.6 | ↓ |
| 1114 | ↓ | — | 7.02 | 3.594 | ↓ | 0.14 | 24.13 | 1.88 | 2.327 | -167.5 | ↓ |

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681/CR17E

Date: 10-20-2011 Location is DPT0262

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1137 | 0162 | 26-30 | 6.97 | 1.331 | Not | 4.48 | 24.34 | 0.66 | 0.856 | -30.2 | Tan |
| 1139 | | (028.0) | 6.91 | 1.311 | Recorded | 0.56 | 25.12 | 0.65 | 0.849 | -50.8 | ↓ |
| 1141 | | — | 6.85 | 1.300 | | 0.20 | 25.52 | 0.64 | 0.840 | -122.6 | ↓ |
| | | | | | | | | | | | |
| 1150 | | 31-35 | 6.77 | 1.869 | | 6.66 | 24.55 | 0.95 | 1.213 | -111.4 | Tan |
| 1152 | | (033.0) | 6.94 | 1.859 | | 0.77 | 25.41 | 0.93 | 1.200 | -119.2 | ↓ |
| 1154 | | — | 6.96 | 1.848 | | 0.25 | 25.68 | 0.94 | 1.210 | -142.3 | ↓ |
| | | | | decon screens | | | | | | | |
| 1245 | | 36-40 | 6.98 | 2.078 | | 5.02 | 23.44 | 1.08 | 1.376 | -135.0 | Gray |
| 1247 | | (038.0) | 6.91 | 2.122 | | 0.72 | 24.33 | 1.09 | 1.382 | -135.1 | ↓ |
| 1249 | | — | 6.88 | 2.124 | | 0.16 | 24.78 | 1.08 | 1.378 | -136.1 | ↓ |
| | | | | | | | | | | | |
| 1300 | | 41-45 | 6.99 | 2.354 | | 1.37 | 24.72 | 1.23 | 1.558 | -156.0 | Clear |
| 1302 | | (043.0) | 6.92 | 2.437 | | 1.25 | 25.88 | 1.26 | 1.598 | -154.9 | ↓ |
| 1304 | | — | 6.92 | 2.462 | | ~~1.26~~ 0.12 | 25.93 | 1.27 | 1.602 | -154.5 | ↓ |
| | | | | | | | | | | | |
| 1318 | | 46-50 | 7.02 | 1.718 | | 0.56 | 25.01 | 1.50 | 1.930 | -154.8 | Gray |
| 1320 | | (048.0) | 7.15 | 3.158 | | 0.49 | 25.05 | 1.66 | 2.070 | -159.5 | ↓ |
| 1322 | | — | 7.18 | 3.196 | | 0.12 | 25.89 | 1.68 | 2.115 | ~~-159.5~~ DS -173.4 | ↓ |
| | | | | | | | | | | | |
| 1335 | | 51-55 | 7.08 | 3.350 | | 1.52 | 24.91 | 1.87 | 2.330 | -175.4 | Tan |
| 1337 | | (053.0) | 7.20 | 3.645 | | ~~1.92~~ 0.11 DS | 25.22 | 1.94 | 2.405 | +77.1 | ↓ |
| 1339 | | — | 7.24 | 3.753 | | 0.09 | 25.32 | 1.96 | 2.440 | -178.6 | ↓ |
| | | | | | | | | | | | |
| 1357 | | 61-65 | 7.08 | 3.953 | | 1.38 | 25.83 | 2.13 | 2.633 | -118.4 | Tan |
| 1359 | | (063.0) | 7.14 | 4.097 | | 0.18 | 26.05 | 2.18 | 2.680 | -127.3 | ↓ |
| 1401 | ↓ | — | 7.17 | 4.151 | ↓ | 0.09 | 26.18 | 2.20 | 2.710 | -175.2 | ↓ |

Notes:

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NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681 / CIRHE

Date: 10-20-2011 Location R is 0163

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1424 | 0163 | 26-30 | 7.10 | 0.737 | Not | 1.74 | 26.77 | 0.35 | 0.475 | -24.1 | Gray |
| 1426 | | (028.0) | 7.08 | 0.727 | Recorded | 0.24 | 26.82 | 0.35 | 0.469 | -46.3 | ↓ |
| 1428 | | — | 7.04 | 0.718 | | 0.12 | 26.72 | 0.35 | 0.464 | -133.7 | ↓ |
| | | | | Zelon screens | | | | | | | |
| 1457 | | 31-35 | 6.89 | 1.149 | | 5.41 | 25.96 | 0.57 | 0.742 | -124.2 | Gray |
| 1459 | | (033.0) | 7.01 | 1.125 | | 0.64 | 25.60 | 0.54 | 0.714 | -133.2 | ↓ |
| 1501 | | — | 7.01 | 1.094 | | 0.17 | 26.90 | 0.54 | 0.708 | ~~-131.8~~ -164.6 | ↓ |
| 1511 | | 36-40 | 7.02 | 1.077 | | 2.60 | 25.87 | 1.04 | 1.338 | -161.8 | Gray |
| 1513 | | (038.0) | 6.96 | 2.117 | | 1.33 | 26.70 | 1.10 | 1.411 | -161.4 | ↓ |
| 1515 | | — | 6.94 | 2.208 | | 0.13 | 26.93 | 1.13 | 1.453 | -161.3 | ↓ |
| 1527 | | 41-45 | 6.99 | 2.484 | | 0.33 | 26.20 | 1.31 | 1.663 | -153.9 | Gray |
| 1529 | | (043.0) | 7.03 | 2.604 | | 0.11 | 26.44 | 1.35 | 1.710 | -156.3 | ↓ |
| 1531 | | — | 7.05 | 2.675 | | 0.10 | 26.64 | 1.37 | 1.733 | -158.1 | ↓ |
| 1543 | | 46-50 | 7.03 | 3.293 | | 0.35 | 25.23 | 1.76 | 2.196 | -167.5 | Tan |
| 1545 | | (048.0) | 7.08 | 3.444 | | 0.18 | 26.11 | 1.83 | 2.300 | -168.8 | ↓ |
| 1547 | | — | 7.11 | 3.891 | | 0.17 | 26.30 | 1.92 | 2.483 | -169.5 | ↓ |

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: FR1681 - CRHE

Date: 10-21-2011 DPT0164 @ location U

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0800 | 0164 | 26-30 | 6.70 | 1.515 | Not Recorded | 8.72 | 16.96 | 0.78 | 1.012 | 9.2 | Gray |
| 0802 | | (028.0) | 6.69 | 1.582 | | 1.32 | 18.53 | 0.81 | 1.043 | -53.5 | ↓ |
| 0804 | | — | 6.70 | 1.623 | | 0.31 | 19.87 | 0.83 | 1.066 | -145.5 | ↓ |
| | | | | | | | | | | | |
| 0830 | | 31-35 | 7.17 | 1.603 | | 0.44 | 20.30 | 0.79 | 1.021 | -180.6 | Tan |
| 0832 | | (033.0) | 7.11 | 1.587 | | 0.35 | 22.46 | 0.81 | 1.044 | -180.4 | ↓ |
| 0834 | | — | 7.09 | 1.613 | | 0.35 | 22.96 | 0.82 | 1.053 | -180.2 | ↓ |
| | | | | | | | | | | | |
| 0848 | | 36-40 | 7.18 | 1.038 | | 0.53 | 19.23 | 0.99 | 1.268 | -169.5 | Gray |
| 0850 | | (038.0) | 7.18 | 1.997 | | 0.37 | 20.97 | 1.04 | 1.328 | -169.6 | ↓ |
| 0852 | | — | 7.14 | 2.067 | | 0.24 | 22.58 | 1.05 | 1.348 | -169.4 | ↓ |
| | | | | | | | | | | | |
| 0905 | | 41-45 | 7.06 | 1.454 | | 7.47 | 20.73 | 1.46 | 1.825 | -119.2 | Tan |
| 0907 | | (043.0) | 7.10 | 2.827 | | 0.91 | 22.46 | 1.47 | 1.837 | -126.7 | ↓ |
| 0909 | | — | 7.11 | 2.841 | | 0.20 | 23.48 | 1.48 | 1.858 | -158.7 | ↓ |
| | | | | | | | | | | | |
| 0920 | | 46-50 | 7.14 | 3.449 | | 0.41 | 21.51 | 1.85 | 2.296 | -162.8 | Tan |
| 0922 | | (048.0) | 7.19 | 3.594 | | 0.14 | 22.73 | 1.91 | 2.362 | -165.8 | ↓ |
| 0924 | | — | 7.20 | 3.720 | | 0.11 | 23.86 | 1.94 | 2.418 | -167.5 | ↓ |
| | | | | | | | | | | | |
| 0938 | | 51-55 | 7.20 | 3.598 | | 2.84 | 22.46 | 1.96 | 2.430 | -168.2 | Tan |
| 0940 | | (053.0) | 7.23 | 3.825 | | 0.26 | 23.50 | 2.06 | 2.541 | -169.4 | ↓ |
| 0942 | | — | 7.21 | 4.034 | | 0.13 | 24.33 | 2.11 | 2.620 | -168.7 | ↓ |
| | | | | decon | screens | | | | | | |
| 1019 | | 61-65 | 7.16 | 3.902 | | 0.45 | 23.92 | 2.10 | 2.592 | -164.2 | Tan |
| 1021 | | (063.0) | 7.23 | 4.042 | | 0.10 | 24.61 | 2.15 | 2.652 | -167.4 | ↓ |
| 1023 | | — | 7.25 | 4.152 | | 0.10 | 25.98 | 2.19 | 2.693 | -169.3 | ↓ |
| | ↓ | | | | ↓ | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: FR1681-CRHE

Date: 10-21-2011 Location V is DPT0165

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1048 | 0165 | 26-30 | 7.23 | 1.804 | Not | 1.09 | 24.62 | 0.90 | 1.150 | -132.4 | Tan |
| 1050 | | (028.0) | 7.14 | 1.763 | Recorded | 0.31 | 25.61 | 0.89 | 1.149 | -132.4 | ↓ |
| 1052 | | — | 7.06 | 1.773 | | 0.24 | 26.11 | 0.90 | 1.155 | -131.7 | ↓ |
| | | | | | | | | | | | |
| 1100 | | 31-35 | 7.22 | 1.923 | | 0.53 | 24.61 | 0.97 | 1.239 | -151.9 | Gray |
| 1102 | | (033.0) | 7.14 | 1.911 | | 0.20 | 25.60 | 0.97 | 1.246 | -151.1 | ↓ |
| 1104 | | — | 7.09 | 1.920 | | 0.16 | 25.81 | 0.97 | 1.249 | -150.4 | ↓ |
| | | | | | | | | | | | |
| 1115 | | 36-40 | 7.20 | 2.086 | | 1.35 | 24.97 | 1.08 | 1.378 | -167.9 | Tan |
| 1117 | | (038.0) | 7.14 | 2.154 | | 1.10 | 25.91 | 1.11 | 1.421 | -166.0 | ↓ |
| 1119 | | — | 7.10 | 2.227 | | 0.13 | 26.00 | 1.14 | 1.447 | -163.0 | ↓ |
| | | | | | | | | | | | |
| 1130 | | 41-45 | 7.13 | 2.534 | | 0.33 | 26.30 | 1.32 | 1.666 | -173.3 | Gray |
| 1132 | | (043.0) | 7.17 | 2.590 | | 0.18 | 26.69 | 1.34 | 1.702 | -175.1 | ↓ |
| 1134 | | — | 7.18 | 2.694 | | 0.17 | 26.86 | 1.36 | 1.727 | -176.5 | ↓ |
| | | | | | | | | | | | |
| 1144 | | 46-50 | 7.18 | 3.615 | | 1.33 | 25.21 | 1.93 | 2.401 | -178.2 | Gray |
| 1146 | | (048.0) | 7.20 | 3.771 | | 0.33 | 25.77 | 2.01 | 2.500 | -180.8 | ↓ |
| 1148 | | — | 7.22 | 3.952 | | 0.16 | 26.30 | 2.06 | 2.545 | -182.2 | ↓ |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM**
DPT Location: CRHE - NASA

Project Number: 1-R1681
Date: 1/9/12 Sampler: A. RIVERA

| DPT Name | Sample Depth | Purg Vol gal | pH std units | Conductivity mS/cm | Turbidity NTUs | Temp deg. C | Salinity % | ORP mv | TDS g/L | Comments DO mg/L | TIME |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0166 | 28 | 0.50 | 7.22 | 2.652 | OR | 24.24 | 1.40 | -216.8 | 1.756 | | 0910 |
| | | 0.25 | 7.26 | 2.655 | ↓ | 23.98 | 1.40 | -220.3 | 1.760 | | 0912 |
| | | 0.25 | 7.24 | 2.648 | ↓ | 23.89 | 1.40 | -212.6 | 1.759 | 0.32 | 0914 |
| | | | | | | | | | | SAMPLE | 0915 |
| | 33 | 0.50 | 7.47 | 2.564 | OR | 24.32 | 2.08 | -189.2 | 2.564 | 0.45 | 0933 |
| | | 0.25 | 7.41 | 2.551 | OR | 24.18 | 2.07 | -172.1 | 2.594 | 0.25 | 0935 |
| | | 0.25 | 7.37 | 2.541 | OR | 23.99 | 2.06 | -170.8 | 2.539 | 0.24 | 0937 |
| | | | | | | | | | | SAMPLE | 0938 |
| | 38 | NA → | | | | | | | | SAMPLE | 1000 |
| | XXX | UNABLE TO TAKE READINGS DUE TO LOW VOLUME | | | | | | | | | |
| | 43 | 0.50 | 7.49 | 4816 | OR | 24.06 | 2.63 | -173.5 | 3.198 | 0.42 | 1016 |
| | | 0.25 | 7.39 | 4847 | OR | 23.95 | 2.65 | -161.4 | 3.215 | 0.25 | 1018 |
| | | 0.25 | 7.37 | 4849 | OR | 23.93 | 2.66 | -159.3 | 3.219 | 0.23 | 1020 |
| | | | | | | | | | | SAMPLE | 1020 |
| | 48 | 0.25 | 7.56 | 4965 | OR | 23.81 | 2.73 | -169.4 | 3.303 | 4.76 | 1035 |
| | | 0.25 | 7.52 | 4995 | OR | 23.99 | 2.74 | -174.0 | 3.314 | 0.98 | 1037 |
| | | 0.25 | 7.46 | 5011 | OR | 23.96 | 2.75 | -163.1 | 3.325 | 0.53 | 1039 |
| ↓ | | | | | | | | | | SAMPLE | 1040 |
| 0167 | 28' | 0.50 | 7.40 | 3164 | OR | 26.01 | 1.62 | -226.0 | 2.034 | 1.30 | 1143 |
| | | 0.25 | 7.26 | 3199 | OR | 25.41 | 1.65 | -221.9 | 2.065 | 0.31 | 1145 |
| | | 0.25 | 7.22 | 3198 | OR | 25.21 | 1.66 | -206.0 | 2.070 | 0.21 | 1147 |
| | | | | | | | | | | SAMPLE | 1148 |
| | 33' | 0.50 | 7.36 | 3260 | OR | 25.18 | 1.71 | -158.8 | 2.131 | 1.41 | 1159 |
| | | 0.25 | 7.33 | 3269 | OR | 25.01 | 1.70 | -150.5 | 2.121 | 0.46 | 1201 |
| | | 0.25 | 7.31 | 3234 | OR | 24.89 | 1.69 | -152.0 | 2.105 | 0.27 | 1203 |
| | | | | | | | | | | SAMPLE | 1204 |
| | 38' | 0.125 | 7.57 | 4257 | OR | 24.97 | 2.26 | -169.7 | 2.766 | 0.72 | 1225 |
| | | 0.125 | 7.56 | 4252 | OR | 24.98 | 2.26 | -179.5 | 2.764 | 0.46 | 1227 |
| | | 0.125 | 7.55 | 4253 | OR | 25.03 | 2.25 | -158.8 | 2.763 | 0.30 | 1229 |
| | | | | | | | | | | SAMPLE | 1230 |
| | 43' | 0.50 | 7.49 | 4573 | OR | 24.44 | 2.45 | -174.4 | 3.001 | 0.45 | 1245 |
| | | 0.25 | 7.34 | 4627 | OR | 24.34 | 2.50 | -136.1 | 3.050 | 0.18 | 1245 |
| | | 0.25 | 7.29 | 4642 | OR | 24.29 | 2.51 | -133.7 | 3.060 | 0.14 | 1247 |
| | | | | | | | | | | SAMPLE | 1248 |
| | 48' | 0.25 | 7.43 | 4944 | OR | 24.08 | 2.71 | -127.9 | 3.293 | 0.65 | 1302 |
| | | 0.125 | 7.36 | 5055 | OR | 24.00 | 2.77 | -130.2 | 3357 | 0.25 | 1304 |
| | | 0.125 | 7.33 | 5075 | OR | 23.92 | 2.79 | -126.7 | 3.371 | 0.19 | 1306 |
| ↓ | | | | | | | | | | SAMPLE | 1307 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Insert units if not provided on sheet

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**DPT GEOCHEMICAL DATA FORM**
DPT Location: CRANE - NASA

Project Number: FR1681
Date: 1/9/12 Sampler: A. RIVERA

| DPT Name | Sample Depth | Purg Vol gal | pH std units | Conductivity µS/cm | Turbidity NTUs | Temp deg. C | Salinity % | ORP mv | TDS g/L | Comments DO mg/L | TIME |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0168 | 28 | 0.50 | 7.42 | 2348 | OR | 25.07 | 1.20 | -181.4 | 1.530 | 0.27 | 1350 |
| \| | | 0.25 | 7.37 | 2361 | OR | 24.95 | 1.21 | -180.1 | 1.538 | 0.21 | 1352 |
| | | 0.25 | 7.35 | 2361 | OR | 24.84 | 1.21 | -178.7 | 1.540 | 0.18 | 1354 |
| | | | | | | | | | | SAMPLE | 1355 |
| | 33 | 0.25 | 7.31 | 2892 | OR | 24.55 | 1.50 | -184.5 | 1.877 | 0.59 | 1406 |
| | | 0.25 | 7.30 | 2878 | OR | 24.90 | 1.49 | -182.8 | 1.873 | 0.38 | 1408 |
| | | 0.25 | 7.29 | 2874 | OR | 24.85 | 1.49 | ~~-187.3~~ | 1.873 | 0.28 | 1413 |
| | | | | | | | | -174.9 | | SAMPLE | 1418 |
| | 38 | 0.50 | 7.30 | 4628 | OR | 24.77 | 2.48 | -149.3 | 3.018 | 0.55 | 1426 |
| | | 0.25 | 7.28 | 4613 | OR | 24.76 | 2.47 | -146.8 | 3.012 | 0.42 | 1428 |
| | | 0.25 | 7.27 | 4616 | OR | 24.80 | 2.47 | -147.3 | 3.013 | 0.36 | 1430 |
| | | | | | | | | | | SAMPLE | 1432 |
| | 43 | 0.25 | 7.75 | 3210 | OR | 24.78 | 1.69 | -175.8 | 2.057 | 0.18 | 1445 |
| | | 0125 | 7.65 | 4488 | OR | 25.30 | 2.42 | -166.1 | 3.004 | 0.14 | 1449 |
| | | 0125 | 7.63 | 4777 | OR | 25.13 | 2.57 | -2554 | 3146 | 0.11 | 1449 |
| | | | | | | | | | | SAMPLE | 1450 |
| | 48 | 0.25 | 7.49 | 5244 | OR | 24.21 | 2.87 | -162.7 | 3.467 | 2.04 | 1507 |
| | | 0.125 | 7.46 | 5264 | OR | 24.14 | 2.89 | -157.6 | 3.482 | 0.75 | 1509 |
| | | 0.125 | 7.44 | 5271 | OR | 24.12 | 2.89 | -156.6 | 3.487 | 0.49 | 1510 |
| ▽ | | | | | | | | | | SAMPLE | 1512 |
| 0169 | 28' | 0.25 | 7.35 | 1067 | OR | 23.45 | 0.54 | -180.3 | 0.713 | 0.51 | ~~1612~~ 1615 |
| \| | | 0.25 | 7.40 | 1062 | OR | 23.39 | 0.54 | -194.3 | 0.911 | 0.40 | 1617 |
| | | 0.25 | 7.41 | 1056 | OR | 23.34 | 0.54 | -201.6 | 0.708 | 0.28 | 1619 |
| | | | | | | | | | | SAMPLE | 1620 |
| | 33' | 0.25 | 7.28 | 1284 | OR | 23.35 | 0.66 | -217.6 | 0.861 | 0.35 | 1627 |
| | | 0.25 | 7.31 | 1292 | OR | 23.26 | 0.66 | -227.9 | 0.863 | 0.25 | 1629 |
| | | 0.25 | 7.32 | 1285 | OR | 23.20 | 0.67 | -232.5 | 0.867 | 0.20 | 1631 |
| | | | | | | | | | | SAMPLE | 1632 |
| | 38 | 0.25 | 7.44 | 1588 | OR | 23.56 | 0.82 | -189.4 | 1.063 | 0.46 | 1641 |
| | | 0.25 | 7.45 | 1590 | OR | 23.51 | 0.83 | -190.2 | 1.064 | 0.36 | 1643 |
| | | 0.25 | 7.47 | 1588 | OR | 23.45 | 0.83 | -190.7 | 1.064 | 0.27 | 1645 |
| | | | | | | | | | | SAMPLE | 1646 |
| | 43' | 0.25 | 7.57 | 2225 | OR | 22.21 | 1.21 | -236.5 | 1.527 | 0.55 | 1659 |
| | | 0.25 | 7.58 | 2223 | OR | 22.17 | 1.21 | -244.4 | 1.527 | 0.40 | 1701 |
| | | 0.25 | 7.58 | 2221 | OR | 22.15 | 1.21 | -249.3 | 1.527 | 0.32 | 1703 |
| | | | | | | | | | | SAMPLE | 1704 |
| | 48' | 0.25 | 7.45 | 2461 | OR | 23.59 | 1.32 | -208.9 | 1.692 | 4.38 | 1713 |
| | | 0.25 | 7.55 | 2632 | OR | 23.26 | 1.41 | -287.7 | 1.776 | 0.19 | 1715 |
| | | 0.25 | 7.56 | 2641 | OR | 23.27 | 1.41 | -290.8 | 1.775 | 0.15 | 1717 |
| ▽ | | | | | | | | | | SAMPLE | 1718 |

Note: Insert units if not provided on sheet

**DPT GEOCHEMICAL DATA FORM**

DPT Location: NASA - CRITE

Project Number: FR1681

Date: 1/10/12 Sampler: A. RIVERA

| DPT Name | Sample Depth | Purg Vol gal | pH std units | Conductivity µS/cm | Turbidity NTUs | Temp deg. C | Salinity % | ORP mv | TDS g/L | Comments DO (mg/L) | Comments TIME |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| 0170 | 28 | 0.25 | 7.75 | 10,854 J | OR | 20.27 | 6.85 | -163.6 | 7.770 | 0.10 | 0818 |
| | | 0.125 | 7.33 | 10,818 | OR | 20.13 | 6.84 | -203.0 | 7.750 | 0.07 | 0823 |
| | | 0.125 | 7.34 | 10,800 | OR | 20.08 | 6.95 | -209.7 | 7.745 | 0.06 | 0822 |
| | | | | | | | | | | SAMPLE | 0823 |
| | 33 | 0.25 | 7.11 | 13548 J | OR | 21.52 | 8.57 | -122.3 | 9.581 | 0.23 | 0831 |
| | | 0.125 | 7.08 | 13516 | OR | 21.58 | 8.54 | -115.6 | 9.502 | 0.37 | 0833 |
| | | 0.125 | 7.05 | 13623 | OR | 21.76 | 8.44 | -111.2 | 9.428 | 0.42 | 0835 |
| | | | | | | | | | | SAMPLE | 0836 |
| | 38 | 0.25 | 7.21 | 1480 | OR | 21.07 | 7.21 | -146.6 | 1.044 | 0.23 | 0849 |
| | | 0.125 | 7.20 | 1504 | OR | 21.03 | 7.20 | -149.3 | 1.058 | 0.25 | 0851 |
| | | 0.125 | 7.20 | 1505 | OR | 20.99 | 7.20 | -150.3 | 1.060 | 0.25 | 0853 |
| | | | | | | | | | | SAMPLE | 0854 |
| | 43 | 0.125 | 7.58 | 934 | OR | 18.58 | 0.52 ~~7.58~~ | -229.0 | 0.738 | 0.06 | 0910 |
| | | 0.125 | 7.77 | 1192 | OR | 20.38 | 0.66 | -233.7 | 0.851 | 0.03 | 0912 |
| | | 0.125 | 7.77 | 1192 | OR | 20.32 | 0.66 | -242.1 | 0.852 | 0.02 | 0914 |
| | | | | | | | | | | SAMPLE | 0915 |
| | 48 | 0.125 | 7.52 | 1288 | OR | 20.73 | 0.71 | -207.2 | 0.916 | 0.07 | 0927 |
| | | 0.125 | 7.48 | 1346 | OR | 21.03 | 0.82 | -210.1 | 0.958 | 0.05 | 0929 |
| | | 0.125 | 7.47 | 1353 | OR | 21.09 | 0.84 | -212.3 | 0.961 | 0.05 | 0931 |
| | | | | | | | | | | SAMPLE | 0932 |
| 0171 | 28' | 0.25 | 7.33 | 1127 | OR | 24.23 | 0.57 | -148.5 | 0.743 | 0.11 | 1044 |
| | | 0.125 | 7.24 | 1118 | OR | 24.04 | 0.56 | -136.8 | 0.739 | 0.10 | 1046 |
| | | 0.125 | 7.13 | 1115 | OR | 23.85 | 0.57 | -122.0 | 0.742 | 0.26 | 1048 |
| | | | | | | | | | | SAMPLE | 1049 |
| | 33' | 0.25 | 7.33 | 1213 | OR | 24.67 | 0.61 | -153.4 | 0.793 | 0.43 | 1100 |
| | | 0.125 | 7.27 | 1205 | OR | 24.54 | 0.60 | -143.4 | 0.788 | 0.33 | 1102 |
| | | 0.125 | 7.21 | 1190 | OR | 24.26 | 0.60 | -132.4 | 0.784 | 0.26 | 1104 |
| | | | | | | | | | | SAMPLE | 1105 |
| | 38' | 0.25 | 7.12 | 1454 | OR | 25.38 | 0.72 | -158.8 | 0.940 | 0.32 | 1116 |
| | | 0.125 | 7.11 | 1475 | OR | 25.67 | 0.73 | -163.7 | 0.947 | 0.23 | 1118 |
| | | 0.25 | 7.39 | 1514 | OR | 25.77 | 0.75 | -173.0 | 0.972 | 0.15 | 1120 |
| | | | | | | | | | | SAMPLE | 1121 |
| | 43' | 0.125 | 7.94 | 865 | OR | 25.25 | 0.42 | -238.1 | 0.561 | 0.20 | 1132 |
| | | 0.125 | 7.86 | 998 | OR | 25.59 | 0.59 | -248.9 | 0.794 | 0.14 | 1135 |
| | | 0.125 | 7.81 | 1310 | OR | 25.32 | 0.65 | -249.8 | 0.845 | 0.11 | 1136 |
| | 48 | | | | | | | | | SAMPLE | 1137 |
| | | 0.125 | 7.50 | 1797 | OR | 24.41 | 0.93 | -188.8 | 1.207 | 0.36 | 1150 |
| | | 0.125 | 7.48 | 1862 | OR | 24.52 | 0.96 | -193.6 | 1.225 | 0.23 | 1152 |
| | | 0.125 | 7.48 | 1911 | OR | 24.60 | 0.98 | -207.3 | 1.252 | 0.11 | 1154 |
| | | | | | | | | | | SAMPLE | 1155 |

OR = OUT OF RANGE

J = RECALIBRATED VALUE = ESTIMATED VALUE

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: NASA - CRHE

Project Number: FR1681

Date: 1/10/12 Sampler: A. RIVERA

| DPT Name | Sample Depth | Purg Vol gal | pH std units | Conductivity mS/cm | Turbidity NTUs | Temp deg. C | Salinity % | ORP mv | TDS g/L | Comments DO mg/L | TIME |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0172 | 28' | 0.25 | 7.37 | 870 | OR | 24.88 | 0.42 | -150.8 | 0.562 | 0.50 | 1341 |
| | | 0.125 | 7.23 | 844 | OR | 24.52 | 0.42 | -140.6 | 0.552 | 0.37 | 1343 |
| | | 0.125 | 6.98 | 840 | OR | 24.43 | 0.42 | -123.3 | 0.552 | 0.23 | 1345 |
| | 33' | 0.25 | 7.29 | 1610 | OR | 25.84 | 0.80 | -169.3 | 1.032 | SAMPLE | 1346 |
| | | | | | | | | | ↳ | 0.26 | 1357 |
| | | 0.125 | 7.31 | 1614 | OR | 25.82 | 0.80 | -173.5 | 1.033 | 0.20 | 1359 |
| | | 0.125 | 7.36 | 1619 | OR | 25.79 | 0.80 | -161.0 | 1.037 | 0.11 | 1401 |
| | | | | | | | | | | SAMPLE | 1402 |
| | 38' | 0.25 | 7.39 | 1651 | OR | 24.86 | 0.84 | -152.2 | 1.080 | 0.31 | 1413 |
| | | 0.25 | 7.36 | 1647 | OR | 24.44 | 0.84 | -141.1 | 1.080 | 0.22 | 1415 |
| | | 0.25 | 7.29 | 1636 | OR | 24.29 | 0.84 | -134.8 | 1.078 | 0.15 | 1417 |
| | | | | | | | | | | SAMPLE | 1418 |
| | 43' | 0.25 | 7.42 | 1703 | OR | 24.91 | 0.86 | -165.1 | 1.118 | 0.32 | 1431 |
| | | 0.125 | 7.40 | 1724 | OR | 24.59 | 0.88 | -157.8 | 1.130 | 0.21 | 1433 |
| | | 0.125 | 7.37 | 1723 | OR | 24.36 | 0.88 | -151.8 | 1.135 | 0.16 | 1435 |
| | | | | | | | | | | SAMPLE | 1436 |
| | 48' | 0.25 | 7.31 | 2170 | OR | 23.88 | 1.14 | -167.7 | 1.458 | 0.26 | 1453 |
| | | 0.125 | 7.29 | 2197 | OR | 23.74 | 1.15 | -166.1 | 1.465 | 0.23 | 1457 |
| | | 0.125 | 7.31 | 2211 | OR | 23.60 | 1.17 | -158.9 | 1.478 | 0.13 | 1459 |
| | | | | | | | | | | SAMPLE | 1500 |
| | 53' | 0.25 | 7.54 | 3278 | OR | 23.77 | 1.76 | -159.1 | 2.190 | 0.26 | 1521 |
| | | 0.125 | 7.52 | 3308 | OR | 23.69 | 1.78 | -183.0 | 2.209 | 0.18 | 1523 |
| | | 0.125 | 7.50 | 3316 | OR | 23.65 | 1.79 | -175.6 | 2.216 | 0.15 | 1525 |
| | | | | | | | | | | SAMPLE | 1526 |
| | 63' | 0.25 | 7.52 | 3797 | OR | 24.01 | 1.84 | -182.5 | 2.310 | 0.26 | 1545 |
| | | 0.125 | 7.55 | 3607 | OR | 23.99 | 1.95 | -195.9 | 2.423 | 0.09 | 1547 |
| | | 0.125 | 7.54 | 3712 | OR | 23.96 | 1.97 | -201.5 | 2.446 | 0.08 | 1549 |
| | | | | | | | | | | SAMPLE | 1550 |
| 0173 | 28' | 0.125 | 7.58 | 1536 | OR | 24.02 | 0.78 | -170.0 | 1.010 | 0.40 | 1630 |
| | | 0.125 | 7.57 | 1520 | OR | 23.95 | 0.78 | -188.4 | 1.009 | 0.10 | 1632 |
| | | 0.125 | 7.57 | 1521 | OR | 23.93 | 0.78 | -195.0 | ~~1.009~~ 1.007 | 0.06 | 1634 |
| | | | | | | | | | | SAMPLE | 1635 |
| | 33' | 0.25 | 7.31 | 2204 | OR | 24.24 | 1.15 | -156.0 | 1.460 | 0.24 | 1642 |
| | | 0.25 | 7.29 | 2204 | OR | 23.95 | 1.15 | -170.8 | 1.455 | 0.25 | 1644 |
| | | 0.25 | 7.25 | 2178 | OR | 23.61 | 1.15 | -143.5 | 1.453 | 0.25 | 1646 |
| | | | | | | | | | | SAMPLE | 1647 |
| | 38' | 0.25 | 7.31 | 2320 | OR | 24.40 | 1.21 | -164.3 | 1.541 | 0.76 | 1700 |
| | | 0.125 | 7.30 | 2355 | OR | 24.21 | 1.23 | -156.7 | 1.557 | 0.43 | 1702 |
| | | 0.125 | 7.23 | 2362 | OR | 23.84 | 1.24 | -143.3 | 1.564 | 0.17 | 1704 |
| | | | | | | | | | | SAMPLE | 1705 |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**
DPT Location: NASA - CRHE

Project Number: FR1681
Date: 1/11/12 Sampler: A. RIVERA

| DPT Name | Sample Depth | Purg Vol gal | pH std units | Conductivity µS/cm | Turbidity NTUs | Temp deg. C | Salinity % | ORP mv | TDS g/L | Comments DO mg/L | TIME |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0173 | 43' | 0.25 | 7.18 | 2378 | OR | 23.25 | 1.28 | -149.5 | 1.630 | 0.14 | 0740 |
| | | 0.125 | 7.27 | 2446 | OR | 23.11 | 1.31 | -160.5 | 1.651 | 0.09 | 0742 |
| | | 0.125 | 7.24 | 2420 | OR | 22.68 | 1.31 | -162.8 | 1.646 | 0.06 | 0744 |
| | | | | | | | | | | SAMPLE | 0745 |
| | 48' | 0.25 | 7.51 | 2946 | OR | 22.80 | 1.62 | -164.5 | 2.022 | 0.17 | 0800 |
| | | 0.125 | 7.41 | 3006 | OR | 22.75 | 1.64 | -158.7 | 2.041 | 0.17 | 0802 |
| | | 0.125 | 7.42 | 2986 | OR | 22.64 | 1.63 | -168.0 | 2.034 | 0.21 | 0804 |
| | | | | | | | | | | SAMPLE | 0805 |
| | 53' | 0.25 | 7.48 | 3391 | OR | 22.43 | 1.89 | -169.2 | 2.336 | 0.15 | 0820 |
| | | 0.125 | 7.51 | 3470 | OR | 22.46 | 1.93 | -174.8 | 2.376 | 0.10 | 0822 |
| | | 0.125 | 7.51 | 3456 | OR | 22.37 | 1.94 | -176.7 | 2.358 | 0.09 | 0824 |
| | | | | | | | | | | SAMPLE | 0825 |
| | 63' | 0.25 | 7.60 | 3675 | OR | 22.73 | 2.04 | -179.8 | 2.522 | 0.11 | 0845 |
| | | 0.125 | 7.60 | 3767 | OR | 22.74 | 2.09 | -181.5 | 2.594 | 0.07 | 0847 |
| | | 0.125 | 7.58 | 3823 | OR | 22.67 | 2.12 | -179.1 | 2.604 | 0.05 | 0849 |
| | | | | | | | | | | SAMPLE | 0850 |
| 0174 | 28' | 0.25 | 7.21 | 1808 | OR | 23.52 | 0.94 | -100.5 | 1.204 | 0.71 | 0758 |
| | | 0.25 | 7.15 | 1789 | OR | 23.38 | 0.93 | -97.2 | 1.197 | 0.42 | 1000 |
| | | 0.25 | 7.08 | 1778 | OR | 23.23 | 0.93 | -97.9 | 1.197 | 0.31 | 1002 |
| | | | | | | | | | | SAMPLE | 1003 |
| | 33' | 0.25 | 7.38 | 1764 | OR | 23.51 | 0.92 | -152.1 | 1.187 | 0.48 | 1013 |
| | | 0.125 | 7.40 | 1806 | OR | 23.56 | 0.94 | -165.3 | 1.211 | 0.34 | 1015 |
| | | 0.125 | 7.41 | 1832 | OR | 23.44 | 0.96 | -175.7 | 1.228 | 0.17 | 1017 |
| | | | | | | | | | | SAMPLE | 1018 |
| | 38 | 0.25 | 7.39 | 1952 | OR | 24.03 | 1.01 | -168.2 | 1.299 | 0.26 | 1029 |
| | | 0.125 | 7.34 | 1963 | OR | 23.91 | 1.02 | -162.2 | 1.303 | 0.18 | 1031 |
| | | 0.125 | 7.27 | 1955 | OR | 23.55 | 1.02 | -152.5 | 1.308 | 0.13 | 1033 |
| | | | | | | | | | | SAMPLE | 1034 |
| | 43' | 0.25 | 7.40 | 7050 | OR | 23.57 | 1.09 | -163.7 | 1.352 | 0.45 | 1048 |
| | | 0.125 | 7.39 | 2159 | OR | 23.82 | 1.14 | -167.6 | 1.453 | 0.25 | 1050 |
| | | 0.125 | 7.38 | 2192 | OR | 23.58 | 1.16 | -170.2 | 1.466 | 0.15 | 1052 |
| | | | | | | | | | | SAMPLE | 1053 |
| | 48' | 0.25 | 7.47 | 2331 | OR | 23.49 | 1.22 | -157.3 | 1.519 | 0.65 | 1104 |
| | | 0.125 | 7.52 | 2056 | OR | 24.14 | 1.06 | -180.6 | 1.354 | 0.26 | 1106 |
| | | 0.125 | 7.67 | 2031 | OR | 23.50 | 1.07 | -224.1 | 1.359 | 0.09 | 1108 |
| | | | | | | | | | | SAMPLE | 1109 |
| 0175 | 28' | 0.25 | 7.28 | 1125 | OR | 23.59 | 0.57 | -96.7 | 0.750 | 0.80 | 1157 |
| | | 0.125 | 7.23 | 1119 | OR | 23.49 | 0.44 | -107.8 | 0.745 | 0.37 | 1159 |
| | | 0.125 | 7.20 | 1115 | OR | 23.35 | 0.22 | -115.0 | 0.748 | 0.21 | 1201 |
| | | | | | | | | | | SAMPLE | 1202 |

NOTES
HARD DRILLING

not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**
DPT Location: CRAE - NAIA

Project Number: ER1681
Date: 1/11/12 Sampler: R. RIVERA

| DPT Name | Sample Depth | Purg Vol gal | pH std units | Conductivity µS/cm | Turbidity NTUs | Temp deg. C | Salinity % | ORP mv | TDS g/L | Comments DO (mg/L) | Comments TIME |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0175 | 33' | 0.25 | 7.24 | 1159 | OR | 24.38 | 0.58 | -133.8 | 0.763 | 0.47 | 1243 |
| | | 0.125 | 7.30 | 1152 | OR | 24.26 | 0.58 | -145.4 | 0.759 | 0.32 | 1245 |
| | | 0.125 | 7.35 | 1145 | OR | 23.92 | 0.58 | -154.9 | 0.760 | 0.14 | 1247 |
| | | | | | | | | | | SAMPLE | 1248 |
| | 38' | 0.25 | 7.34 | 1106 | OR | 24.76 | 0.55 | -143.0 | 0.726 | 0.42 | 1259 |
| | | 0.125 | 7.33 | 1108 | OR | 24.48 | 0.55 | -140.9 | 0.727 | 0.30 | 1301 |
| | | 0.125 | 7.29 | 1096 | OR | 24.15 | 0.55 | -134.3 | 0.724 | 0.14 | 1303 |
| | | | | | | | | | | SAMPLE | 1304 |
| | 43' | 0.25 | 7.54 | 1234 | OR | 24.81 | 0.62 | -165.6 | 0.809 | 0.37 | 1315 |
| | | 0.125 | 7.56 | 1247 | OR | 24.72 | 0.62 | -161.1 | 0.815 | 0.30 | 1317 |
| | | 0.125 | 7.44 | 1232 | OR | 24.32 | 0.62 | -174.0 | 0.813 | 0.12 | 1319 |
| | | | | | | | | | | SAMPLE | 1320 |
| | 48 | 0.125 | 7.70 | 1253 | OR | 23.74 | 0.64 | -189.0 | 0.832 | 0.20 | 1337 |
| | | 0.125 | 7.75 | 1246 | OR | 2373 | 0.64 | -200.3 | 0.829 | 0.12 | 1339 |
| | | 0.125 | 7.81 | 1237 | OR | 23.64 | 0.63 | -217.4 | 0.825 | ~~SAMPLE~~ 0.04 | 1342 |
| | | | | | | | | | | SAMPLE | 1342 |
| 0176 | 28' | 0.125 | 7.27 | 804 | OR | 23.48 | 0.41 | -135.1 | 0.538 | 0.65 | 1432 |
| | | 0.125 | 7.30 | 800 | OR | 23.47 | 0.40 | -148.8 | 0.535 | 0.40 | 1434 |
| | | 0.125 | 7.32 | 800 | OR | 23.45 | 0.40 | -160.8 | 0.536 | 0.19 | 1436 |
| | | | | | | | | | | SAMPLE | 1437 |
| | 33' | 0.125 | 7.35 | 890 | OR | 22.81 | 0.46 | -154.3 | 0.604 | 0.23 | 1453 |
| | | 0.125 | 7.38 | 890 | OR | 22.78 | 0.46 | -167.2 | 0.604 | 0.13 | 1452 |
| | | 0.125 | 7.39 | 890 | OR | 22.76 | 0.46 | -175.7 | 0.604 | 0.10 | 1454 |
| | | | | | | | | | | SAMPLE | 1455 |
| | 38' | 0.25 | 7.16 | 1320 | OR | 24.70 | 0.66 | -110.1 | 0.859 | 0.56 | 1507 |
| | | 0.125 | 7.10 | 1303 | OR | 24.58 | 0.65 | -113.4 | 0.853 | 0.46 | 1509 |
| | | 0.125 | 7.05 | 1301 | OR | 24.35 | 0.66 | -112.4 | 0.857 | 0.26 | 1511 |
| | | | | | | | | | | SAMPLE | 1512 |
| | 43' | 0.25 | 7.32 | 1415 | OR | 25.38 | 0.71 | -162.2 | 0.930 | 0.85 | 1527 |
| | | 0.125 | 7.29 | 1497 | OR | 25.15 | 0.75 | -162.1 | 0.996 | 0.31 | 1529 |
| | | 0.125 | 7.25 | 1544 | OR | 24.75 | 0.78 | -161.7 | 0.998 | 0.18 | 1531 |
| | | | | | | | | | | SAMPLE | 1532 |
| | 48' | 0.125 | 7.30 | 1563 | OR | 24.40 | 0.80 | -143.9 | 1.039 | 0.37 | 1550 |
| | | 0.125 | 7.26 | 1608 | OR | 24.30 | 0.82 | -142.4 | 1.060 | 0.23 | 1552 |
| | | 0.125 | 7.20 | 1608 | OR | 23.82 | 0.83 | -127.8 | 1.069 | 0.10 | 1554 |
| | | | | | | | | | | SAMPLE | 1555 |

ts if not provided on sheet

P\FORMS\Field Forms\DPT Logs\DPTFRM_rev

**DPT GEOCHEMICAL DATA FORM**
DPT Location: CR4E - MASA

Project Number: PR1681
Date: 1/12/12 Sampler: A. RIVERA

| DPT Name | Sample Depth | Purg Vol gal | pH std units | Conductivity µS/cm | Turbidity NTUs | Temp deg. C | Salinity % | ORP mv | TDS g/L | Comments DO(mg/L) TIME |
|---|---|---|---|---|---|---|---|---|---|---|
| 0177 | 26' | 0.25 | 6.71 | 1318 | OR | 22.62 | 0.69 | -15.0 | 0.857 | 0.13 0821 |
| | | 0.125 | 6.84 | 1316 | OR | 22.70 | 0.69 | -46.5 | 0.858 | 0.11 0823 |
| | | 0.125 | 6.95 | 1312 | OR | 22.46 | 0.69 | -79.7 | 0.857 | 0.05 0825 |
| | 33' | 0.25 | 7.42 | 1556 | OR | 21.92 | 0.82 | -153.7 | 1.002 | SAMPLE 0826 |
| | | 0.125 | 7.41 | 1596 | OR | 23.14 | 0.83 | -154.0 | 1.034 | 0.41 |
| | | 0.125 | 7.35 | 1574 | OR | 22.70 | 0.85 | -150.2 | 1.070 | 0.33 |
| | | | | | | | | | ↳ | 0.19 |
| | | | | | | | | | | SAMPLE 0836 |
| | 38' | 0.25 | 7.29 | 1881 | OR | 23.53 | 0.98 | -167.5 | 1.253 | 0.40 |
| | | 0.125 | 7.24 | 1873 | OR | 23.60 | 0.98 | -162.2 | 1.247 | 0.41 |
| | | 0.025 | 7.18 | 1865 | OR | 23.26 | 0.93 | -158.8 | 1.235 | 0.20 |
| | | | | | | | | | | SAMPLE 0918 |
| | 43' | 0.25 | 7.42 | 2079 | OR | 23.67 | 1.09 | -143.5 | 1.388 | 0.20 0927 |
| | | 0.125 | 7.40 | 2084 | OR | 23.94 | 1.09 | -142.4 | 1.388 | 0.14 0931 |
| | | 0.125 | 7.38 | 2081 | OR | 23.77 | 1.09 | -139.2 | 1.386 | 0.14 0933 |
| | | | | | | | | | | SAMPLE 0934 |
| | 48' | 0.25 | 7.49 | 2507 | OR | 23.80 | 1.33 | -136.6 | 1.692 | 0.73 0947 |
| | | 0.25 | 7.46 | 2589 | OR | 23.86 | 1.37 | -142.8 | 1.720 | 0.26 0949 |
| | | 0.25 | 7.46 | 2631 | OR | 23.90 | 1.40 | -144.1 | 1.732 | 0.19 0951 |
| | | | | | | | | | | SAMPLE 0952 |
| 0178 | 28' | 0.25 | 7.20 | 1413 | OR | 25.32 | 0.70 | -89.5 | 0.912 | 0.11 1105 |
| | | 0.125 | 7.15 | 1406 | OR | 25.17 | 0.70 | -91.4 | 0.910 | 0.09 1107 |
| | | 0.125 | 7.15 | 1402 | OR | 24.54 | 0.71 | -96.5 | 0.919 | 0.07 1109 |
| | | | | | | | | | | SAMPLE 1110 |
| | 33' | 0.125 | 9.48 | 1488 | OR | 24.87 | 0.76 | -125.3 | 0.956 | 0.10 1124 |
| | | 0.125 | 7.48 | 1595 | OR | 25.10 | 0.80 | -127.4 | 1.039 | 0.03 1126 |
| | | 0.125 | 7.55 | 1598 | OR | 24.85 | 0.81 | -128.3 | 1.045 | 0.01 1128 |
| | | | | | | | | | | SAMPLE 1129 |
| | 38' | 0.25 | 7.34 | 2020 | OR | 25.15 | 1.03 | -113.5 | 1.313 | 0.10 1140 |
| | | 0.25 | 7.27 | 2022 | OR | 24.91 | 1.03 | -109.0 | 1.316 | 0.09 1142 |
| | | 0.25 | 7.23 | 2021 | OR | 24.87 | 1.03 | -107.9 | 1.317 | 0.03 1144 |
| | | | | | | | | | | SAMPLE 1145 |
| | 43 | 0.25 | 7.49 | 2802 | OR | 25.62 | 1.44 | -159.3 | 1.810 | 0.05 1155 |
| | | 0.25 | 7.50 | 2833 | OR | 25.58 | 1.45 | -161.8 | 1.826 | 0.05 1157 |
| | | 0.25 | 7.50 | 2861 | OR | 25.48 | 1.47 | -164.1 | 1.844 | 0.02 1159 |
| | | | | | | | | | | SAMPLE 1200 |
| | 48' | 0.25 | 7.67 | 2760 | OR | 25.28 | 1.42 | -164.6 | 1.796 | 0.10 1213 |
| | | 0.125 | 7.64 | 2924 | OR | 25.41 | 1.51 | -162.0 | 1.906 | 0.04 1215 |
| | | 0.125 | 7.61 | 2955 | OR | 25.38 | 1.54 | -159.4 | 1.940 | 0.04 1217 |
| | | | | | | | | | | SAMPLE 1218 |

Note: Insert units if not provided on sheet

**DPT GEOCHEMICAL DATA FORM**
DPT Location: DPT0159

Project Number: FF1681
Date: 2-7-12 CS

| DPT Location | Sample Depth | pH std units | Conductivity M S/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity (PT %) | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| DPT0159 | | | | | | | | | |
| 09:20 | 8-12 | 7.24 | 808 | — | 5.53 6.79 | 22.26 | 0.39 | 0.511 | -104.3 |
| 09:21 | 010.0 | 7.20 | 782 | — | 4.14 | 22.14 | 0.38 | 0.504 | -100.1 |
| 09:22 | | 7.16 | 772 | — | 4.05 | 22.08 | 0.38 | 0.499 | -97.8 |
| | | | | | | | | | |
| | | Sampled @ 09:23 CS | | | | | | | |
| | | | | | | | | | |
| DPT0159 | 12-16 09:33 | 7.44 | 952 | — | 4.13 | 23.14 | 0.47 | 0.615 | -130.8 |
| 014.0 | 09:34 | 7.42 | 942 | — | 4.84 | 23.20 | 0.46 | 0.608 | -126.2 |
| | 09:35 | 7.40 | 930 | — | 5.03 | 23.21 | 0.46 | 0.602 | -122.7 |
| | | Sampled @ 09:36 CS | | | | | | | |
| | | | | | | | | | |
| DPT0159 | 16-20 | 7.41 | 1,162 | — | 5.12 | 24.18 | 0.58 | 0.760 | -118.9 |
| 018.0 | 09:40 09:41 ✓ | 7.38 | 1,172 | — | 5.00 | 24.10 | 0.58 | 0.763 | -111.1 |
| | 09:42 | 7.35 | 1,174 | — | 4.90 | 23.99 | 0.58 | 0.763 | -104.3 |
| | | Sampled @ 09:44 CS | | | | | | | |
| | | | | | | | | | |
| DPT0159 | 21-25 | 7.51 | 1,207 | — | 4.42 | 24.04 | 0.60 | 0.790 | -134.4 |
| 023.0 | 09:53 | 7.47 | 1,220 | — | 3.01 | 24.15 | 0.61 | 0.796 | -132.7 |
| | 09:54 | 7.42 | 1,226 | — | 2.71 | 24.10 | 0.61 | 0.797 | -125.0 |
| | 09:55 | | | | | | | | |
| | | Sampled @ | 09:56 | CS | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0161

Project Number: FR1681 CS

Date: 2-7-12

| DPT Location | Sample Depth | pH std units | Conductivity µ S/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity ppt % CS | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| DPT0161 | 10:27 | 7.41 | 897 | — | 3.70 | 25.35 | 0.44 | 0.581 | -138.7 |
| 8-12 | 10:28 | 7.41 | 893 | — | 2.74 | 25.35 | 0.44 | 0.577 | -141.0 |
| 010.0 | 10:29 | 7.41 | 884 | — | 2.61 | 25.33 | 0.43 | 0.571 | -139.8 |
| | | Sampled @ 10:30 CS | | | | | | | |
| | | | | | | | | | |
| DPT0161 | 10:33 | 7.41 | 1,572 | — | 6.01 | 26.28 | 0.79 | 1.019 | -148.2 |
| 12-16 | 10:34 | 7.37 | 1,562 | — | 4.12 | 26.42 | 0.78 | 1.010 | -143.1 |
| 014.0 | 10:35 | 7.34 | 1,550 | — | 3.96 | 2636 | 0.77 | 1.004 | -134.4 |
| | | Sampled @ 10:36 CS | | | | | | | |
| | | | | | | | | | |
| DPT0161 | 10:44 | 7.45 | 1,693 | — | 6.20 | 25.81 | 0.85 | 1.101 | -1468 |
| 16-20 | 10:45 | 7.44 | 1,698 | — | 2.84 | 26.28 | 0.86 | 1108 | -143.1 |
| 018.0 | 10:46 | 7.38 | 1,706 | — | 2.26 | 26.28 | 0.86 | 1.111 | -138.6 |
| | | Sampled @ 10:47 CS | | | | | | | |
| | | | | | | | | | |
| DPT0161 | 10:52 | 7.44 | 1,738 | — | 3.60 | 26.23 | 0.88 | 1.131 | -133.1 |
| 21-25 | 10:53 | 7.42 | 1,740 | — | 3.12 | 26.27 | 0.88 | 1.132 | -130.6 |
| 023.0 | 10:54 | 7.37 | 1,742 | — | 2.98 | 26.16 | 0.88 | 1.132 | -122.8 |
| | | Sampled @ 10:55 CS | | | | | | | |
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Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**
DPT Location: DPT0167

Project Number: F121681
Date: 2-7-12 CS

| DPT Location | Sample Depth | pH std units | Conductivity µS/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity ppt % ⓒ | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| DPT0167 | 13:17 | 7.82 | 773 | — | 8.42 | 23.69 | 0.37 | 0.497 | -164.7 |
| 8-12 | 13:18 | 7.84 | 754 | — | 6.97 | 23.59 | 0.37 | 0.487 | -160.3 |
| 010.0 | 13:19 | 7.74 | 746 | — | 6.51 | 23.51 | 0.36 | 0.483 | -162.7 |
| | | Sampled @ 13:20 CS | | | | | | | |
| | | | | | | | | | |
| DPT0167 | 13:26 | 7.70 | 1,439 | — | 3.83 | 24.11 | 0.73 | 0.943 | -148.4 |
| 12-16 | 13:27 | 7.64 | 1,454 | — | 3.50 | 24.03 | 0.73 | 0.947 | -137.5 |
| 014.0 | 13:28 | 7.60 | 1,457 | — | 3.76 | 23.89 | 0.73 | 0.946 | -128.4 |
| | | Sampled @ 13:29 CS | | | | | | | |
| | | | | | | | | | |
| DPT0167 | 13:36 | 7.65 | 1,647 | — | 3.59 | 24.27 | 0.83 | 1.065 | -1462 |
| 16-20 | 13:37 | 7.60 | 1,630 | — | 3.28 | 24.19 | 0.82 | 1.054 | -128.7 |
| 018.0 | 13:38 | 7.56 | 1,616 | — | 3.27 | 24.08 | 0.81 | 1.046 | -117.0 |
| | | Sampled @ 13:39 CS | | | | | | | |
| | | | | | | | | | |
| DPT0167 | 13:49 | 7.46 | 2,438 | — | 2.80 | 24.10 | 1.26 | 1.594 | -113.5 |
| 21-25 | 13:50 | 7.40 | 2,466 | — | 2.84 | 24.06 | 1.27 | 1.608 | -1001 |
| 023.0 | 13:51 | 7.36 | 2,477 | — | 2.87 | 23.99 | 1.28 | 1.612 | -93.7 |
| | | Sampled 13:52 CS | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0179

Project Number: FR1681 CS

Date: 02-07-12

| DPT Location | Sample Depth | pH std units | Conductivity µS/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity (PT ~~X~~ CS) | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| DPT0179 | 14:24 | 7.60 | 1,650 | — | 3.27 | 22.40 | 0.83 | 1.074 | -105.1 |
| 8-12 | 14:25 | 7.60 | 1,652 | — | 3.36 | 22.41 | 0.83 | 1.074 | -104.2 |
| 010.0 | 14:26 | 7.60 | 1,651 | — | 3.45 | 22.43 | 0.83 | 1.073 | -103.2 |
| | Sampled @ | | 14:27 | CS | | | | | |
| | | | | | | | | | |
| (CS) DPT0179 | 14:37 | 7.71 | 1,572 | — | 5.40 | 22.32 | 0.79 | 1.022 | -114.2 |
| 16-20 ~~12-16~~ | 14:38 | 7.71 | 1,574 | — | 5.28 | 22.43 | 0.80 | 1.036 | -111.7 |
| 018.0 ~~014.0~~ | 14:39 | 7.70 | 1,603 | — | 5.29 | 22.55 | 0.81 | 1.047 | -117.0 |
| | Sampled @ | | 14:40 | CS | | | - - | | |
| | | | | | | | | | |
| DPT0179 | 14:50 | 7.54 | 2,284 | — | 1.96 | 24.11 | 1.20 | 1.519 | -126.0 |
| 26-30 | 14:51 | 7.43 | 2,351 | — | 2.67 | 23.76 | 1.16 | 1.504 | -99.7 |
| 028.0 | 14:52 | 7.36 | 2,320 | — | 3.32 | 24.22 | 1.20 | 1.518 | -86.9 |
| | Sampled @ | | 14:53 | CS | 1.96 | 24.11 | 1.20 | 1.519 | -126.0 (CS) |
| | | | | | | | | | |
| DPT0179 | 15:08 | 7.53 | 2,286 | — | 4.43 | 24.63 | 1.18 | 1.494 | -133.8 |
| 31-35 | 15:09 | 7.48 | 2,312 | — | 3.56 | 24.80 | 1.19 | 1.510 | -131.6 |
| 033.0 | 15:10 | 7.45 | 2,327 | — | 3.46 | 24.87 | 1.19 | 1.514 | -124.2 |
| | | Sampled @ | 15:11 | CS | | | | | |
| | | | | | | | | | |
| DPT0179 | 15:25 | 7.61 | 2,566 | — | 1.56 | 24.37 | 1.33 | 1.674 | -147.5 |
| 36-40 | 15:26 | 7.55 | 2,585 | — | 1.20 | 24.54 | 1.34 | 1.689 | -139.7 |
| 038.0 | 15:27 | 7.50 | 2,604 | — | 1.11 | 24.69 | 1.34 | 1.696 | -132.9 |
| | | Sampled @ | 15:28 | CS | | | | | |
| | | | | | | | | | |
| DPT0179 | 15:39 | 7.58 | 3,153 | — | 3.07 | 23.75 | 1.63 | 2.030 | -135.6 |
| 41-45 | 15:40 | 7.54 | 3,104 | — | ~~CS~~ 1.25 | 24.36 | 1.61 | 2.005 | -126.9 |
| (CS) ~~X~~ 043.0 | 15:41 | (CS) ~~Sampled @ 15:42 CS~~ | | | 1.12 | 24.50 | 1.59 | 1.986 | -116.1 |
| | | 7.48 | 3,070 | — | ↗ | | | | |
| | | Sampled @ | 15:42 | CS | | | | | |
| | | | | | * note: tubing lost | | | water on way out | |
| | | | | | of DPT rod, placed | | | | |

tubing back into rod to pump more water for sample.

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT 0179

Project Number: FR1681

Date: 2-7-12 CS

| DPT Location | Sample Depth | pH std units | Conductivity µS/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity mg/L % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| DPT0179 | 16:02 | 7.42 | 3,919 | — | 2.74 | 24.16 | 2.05 | 2.536 | -128.7 |
| 46-50 | 16:03 | 7.47 | 3,924 | - | 1,54 | 24.24 | 2.08 | 2.554 | -127.2 |
| 048.0 | 16:04 | 7.45 | 3,930 | — | 1.73 | 24.28 | 2.08 | 2.555 | -124.9 |
| | | Sample @ 16:05 CS | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**
DPT Location: DPT 0180

Project Number: F12681
Date: 2-7-12 to 2-8-12 CS

| DPT Location | Sample Depth | pH std units | Conductivity µ S/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity ppt % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| DPT0180 | 16:29 | 7.71 | 909 | — | 2.82 | 23.31 | 0.45 | 0.593 | -168.4 |
| 8-12 | 16:30 | 7.71 | 914 | — | 2.24 | 23.26 | 0.45 | 0.595 | -173.0 |
| 010.0 | 16:31 | 7.71 | 915 | — | 2.13 | 23.19 | 0.45 | 0.594 | -174.3 |
| | Sampled @ 16:32 CS | | | | | | | | |
| 2-7-12 | | | | | | | | | |
| 2-8-12 | | | | | | | | | |
| DPT0180 | 07:59 | 7.21 | 747 | — | ADO | 22.42 | 0.37 | 0.487 | -182.7 |
| 16-20 | 08:00 | 7.01 | 749 | — | reading | 22.55 | 0.36 | 0.485 | -173.5 |
| 018.0 | 08:01 | 6.99 | 743 | — | abnormal, recalibrate CS | 22.70 | 0.36 | 0.482 | -164.0 |
| | Sampled @ 08:02 CS | | | | | | | | |
| | | | | | | | | | |
| DPT0180 | 08:13 | 7.14 | 978 | — | 5.77 | 21.83 | 0.51 | 0.664 | -171.9 |
| 26-30 | 08:14 | 7.16 | 1,023 | — | 4.67 | 21.72 | 0.51 | 0.668 | -173.5 |
| 028.0 | 08:15 | 7.17 | 1,029 | — | 4.06 | 21.68 | 0.51 | 0.670 | -177.6 |
| | Sampled @ 08:16 CS | | | | | | | | |
| | | | | | | | | | |
| DPT0180 | 08:33 | 7.14 | 1,393 | — | 3.52 | 22.59 | 0.71 | 0.917 | -169.1 |
| 31-35 | 08:34 | 7.09 | 1,421 | — | 3.08 | 23.06 | 0.71 | 0.924 | -155.3 |
| 033.0 | 08:35 | 7.05 | 1,418 | — | 3.02 | 23.31 | 0.71 | 0.919 | -150.8 |
| | | Sampled @ 08:36 CS | | | | | | | |
| | | | | | | | | | |
| DPT0180 | 08:51 | 7.11 | 1,612 | — | 5.88 | 22.55 | 0.83 | 1.080 | -153.19 |
| 36-40 | 08:52 | 7.05 | 1,882 | — | 4.33 | 23.01 | 0.86 | 1.103 | -144.0 |
| 038.0 | 08:53 | | 1,702 | — | 4.01 | 23.25 | 0.86 | 1.113 | -133.2 |
| | | Sampled @ 08:54 CS | | | | | | | |
| | | | | | | | | | |
| DPT0180 | 09:11 | 7.30 | 2,153 | — | 4.64 | 23.18 | 1.11 | 1.407 | -183.3 |
| 41-45 | 09:12 | 7.28 | 2,173 | — | 4.40 | 23.31 | 1.12 | 1.424 | -182.9 |
| 043.0 | 09:13 | 7.22 | 2,197 | — | 4.48 | 23.40 | 1.13 | 1.432 | -181.4 |
| | | Sampled @ 09:14 | | | CS | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**

DPT Location: DPT0180

Project Number: F21681

Date: 2-8-12 CS

| DPT Location | Sample Depth | pH std units | Conductivity µ S/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity ppt %S | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| DPT0180 | 09:27 | 7.32 | 3,150 | — | 4.94 | 23.11 | 1.67 | 2.081 | +186.2 |
| 46-50 | 09:28 | 7.29 | 3,238 | — | 4.16 | 23.25 | 1.71 | 2.130 | +180.2 |
| 048.0 | 09:29 | 7.26 | 3,297 | — | 4.18 | 23.34 | 1.74 | 2.160 | +176.5 |
| | | Sample @ 09:30 CS | | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**
DPT Location: DPT0181

Project Number: FR1681 CS
Date: 2-8-12

| DPT Location | Sample Depth | pH std units | Conductivity µS/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity (PPT %S) | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| DPT0181 | 10:50 | 6.79 | 836 | — | 3.52 | 21.67 | 0.41 | 0.540 | -111.3 |
| 8-12 | 10:51 | 6.71 | 926 | — | 3.34 | 21.54 | 0.40 | 0.533 | -105.1 |
| 010.0 | 10:52 | 6.66 | 817 | — | 3.30 | 21.42 | 0.40 | 0.528 | -100.2 |
| | | Sampled @ 10:53 CS | | | | | | | |
| | | | | | | | | | |
| DPT0181 | 11:02 | 6.69 | 932 | — | 3.93 | 22.71 | 0.46 | 0.600 | -124.6 |
| 16-20 | 11:03 | 6.68 | 915 | — | ~~6.68~~ 3.36 | 22.76 | 0.44 | 0.587 | -116.7 |
| 018.0 | 11:04 | 6.66 | 898 | — | 3.34 | 22.70 | 0.44 | 0.580 | -108.3 |
| | | Sampled @ 11:05 CS | | | | | | | |
| | | | | | | | | | |
| DPT0181 | 11:16 | 7.09 | 1,199 | — | 6.10 | 22.63 | 0.61 | 0.795 | -171.6 |
| 26-30 | 11:17 | 7.11 | 1,241 | — | 3.59 | 22.72 | 0.62 | 0.815 | -174.3 |
| 028.0 | 11:18 | 7.11 | 1,262 | — | 2.98 | 22.71 | 0.63 | 0.827 | -175.4 |
| | | Sampled @ 11:19 CS | | | | | | | |
| | | | | | | | | | |
| DPT0181 | 11:32 | 6.89 | 723 | — | 4.08 | 22.63 | 0.36 | 0.484 | -202.4 |
| 36-40 | 11:33 | 7.22 | 748 | — | 2.55 | 22.74 | 0.36 | 0.485 | -203.7 |
| 038.0 | 11:34 | 7.23 | 745 | — | 2.50 | 22.85 | 0.36 | 0.482 | -189.7 |
| | | Sampled @ 11:35 CS | | | | | | | |
| | | | | | | | | | |
| DPT0181 | 11:51 | 7.16 | 817 | — | 2.16 | 22.48 | 0.40 | 0.533 | -180.7 |
| 41-45 | 11:52 | 7.18 | 821 | — | 1.78 | 22.49 | 0.40 | 0.534 | -186.4 |
| 043.0 | 11:53 | 7.19 | 823 | — | 1.66 | 22.49 | 0.40 | 0.535 | -189.0 |
| | | Sampled @ 11:54 CS | | | | | | | |
| DPT0181 | 12:09 | 7.14 | 7,622 | — | 2.51 | 22.52 | 1.37 | 1.723 | -197.9 |
| 46-50 | 12:10 | 7.26 | 2,654 | — | 1.61 | 22.57 | 1.37 | 1.720 | -199.2 |
| 048.0 | 12:11 | 7.26 | 2,629 | — | 1.45 | 22.67 | 1.33 | 1.670 | -202.5 |
| | | Sampled @ 12:12 CS | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**
DPT Location: DPT0182

Project Number: FR1681 CS
Date: 2-8-12

| DPT Location | Sample Depth | pH std units | Conductivity µS/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity pt % (S) | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| DPT0182 | 14:04 | 6.16 | 931 | – | 2.55 | 21.93 | 0.45 | 0.595 | -94.1 |
| 8-12 | 14:05 | 6.05 | 904 | – | 1.92 | 21.71 | 0.44 | 0.573 | -87.1 |
| 010.0 | 14:06 | 5.96 | 886 | – | 1.67 | 21.54 | 0.43 | 0.561 | -85.3 |
| | | Sampled @ 14:07 CS | | | | | | | |
| | | | | | | | | | |
| DPT0182 | 14:13 | 6.19 | 901 | – | 1.61 | 21.90 | 0.44 | 0.586 | -93.8 |
| 16-20 | 14:14 | 6.27 | 907 | – | 1.59 | 22.10 | 0.45 | 0.592 | -97.8 |
| 018.0 | 14:15 | 6.29 | 917 | – | 1.59 | 22.11 | 0.46 | 0.602 | -101.0 |
| | | Sampled @ 14:16 CS | | | | | | | |
| | | | | | | | | | |
| DPT0182 | 14:20 | 6.86 | 676 | – | 3.49 | 23.90 | 0.35 | 0.463 | -162.8 |
| 26-30 | 14:21 | 6.91 | 717 | – | 1.72 | 23.91 | 0.35 | 0.469 | -161.1 |
| 028.0 | 14:22 | 6.89 | 722 | – | 1.37 | 23.76 | 0.35 | 0.470 | -154.9 |
| | | Sampled @ 14:23 CS | | | | | | | |
| | | | | | | | | | |
| DPT0182 | 14:36 | 6.79 | 710 | – | 2.70 | 23.58 | 0.35 | 0.465 | -166.6 |
| 36-40 | 14:37 | 6.82 | 717 | – | 1.63 | 23.73 | 0.35 | 0.467 | -164.2 |
| 038.0 | 14:38 | 6.77 | 718 | – | 1.37 | 23.72 | 0.35 | 0.466 | -158.4 |
| | | Sampled @ 14:39 CS | | | | | | | |
| | | | | | | | | | |
| DPT0182 | 15:02 | 6.67 | 716 | – | 2.59 | 23.01 | 0.35 | 0.468 | -147.0 |
| 41-45 | 15:03 | 6.57 | 722 | – | 1.89 | 23.14 | 0.35 | 0.470 | -148.1 |
| 043.0 | 15:04 | 6.66 | 723 | – | 1.72 | 23.14 | 0.35 | 0.469 | -144.1 |
| | | Sampled @ 1505 CS | | | | | | | |
| | | | | | | | | | |
| DPT0182 | 15:22 | 6.80 | 789 | – | 1.22 | 22.99 | 0.38 | 0.507 | -149.7 |
| 46-50 | 15:23 | 6.76 | 774 | – | 1.22 | 23.00 | 0.38 | 0.500 | -142.7 |
| 048.0 | 15:24 | 6.72 | 767 | – | 1.23 | 22.99 | 0.37 | 0.497 | -139.9 |
| | | Sampled @ 15:25 CS | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**
DPT Location: DPT0183

Project Number: FR1681
Date: 2-8-12 to 2-9-12 (S)

| DPT Location | Sample Depth | pH std units | Conductivity µ S/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity ppt (S) | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| DPT0183 | 16:42 | 6.65 | 820 | – | 8.71 | 20.93 | 0.40 | 0.530 | -82.7 |
| 8-12 | 16:43 | 6.67 | 815 | – | 5.79 | 20.91 | 0.40 | 0.530 | -81.2 |
| 010.0 | 16:44 | 6.68 | 815 | – | 5.48 | 20.89 | 0.40 | 0.529 | -80.2 |
| | Sampled @ | | 16:45 | CS | | | | | |
| 2-8-12 | | | | | | | | | |
| DPT0183 | 07:16 | 7.12 | 700 | – | 4.87 | 21.59 | 0.34 | 0.454 | -127.4 |
| 2-9-12 1620 | 07:17 | 7.12 | 697 | – | 4.45 | 21.64 | 0.34 | 0.452 | -124.4 |
| 018.0 | 07:18 | 7.12 | 695 | – | 4.15 | 21.66 | 0.34 | 0.451 | -122.2 |
| | Sampled @ | | 07:19 | CS | | | | | |
| DPT0183 | 07:29 | 7.10 | 697 | – | 2.29 | 21.08 | 0.34 | 0.455 | -123.6 |
| 2630 | 07:30 | 7.08 | 698 | – | 1.99 | 21.41 | 0.34 | 0.453 | -123.4 |
| 028.0 | 07:31 | 7.06 | 694 | – | 1.90 | 21.63 | 0.34 | 0.450 | -121.1 |
| | Sampled @ | | 07:32 | CS | | | | | |
| DPT0183 | 07:47 | 7.08 | 750 | – | 1.90 | 21.65 | 0.37 | 0.485 | -140.4 |
| 3640 | 07:48 | 7.06 | 739 | – | 1.41 | 22.00 | 0.36 | 0.476 | -133.1 |
| 038.0 | 07:49 | 7.03 | 729 | – | 1.35 | 22.14 | 0.35 | 0.471 | -126.2 |
| | Sampled @ | | 07:50 | CS | | | | | |
| DPT0183 | 08:04 | 7.11 | 719 | – | 4.36 | 22.08 | 0.35 | 0.465 | -136.1 |
| 4145 | 08:05 | 7.12 | 714 | – | 4.09 | 22.29 | 0.35 | 0.461 | -130.2 |
| 043.0 | 08:06 | 7.10 | 707 | – | 1.19 | 22.40 | 0.34 | 0.457 | -122.4 |
| | Sampled @ | | 08:07 | CS | | | | | |
| DPT0183 | 08:30 | 7.21 | 1,374 | – | ~~1.44~~ 1.34 (S) | 21.47 | 0.68 | 0.874 | -149.4 |
| 4650 | 08:31 | 7.23 | 1,313 | – | 1.04 | 21.96 | 0.64 | 0.827 | -147.6 |
| 048.0 | 08:32 | 7.21 | 1,217 | – | 1.14 | 22.11 | 0.59 | 0.768 | -143.9 |
| | Sampled @ | | 08:33 | CS | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**
DPT Location: DPT0177

Project Number: FR1681
Date: 2-9-12 CS

| DPT Location | Sample Depth | pH std units | Conductivity µS/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity pt % | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| DPT0177 | 11:03 | 7.42 | 844 | — | 3.32 | 22.81 | 0.41 | 0.547 | -149.5 |
| 8-12 | 11:04 | 7.37 | 840 | — | 2.78 | 22.89 | 0.41 | 0.545 | -152.2 |
| 010.0 | 11:05 | 7.41 | 838 | — | 2.68 | 22.89 | 0.41 | 0.544 | -153.2 |
| | | Sampled @ 11:07 CS | | | | | | | |
| | | | | | | | | | |
| DPT0177 | 11:15 | 7.17 | 1,277 | — | 2.12 | 23.48 | 0.64 | 0.828 | -135.8 |
| 12-16 | 11:16 | 7.14 | 1,267 | — | 1.27 | 23.66 | 0.62 | 0.813 | -133.1 |
| 014.0 | 11:17 | 7.12 | 1,238 | — | 1.14 | 23.67 | 0.61 | 0.797 | -129.1 |
| | | Sampled @ 11:18 CS | | | | | | | |
| | | | | | | | | | |
| DPT0177 | 11:24 | 7.22 | 1,393 | — | 6.58 | 24.39 | 0.70 | 0.904 | -141.7 |
| 16-20 | 11:25 | 7.17 | 1,390 | — | 5.61 | 24.26 | 0.69 | 0.900 | -131.7 |
| 018.0 | 11:26 | 7.11 | 1,383 | — | 4.99 | 24.14 | 0.69 | 0.897 | -126.8 |
| | | Sampled @ 11:27 CS | | | | | | | |
| | | | | | | | | | |
| DPT0177 | 11:33 | 7.15 | 1,718 | — | 6.34 | 24.12 | 0.87 | 1.119 | -139.0 |
| 21-25 | 11:34 | 7.14 | 1,727 | — | 4.19 | 24.35 | 0.88 | 1.130 | -139.1 |
| 023.0 | 11:35 | 7.13 | 1,745 | — | 3.32 | 24.38 | 0.88 | 1.137 | -134.3 |
| | | Sampled @ 11:36 CS | | | | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM**

DPT Location: A - DPT 0184

Project Number: FR1681

Date: 2-9-12 CS

| DPT Location | Sample Depth | pH std units | Conductivity µS/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity ~~pct~~ % (S) | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| DPT0184 | ~~A~~ | 13:33 | 7.16 | 717 | — | 2.37 | 24.77 | 0.35 | 0.462 | -116.2 |
| | 8-12 | 13:34 | 7.11 | 706 | — | 2.10 | 24.60 | 0.34 | 0.455 | -109.5 |
| | 010.0 | 13:35 | 7.08 | 696 | — | 1.92 | 24.48 | 0.34 | 0.449 | -104.6 |
| | | Sampled @ | 13:36 | CS | | | | | | |
| DPT0184 | ~~A~~ | 13:43 | 7.22 | 1,594 | — | 0.76 | 26.70 | 0.80 | 1.037 | -149.5 |
| | 16-20 | 13:44 | 7.22 | 1,597 | — | 0.79 | 26.65 | 0.80 | 1.039 | -147.8 |
| | 018.0 | 13:45 | 7.21 | 1,599 | — | 0.73 | 26.57 | 0.80 | 1.039 | -147.5 |
| | | Sampled @ | 13:46 | CS | | | | | | |
| DPT0184 | ~~A~~ | 13:53 | 7.24 | 1,633 | — | 1.34 | 25.96 | 0.83 | 1.078 | -126.3 |
| | 26-30 | 13:54 | 7.15 | 1,662 | — | 0.71 | 26.02 | 0.84 | 1.082 | -123.2 |
| | 028.0 | 13:55 | | 1,666 | — | 0.66 | 26.01 | 0.84 | 1.083 | -124.4 |
| | | Sampled @ | 13:56 | CS | | | | | | |
| DPT0184 | ~~A~~ | 14:10 | 7.22 | 1,627 | — | 3.34 | 25.64 | 0.82 | 1.067 | -154.7 |
| | 31-35 | 14:11 | 7.17 | 1,650 | — | 2.63 | 25.86 | 0.83 | 1.079 | -150.0 |
| | 033.0 | 14:12 | 7.17 | 1,664 | — | 2.35 | 25.92 | 0.84 | 1.085 | -144.7 |
| | | Sampled @ | 14:13 | CS | | | | | | |
| DPT0184 | ~~A~~ | 14:27 | 7.29 | 2,122 | — | 3.03 | 26.43 | 1.09 | 1.392 | -162.8 |
| | 36-40 | 14:28 | 7.29 | 2,149 | — | 1.99 | 26.67 | 1.10 | 1.399 | -163.2 |
| | 038.0 | 14:29 | 7.29 | 2,155 | — | 1.80 | 26.71 | 1.10 | 1.401 | -160.7 |
| | | Sampled @ | 14:30 | CS | | | | | | |
| DPT0184 | ~~A~~ | 14:43 | 7.38 | 3,160 | — | 2.54 | 26.67 | 1.64 | 2.055 | -174.3 |
| | 41-45 | 14:44 | 7.40 | 3,167 | — | 1.74 | 26.67 | 1.65 | 2.062 | -173.4 |
| | 043.0 | 14:45 | 7.39 | 3,178 | — | 1.57 | 26.59 | 1.65 | 2.069 | -172.3 |
| | | Sampled @ | 14:46 | CS | | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**
DPT Location:

Project Number: F21681
Date: 2-9-12 CS

DPT0484

| DPT Location | Sample Depth | pH std units | Conductivity µ S/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity ppt % (S) | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| A | 14:57 | 7.39 | 3,749 | — | 1.93 | 25.99 | 2.00 | 2.476 | -184.7 |
| 46-50 | 14:58 | 7.40 | 3,845 | — | 1.59 | 25.94 | 2.04 | 2,520 | -185.4 |
| 048.0 | 14:59 | 7.39 | 3,901 | — | 1.52 | 25.85 | 2.07 | 2.551 | -182.4 |
| | Sampled @ 15:00 | | | CS | | | | | |

Note: Insert units if not provided on sheet.

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**DPT GEOCHEMICAL DATA FORM**
DPT Location: IDW

Project Number: FR1681 CS
Date: 2-9-12

| DPT Location | Sample Depth | pH std units | Conductivity S/cm | Turbidity NTUs | Diss. $O_2$ g/L | Temp deg. C | Salinity | TDS g/L | ORP mV |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| CRHE-IDW | | 188738-20120209 | | | | | | | |
| | | Sampled @ | | 17:10 | CS | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| CRHE-IDW | | 188736-20120209 | | | | | | | |
| | | Sampled @ | | 17:11 | CS | | | | |

Note: Insert units if not provided on sheet.

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/2/12 M. Stackhouse

| Time | I DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0907 | 0185 | 16-20 | 7.80 | 1.549 | — | 3.32 | 27.21 | — | — | -168.9 | brown |
| 0909 | ↓ | ↓ | 7.43 | 1.568 | — | 2.14 | 27.11 | — | — | -174.3 | ↓ |
| 0911 | ↓ | ↓ | 7.37 | 1.568 | — | 2.00 | 27.09 | — | — | -176.2 | ↓ |
| Sampled @ | | | 0911 | | | | | | | | not shown on display |
| | | | | | | | | | | | |
| 0917 | 0185 | 21-25 | 7.54 | 1.449 | — | 3.26 | 26.90 | 0.72 | 0.943 | -131.7 | lt brown |
| 0919 | ↓ | ↓ | 7.41 | 1.464 | — | 1.64 | 26.49 | 0.74 | 0.957 | -133.0 | ↓ |
| 0921 | ↓ | ↓ | 7.36 | 1.476 | — | 1.51 | 26.48 | 0.74 | 0.961 | -133.7 | ↓ |
| Sampled @ | | | 0921 | | | | | | | | |
| | | | | | | | | | | | |
| 0933 | 0185 | 26-30 | 7.39 | 1.705 | — | 11.11 | 26.93 | 0.86 | 1.110 | -134.0 | lt brown |
| 0935 | ↓ | ↓ | 7.37 | 1.709 | — | 10.24 | 26.94 | 0.86 | 1.113 | -137.0 | ↓ |
| 0937 | ↓ | ↓ | 7.35 | 1.712 | — | 8.81 | 26.92 | 0.86 | 1.112 | -138.7 | ↓ |
| Sampled @ | | | 0937 | | | | | | | | |
| | | | | | | | | | | | |
| 0945 | 0185 | 31-35 | 7.31 | 1.972 | — | 5.01 | 26.96 | 1.9 | 1.297 | -148.6 | lt brown |
| 0947 | ↓ | ↓ | 7.33 | 1.999 | — | 3.30 | 26.96 | 1.01 | 1.294 | -149.5 | ↓ |
| 0949 | ↓ | ↓ | 7.34 | 1.982 | — | 2.92 | 26.93 | 1.00 | 1.276 | -149.5 | ↓ |
| Sampled @ | | | 0949 | | | | | | | | |
| | | | | | | | | | | | |
| 1000 | 0185 | 36-40 | 7.44 | 1.846 | — | 4.75 | 27.47 | 0.94 | 1.206 | -186.6 | gray |
| 1002 | ↓ | ↓ | 7.43 | 1.857 | — | 2.64 | 27.46 | 0.94 | 1.209 | -190.6 | ↓ |
| 1004 | ↓ | ↓ | 7.43 | 1.862 | — | 2.26 | 27.45 | 0.94 | 1.214 | -193.6 | ↓ |
| Sampled @ | | | 1004 | | | | | | | | |
| | | | | | | | | | | | |
| 1018 | 0185 | 41-45 | 7.63 | 1.051 | — | 1.90 | 28.68 | 0.41 | 0.540 | -228.3 | gray |
| 1020 | ↓ | ↓ | 7.60 | 0.713 | — | 1.65 | 28.73 | 0.32 | 0.423 | -229.2 | ↓ |
| 1022 | ↓ | ↓ | 7.59 | 0.617 | — | 1.48 | 28.75 | 0.29 | 0.392 | -230.5 | ↓ |
| Sampled @ | | | 1022 | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/2/12 M. Stackhouse.

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1043 | 0185 | 56-60 | 7.68 | 2.611 | — | 9.01 | 28.01 | 1.37 | 1.739 | -186.6 | gray |
| 1045 | ↓ | ↓ | 7.67 | 2.696 | — | 5.17 | 27.95 | 1.40 | 1.771 | -192.8 | ↓ |
| 1047 | ↓ | ↓ | 7.666 | 2.749 | — | 4.00 | 27.97 | 1.43 | 1.812 | -197.5 | ↓ |
| Sampled @ 1047 | | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681

Date: 10/2/12 M. Stackhouse.

| Time | H DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1208 | 0186 | 26-30 | 7.96 | 0.665 | — | 5.40 | 28.02 | 0.24 | 0.303 | -189.7 | gray |
| 1210 | ↓ | ↓ | 7.81 | 0.383 | — | 4.80 | 27.97 | 0.15 | 0.207 | -193.9 | ↓ |
| 1212 | ↓ | ↓ | 7.72 | 0.310 | — | 4.90 | 27.94 | 0.14 | 0.197 | -196.6 | ↓ |
| Sampled @ 1212 | | | | | | | | | | | |
| 1223 | 0186 | 31-35 | 7.56 | 1.739 | — | 4.81 | 27.72 | 0.90 | 1.129 | -153.7 | gray |
| 1225 | ↓ | ↓ | 7.47 | 1.834 | — | 3.62 | 27.52 | 0.94 | 1.212 | -156.1 | ↓ |
| 1227 | ↓ | ↓ | 7.42 | 1.899 | — | 3.31 | 27.20 | 0.97 | 1.245 | -156.9 | ↓ |
| Sampled @ 1227 | | | | | | | | | | | |
| 1236 | 0186 | 36-40 | 7.68 | 2.006 | — | 8.22 | 27.34 | 1.04 | 1.367 | -163.5 | gray |
| 1238 | ↓ | ↓ | 7.60 | 2.108 | — | 5.61 | 26.82 | 1.09 | 1.389 | -164.2 | ↓ |
| 1240 | ↓ | ↓ | 7.56 | 2.145 | — | 5.29 | 26.60 | 1.09 | 1.402 | -164.3 | ↓ |
| Sampled @ 1240 | | | | | | | | | | | |
| 1253 | 0186 | 41-45 | 7.71 | 1.753 | — | 5.56 | 27.72 | 0.95 | 1.238 | -188.7 | gray |
| 1255 | ↓ | ↓ | 7.69 | 1.982 | — | 3.41 | 27.50 | 1.03 | 1.330 | -199.5 | ↓ |
| 1257 | ↓ | ↓ | 7.68 | 2.082 | — | 3.60 | 27.28 | 1.08 | 1.388 | -202.5 | ↓ |
| Sampled @ 1257 | | | | | | | | | | | |
| 1310 | 0186 | 56-60 | 7.71 | 2.662 | — | 1.68 | 27.58 | 1.39 | 1.786 | -210.3 | gray |
| 1312 | ↓ | ↓ | 7.70 | 2.799 | — | 1.52 | 27.32 | 1.45 | 1.834 | -211.5 | ↓ |
| 1314 | ↓ | ↓ | 7.70 | 2.810 | — | 1.47 | 27.13 | 1.44 | 1.810 | -211.0 | ↓ |
| Sampled @ 1314 | | | | | | | | | | | |
| | ~~0186~~ | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/2/12 M. Stackhouse

| Time | G DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1345 | 0187 | 26-30 | 8.21 | 0.831 | — | 4.30 | 28.12 | 0.40 | 0.534 | -194.0 | gray |
| 1347 | ↓ | ↓ | 8.06 | 0.817 | — | 3.41 | 28.00 | 0.40 | 0.528 | -201.6 | ↓ |
| 1349 | ↓ | ↓ | 8.01 | 0.809 | — | 3.10 | 28.01 | 0.39 | 0.524 | -205.4 | ↓ |
| Sampled @ 1349 | | | | | | | | | | | |
| 1359 | 0187 | 31-35 | 7.85 | 1.610 | — | 6.33 | 27.07 | 0.88 | 1.171 | +19.5 | gray |
| 1401 | ↓ | ↓ | 7.53 | 1.959 | — | 3.81 | 25.52 | 1.03 | 1.333 | -114.1 | ↓ |
| 1403 | ↓ | ↓ | 7.39 | 2.083 | — | 3.18 | 24.62 | 1.07 | 1.359 | -109.1 | ↓ |
| Sampled @ 1403 | | | | | | | | | | | |
| 1414 | 0187 | 36-40 | 7.69 | 1.872 | — | 4.12 | 27.50 | 0.96 | 1.243 | -173.8 | gray |
| 1416 | ↓ | ↓ | 7.57 | 1.945 | — | 2.93 | 27.36 | 1.02 | 1.295 | -179.9 | ↓ |
| 1418 | ↓ | ↓ | 7.52 | 2.039 | — | 2.46 | 27.20 | 1.05 | 1.353 | -182.2 | |
| Sampled @ 1418 | | | | | | | | | | | |
| 1453 | 0187 | 41-45 | 7.72 | 1.726 | — | 4.51 | 28.59 | 0.90 | 1.191 | -170.6 | gray |
| 1455 | ↓ | ↓ | 7.61 | 1.944 | — | 2.44 | 27.65 | 1.04 | 1.346 | -182.4 | ↓ |
| 1457 | ↓ | ↓ | 7.53 | 2.128 | — | 1.97 | 27.06 | 0.99 | 1.272 | -181.9 | |
| Sampled @ 1457 | | | | | | | | | | | |
| 1513 | 0187 | 56-60 | 7.75 | 2.313 | — | 2.79 | 27.92 | 1.16 | 1.474 | -212.2 | gray |
| 1515 | ↓ | ↓ | 7.72 | 2.262 | — | 1.86 | 27.84 | 1.15 | 1.473 | -218.8 | ↓ |
| 1517 | ↓ | ↓ | 7.72 | 2.273 | — | 1.70 | 27.75 | 1.16 | 1.484 | -223.6 | ↓ |
| Sampled @ 1517 | | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/2/12 M. Stackhouse

| Time | G DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1345 | 0187 | 26-30 | 8.21 | 0.831 | — | 4.30 | 28.12 | 0.40 | 0.534 | -194.0 | gray |
| 1347 | ↓ | ↓ | 8.06 | 0.817 | — | 3.41 | 28.00 | 0.40 | 0.528 | -201.6 | ↓ |
| 1349 | ↓ | ↓ | 8.01 | 0.809 | — | 3.10 | 28.01 | 0.39 | 0.524 | -205.4 | ↓ |
| Sampled @ 1349 | | | | | | | | | | | |
| 1359 | 0187 | 31-35 | 7.85 | 1.610 | — | 6.33 | 27.07 | 0.88 | 1.171 | +19.5 | gray |
| 1401 | ↓ | ↓ | 7.53 | 1.959 | — | 3.81 | 25.52 | 1.03 | 1.333 | -114.1 | ↓ |
| 1403 | ↓ | ↓ | 7.39 | 2.083 | — | 3.18 | 24.62 | 1.07 | 1.359 | -109.1 | ↓ |
| Sampled @ 1403 | | | | | | | | | | | |
| 1414 | 0187 | 36-40 | 7.69 | 1.872 | — | 4.12 | 27.50 | 0.96 | 1.243 | -173.8 | gray |
| 1416 | ↓ | ↓ | 7.57 | 1.945 | — | 2.93 | 27.36 | 1.02 | 1.295 | -179.9 | ↓ |
| 1418 | ↓ | ↓ | 7.52 | 2.039 | — | 2.46 | 27.20 | 1.05 | 1.353 | -182.2 | |
| Sampled @ 1418 | | | | | | | | | | | |
| 1453 | 0187 | 41-45 | 7.72 | 1.726 | — | 4.51 | 28.59 | 0.90 | 1.191 | -170.6 | gray |
| 1455 | ↓ | ↓ | 7.61 | 1.944 | — | 2.44 | 27.65 | 1.04 | 1.346 | -182.4 | ↓ |
| 1457 | ↓ | ↓ | 7.53 | 2.128 | — | 1.97 | 27.06 | 0.99 | 1.272 | -181.9 | |
| Sampled @ 1457 | | | | | | | | | | | |
| 1513 | 0187 | 56-60 | 7.75 | 2.313 | — | 2.79 | 27.92 | 1.16 | 1.474 | -212.2 | gray |
| 1515 | ↓ | ↓ | 7.72 | 2.262 | — | 1.86 | 27.84 | 1.15 | 1.473 | -218.8 | ↓ |
| 1517 | ↓ | ↓ | 7.72 | 2.273 | — | 1.70 | 27.75 | 1.16 | 1.484 | -223.6 | ↓ |
| Sampled @ 1517 | | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/2/12 & 10/3/12 M. Stackhouse

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1555 | 0188 | 26-30 | 8.01 | 0.923 | — | 4.02 | 27.50 | 0.45 | 0.598 | -160.1 | gray |
| 1557 | ↓ | ↓ | 7.67 | 0.912 | — | 3.02 | 27.36 | 0.44 | 0.589 | -171.8 | ↓ |
| 1559 | ↓ | ↓ | 7.55 | 0.897 | — | 2.56 | 27.31 | 0.44 | 0.579 | -170.4 | ↓ |
| Sampled @ 1559 | | | | | | | | | | | |
| 1609 | 0188 | 31-35 | 7.36 | 1.571 | — | 4.00 | 27.52 | 0.81 | 1.042 | -154.4 | gray |
| 1611 | ↓ | ↓ | 7.32 | 1.661 | — | 2.34 | 27.42 | 0.84 | 1.091 | -161.1 | ↓ |
| 1613 | ↓ | ↓ | 7.34 | 1.681 | — | 1.88 | 27.25 | 0.85 | 1.095 | -162.5 | ↓ |
| Sampled @ 1613 | | | | | | | | | | | |
| 0810 | 0188 | 36-40 | 8.00 | 1.081 | — | 12.69 | 24.37 | 0.42 | 0.520 | -97.9 | gray |
| 0812 | ↓ | ↓ | 7.95 | 0.713 | — | 10.68 | 24.47 | 0.32 | 0.422 | -119.7 | ↓ |
| 0814 | ↓ | ↓ | 7.95 | 0.622 | — | 9.03 | 24.59 | 0.29 | 0.392 | -134.7 | ↓ |
| Sampled @ 0814 | | | | | | | | | | | |
| 0828 | 0188 | 41-45 | 8.03 | 1.793 | — | 5.61 | 25.51 | 0.93 | 1.198 | -76.9 | gray |
| 0830 | ↓ | ↓ | 7.79 | 1.854 | — | 4.04 | 25.42 | 0.93 | 1.210 | -80.2 | ↓ |
| 0832 | ↓ | ↓ | 7.69 | 1.869 | — | 3.72 | 25.37 | 0.95 | 1.221 | -80.9 | ↓ |
| Sampled @ 0832 | | | | | | | | | | | |
| 0846 | 0188 | 56-60 | 7.83 | 2.051 | — | 4.03 | 25.44 | 1.07 | 1.365 | -110.7 | gray |
| 0848 | ↓ | ↓ | 7.80 | 2.133 | — | 4.04 | 25.42 | 1.11 | 1.417 | -118.5 | ↓ |
| 0850 | ↓ | ↓ | 7.78 | 2.208 | — | 3.78 | 25.37 | 1.15 | 1.461 | -122.3 | ↓ |
| Sampled @ 0850 | | | | | | | | | | | |

10/2/12

10/3/12

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/3/12 M. Stackhouse

| Time | V8 DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0948 | 0189 MWS | 51-55 | | Low Yield - Sample Only | | | | | | | brown/ silver |
| 0950 | 0174 | ↓ | | | | | | | | | |
| 0952 | ↓ | ↓ | | | — | | | | | | |
| Sampled @ | | | 0952 | | | | | | | | |
| | 0174 | | | | | | | | | | |
| 1013 | 0189 MWS | 56-60 | 8.14 | 2.583 | — | 3.11 | 27.48 | 1.35 | 1.709 | -63.4 | gray |
| 1015 | ↓ | ↓ | 7.87 | 2.654 | — | 1.87 | 26.70 | 1.37 | 1.737 | -74.8 | ↓ |
| 1017 | ↓ | ↓ | 7.76 | 2.681 | — | 1.63 | 26.37 | 1.38 | 1.746 | -79.9 | ↓ |
| Sampled @ | | | 1017 | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/3/12 M. Stackhouse.

| Time | V16 DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1513 | ~~0192~~ | 56-60 | 8.00 | 3.639 | — | 4.33 | 30.90 | 1.92 | 2.393 | -64.8 | gray |
| 1515 | 0149 | ↓ | 7.80 | 3.679 | — | 2.67 | 30.71 | 1.91 | 2.382 | -79.0 | ↓ |
| 1517 | ↓ | ↓ | 7.71 | 3.658 | — | 2.35 | 30.50 | 1.91 | 2.377 | -86.3 | |
| Sampled @ | | | 1517 | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/2/12 & 10/3/12 M. Stackhouse

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 1555 | 0188 | 26-30 | 8.01 | 0.923 | — | 4.02 | 27.50 | 0.45 | 0.598 | -160.1 | gray |
| 1557 | ↓ | ↓ | 7.67 | 0.912 | — | 3.02 | 27.36 | 0.44 | 0.589 | -171.8 | ↓ |
| 1559 | ↓ | ↓ | 7.55 | 0.897 | — | 2.56 | 27.31 | 0.44 | 0.579 | -170.4 | ↓ |
| Sampled @ 1559 | | | | | | | | | | | |
| 1609 | 0188 | 31-35 | 7.36 | 1.571 | — | 4.00 | 27.52 | 0.81 | 1.042 | -154.4 | gray |
| 1611 | ↓ | ↓ | 7.32 | 1.661 | — | 2.34 | 27.42 | 0.84 | 1.091 | -161.1 | ↓ |
| 1613 | ↓ | ↓ | 7.34 | 1.681 | — | 1.88 | 27.25 | 0.85 | 1.095 | -162.5 | ↓ |
| Sampled @ 1613 | | | | | | | | | | | |
| 0810 | 0188 | 36-40 | 8.00 | 1.081 | — | 12.69 | 24.37 | 0.42 | 0.520 | -97.9 | gray |
| 0812 | ↓ | ↓ | 7.95 | 0.713 | — | 10.68 | 24.47 | 0.32 | 0.422 | -119.7 | ↓ |
| 0814 | ↓ | ↓ | 7.95 | 0.622 | — | 9.03 | 24.59 | 0.29 | 0.392 | -134.7 | ↓ |
| Sampled @ 0814 | | | | | | | | | | | |
| 0828 | 0188 | 41-45 | 8.03 | 1.793 | — | 5.61 | 25.51 | 0.93 | 1.198 | -76.9 | gray |
| 0830 | ↓ | ↓ | 7.79 | 1.854 | — | 4.04 | 25.42 | 0.93 | 1.210 | -80.2 | ↓ |
| 0832 | ↓ | ↓ | 7.69 | 1.869 | — | 3.72 | 25.37 | 0.95 | 1.221 | -80.9 | ↓ |
| Sampled @ 0832 | | | | | | | | | | | |
| 0846 | 0188 | 56-60 | 7.83 | 2.051 | — | 4.03 | 25.44 | 1.07 | 1.365 | -110.7 | gray |
| 0848 | ↓ | ↓ | 7.80 | 2.133 | — | 4.04 | 25.42 | 1.11 | 1.417 | -118.5 | ↓ |
| 0850 | ↓ | ↓ | 7.78 | 2.208 | — | 3.78 | 25.37 | 1.15 | 1.461 | -122.3 | ↓ |
| Sampled @ 0850 | | | | | | | | | | | |

10/2/12

10/3/12

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/3/12 M. Stackhouse

| Time | V8 DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0948 | 0189 MWS | 51-55 | | Low Yield - Sample Only | | | | | | | brown/ silver |
| 0950 | 0174 | ↓ | | | | | | | | | |
| 0952 | ↓ | ↓ | | | — | | | | | | |
| Sampled @ | | | 0952 | | | | | | | | |
| | 0174 | | | | | | | | | | |
| 1013 | 0189 MWS | 56-60 | 8.14 | 2.583 | — | 3.11 | 27.48 | 1.35 | 1.709 | -63.4 | gray |
| 1015 | ↓ | ↓ | 7.87 | 2.654 | — | 1.87 | 26.70 | 1.37 | 1.737 | -74.8 | ↓ |
| 1017 | ↓ | ↓ | 7.76 | 2.681 | — | 1.63 | 26.37 | 1.38 | 1.746 | -79.9 | ↓ |
| Sampled @ | | | 1017 | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE/FR1681

Date: 10/3/12 M. Stackhouse

| Time | A DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1050 | D190 | 26-30 | 8.03 | 1.273 | — | 7.80 | 28.87 | 0.69 | 0.748 | -57.0 | gray |
| 1052 | ↓ | ↓ | 7.72 | 1.065 | — | 5.41 | 28.64 | 0.50 | 0.660 | -60.2 | ↓ |
| 1054 | ↓ | ↓ | 7.65 | 0.993 | — | 4.66 | 28.66 | 0.48 | 0.633 | -61.7 | ↓ |
| Sampled @ 1054 | | | | | | | | | | | |
| 1103 | 0190 | 31-35 | 7.86 | 1.442 | — | 7.33 | 29.03 | 0.74 | 0.973 | -70.5 | gray |
| 1105 | ↓ | ↓ | 7.67 | 1.510 | — | 7.64 | 28.75 | 0.76 | 0.987 | -76.5 | ↓ |
| 1107 | ↓ | ↓ | 7.59 | 1.522 | — | 4.72 | 28.65 | 0.76 | 0.992 | -79.5 | ↓ |
| Sampled @ 1107 | | | | | | | | | | | |
| 1118 | 0190 | 36-40 | 7.69 | 1.539 | — | 8.72 | 30.32 | 0.80 | 1.057 | -96.7 | gray |
| 1120 | ↓ | ↓ | 7.66 | 1.664 | — | 6.20 | 30.13 | 0.84 | 1.099 | -103.2 | ↓ |
| 1122 | ↓ | ↓ | 7.65 | 1.710 | — | 5.41 | 29.94 | 0.86 | 1.123 | -104.7 | ↓ |
| Sampled @ 1122 | | 41-45 | | | | | | | | | |
| 1130 | 0190 | ↓ | 7.73 | 2.115 | — | 6.60 | 29.95 | 0.97 | 1.250 | -68.6 | gray |
| 1132 | ↓ | ↓ | 7.67 | 1.943 | — | 4.62 | 29.64 | 0.99 | 1.282 | -79.4 | ↓ |
| 1134 | ↓ | ↓ | 7.61 | 1.988 | — | 4.13 | 29.24 | 1.01 | 1.299 | -82.4 | ↓ |
| Sampled @ 1134 | | | | | | | | | | | |
| 1148 | 0190 | 56-60 | 7.75 | 2.828 | — | 4.81 | 30.64 | 1.48 | 1.883 | -81.6 | gray |
| 1150 | ↓ | ↓ | 7.69 | 2.937 | — | 3.16 | 30.20 | 1.82 | 1.927 | -87.1 | ↓ |
| 1152 | ↓ | ↓ | 7.67 | 2.985 | — | 2.90 | 30.03 | 1.55 | 1.986 | -88.9 | ↓ |
| Sampled @ 1152 | | | | | | | | | | | |

Notes:

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ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE/FR1681

Date: 10/3/12 M. Stackhouse

| Time | F DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1325 | 0191 | 26-30 | 7.85 | 0.856 | — | 22.16 | 29.01 | 0.42 | 0.557 | -41.1 | gray |
| 1327 | ↓ | ↓ | 7.69 | 0.854 | — | 16.66 | 28.06 | 0.41 | 0548 | -35.0 | ↓ |
| 1329 | ↓ | ↓ | 7.86 | 0.835 | — | 12.51 | 27.63 | 0.40 | 0.536 | -30.7 | ↓ |
| Sampled @ 1329 | | | | | | | | | | | |
| 1340 | 0191 | 31-35 | 7.83 | 0.834 | — | 10.05 | 29.92 | 0.40 | 0.543 | -79.8 | gray |
| 1342 | ↓ | ↓ | 7.63 | 0.835 | — | 8.30 | 29.65 | 0.41 | 0.544 | -84.0 | ↓ |
| 1344 | ↓ | ↓ | 7.68 | 0.837 | — | 7.06 | 29.68 | 0.41 | 0.545 | -87.2 | ↓ |
| Sampled @ 1344 | | | | | | | | | | | |
| 1355 | 0191 | 36-40 | 7.70 | 1.904 | — | 7.00 | 30.14 | 0.95 | 1.229 | -24.4 | gray |
| 1357 | ↓ | ↓ | 7.47 | 1.883 | — | 4.33 | 29.45 | 0.95 | 1.220 | -29.3 | ↓ |
| 1359 | ↓ | ↓ | 7.38 | 1.876 | — | 3.54 | 29.26 | 0.94 | 1.220 | -29.0 | ↓ |
| Sampled @ 1359 | | | | | | | | | | | |
| 1416 | 0191 | 41-45 | 7.52 | 2.045 | — | 4.15 | 31.46 | 1.06 | 1.230 | -79.4 | gray |
| 1418 | ↓ | ↓ | 7.51 | 1.898 | — | 2.73 | 31.41 | 0.95 | 1.237 | -78.9 | ↓ |
| 1420 | ↓ | ↓ | 7.50 | 1.908 | — | 2.45 | 31.37 | 0.96 | 1.243 | -78.6 | ↓ |
| Sampled @ 1420 | | | | | | | | | | | |
| 1433 | 0191 | 56-60 | 7.67 | 2.994 | — | 4.78 | 30.90 | 1.54 | 1.931 | -61.5 | gray |
| 1435 | ↓ | ↓ | 7.62 | 2.965 | — | 3.14 | 30.14 | 1.53 | 1.929 | -69.3 | ↓ |
| 1437 | ↓ | ↓ | 7.60 | 2.976 | — | 2.79 | 29.70 | 1.54 | 1.942 | -71.9 | ↓ |
| Sampled @ 1437 | | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/3/12 M. Stackhouse.

| Time | V16 DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1513 | ~~0192~~ | 56-60 | 8.00 | 3.639 | — | 4.33 | 30.90 | 1.92 | 2.393 | -64.8 | gray |
| 1515 | 0149 | ↓ | 7.80 | 3.679 | — | 2.67 | 30.71 | 1.91 | 2.382 | -79.0 | ↓ |
| 1517 | ↓ | ↓ | 7.71 | 3.658 | — | 2.35 | 30.50 | 1.91 | 2.377 | -86.3 | ↓ |
| Sampled @ | | | 1517 | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681

Date: 10/3/12 M. Stackhouse

| Time | B DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1542 | 0189 | 16-20 | 7.78 | 1.451 | — | 8.06 | 30.59 | 0.72 | 0.948 | -72.4 | gray |
| 1544 | ↓ | ↓ | 7.66 | 1.458 | — | 6.11 | 30.43 | 0.72 | 0.945 | -74.6 | ↓ |
| 1546 | ↓ | ↓ | 7.62 | 1.450 | — | 5.40 | 30.29 | 0.72 | 0.939 | -75.0 | ↓ |
| Sampled @ 1546 | | | | | | | | | | | |
| 1554 | 0189 | 21-25 | 7.51 | 1.318 | — | 7.74 | 29.30 | 0.66 | 0.875 | -107.9 | gray |
| 1556 | ↓ | ↓ | 7.47 | 1.357 | — | 5.00 | 29.47 | 0.67 | 0.887 | -100.2 | ↓ |
| 1558 | ↓ | ↓ | 7.46 | 1.354 | — | 4.17 | 29.53 | 0.67 | 0.879 | -96.6 | ↓ |
| Sampled @ 1558 | | | | | | | | | | | |
| 1625 | 0189 | 26-30 | 7.64 | 1.241 | — | 7.31 | 31.00 | 0.60 | 0.786 | -46.2 | gray |
| 1627 | ↓ | ↓ | 7.53 | 1.200 | — | 5.39 | 30.60 | 0.59 | 0.776 | -46.7 | ↓ |
| 1629 | ↓ | ↓ | 7.47 | 1.190 | — | 4.66 | 30.30 | 0.58 | 0.769 | -45.8 | ↓ |
| Sampled @ 1629 | | | | | | | | | | | |
| 1636 | 0189 | 31-35 | 7.53 | 1.307 | — | 5.47 | 28.75 | 0.62 | 0.812 | -92.3 | gray |
| 1638 | ↓ | ↓ | 7.51 | 1.250 | — | 5.05 | 27.68 | 0.62 | 0.820 | -85.0 | ↓ |
| 1640 | ↓ | ↓ | 7.48 | 1.284 | — | 4.64 | 27.14 | 0.61 | 0.807 | -76.6 | ↓ |
| Sampled @ 1640 | | | | | | | | | | | |
| 1650 | 0189 | 36-40 | 7.69 | 1.724 | — | 6.02 | 29.28 | 0.89 | 1.164 | -56.4 | gray |
| 1652 | ↓ | ↓ | 7.54 | 1.816 | — | 4.71 | 28.66 | 0.92 | 1.192 | -54.4 | ↓ |
| 1654 | ↓ | ↓ | 7.46 | 1.841 | — | 3.87 | 28.44 | 0.93 | 1.200 | -47.4 | ↓ |
| Sampled @ 1654 | | | | | | | | | | | |
| 1702 | 0189 | 41-45 | 7.64 | 1.979 | — | 6.45 | 28.98 | 0.99 | 1.269 | -52.1 | gray |
| 1704 | ↓ | ↓ | 7.61 | 1.938 | — | 4.70 | 29.20 | 0.97 | 1.254 | -64.0 | ↓ |
| 1706 | ↓ | ↓ | 7.60 | 1.935 | — | 3.86 | 29.21 | 0.98 | 1.271 | -72.3 | ↓ |
| Sampled @ 1706 | | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/3/12 M. Stackhouse.

| Time | B DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1716 | 0189 | 56-60 | 7.58 | 2.781 | — | 3.08 | 28.06 | 1.44 | 1.816 | -56.2 | |
| 1718 | ↓ | ↓ | 7.60 | 2.814 | — | 2.60 | 27.89 | 1.46 | 1.842 | -64.6 | ↓ |
| 1720 | ↓ | ↓ | 7.60 | 2.848 | — | 2.41 | 27.89 | 1.48 | 1.865 | -70.1 | ↓ |
| Sampled @ | | | 1720 | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE/FR1681

Date: 10/4/12 M Stackhouse

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0816 | 0192 | 16-20 | 7.81 | 1.394 | — | 13.62 | 27.36 | 0.71 | 0.929 | -141.5 | gray |
| 0818 | ↓ | ↓ | 7.61 | 1.447 | — | 11.84 | 27.35 | 0.73 | 0.951 | -153.2 | ↓ |
| 0820 | ↓ | ↓ | 7.55 | 1.473 | — | 9.89 | 27.34 | 0.74 | 0.965 | -158.3 | ↓ |
| Sampled @ | | | 0820 | | | | | | | | |
| | | ~~21-25~~ | | | | | | | | | |
| 0828 | 0192 | 21-25 | 7.78 | 1.526 | — | 13.10 | 26.06 | 0.77 | 0.997 | -121.0 | gray |
| 0830 | ↓ | ↓ | 7.57 | 1.538 | — | 10.05 | 26.63 | 0.77 | 1.003 | -127.3 | ↓ |
| 0832 | ↓ | ↓ | 7.50 | 1.545 | — | 8.39 | 26.61 | 0.77 | 1.006 | -129.7 | ↓ |
| Sampled @ | | | 0832 | | | | | | | | |
| 0838 | 0192 | 26-30 | 7.79 | 1.611 | — | 4.53 | 27.53 | 0.81 | 1.044 | -111.1 | gray |
| 0840 | ↓ | ↓ | 7.61 | 1.603 | — | 3.11 | 27.42 | 0.80 | 1.040 | -119.9 | ↓ |
| 0842 | ↓ | ↓ | 7.53 | 1.599 | — | 2.90 | 27.37 | 0.80 | 1.039 | -230.2 | ↓ |
| Sampled @ | | | 0842 | | | | | | | | |
| 0851 | 0192 | 31-35 | 7.70 | 1.693 | — | 9.71 | 28.43 | 0.86 | 1.119 | -132.1 | gray |
| 0853 | ↓ | ↓ | 7.56 | 1.734 | — | 7.81 | 28.38 | 0.88 | 1.137 | -141.8 | ↓ |
| 0855 | ↓ | ↓ | 7.56 | 1.755 | — | 7.55 | 28.33 | 0.89 | 1.148 | -148.4 | ↓ |
| Sampled @ | | | 0855 | | | | | | | | |
| 0904 | 0192 | 36-40 | 7.62 | 1.731 | — | 6.22 | 28.21 | 0.87 | 1.120 | -159.5 | gray |
| 0906 | ↓ | ↓ | 7.61 | 1.719 | — | 5.15 | 28.16 | 0.86 | 1.112 | -162.3 | ↓ |
| 0908 | ↓ | ↓ | 7.61 | 1.705 | — | 4.83 | 28.13 | 0.85 | 1.101 | -164.9 | ↓ |
| Sampled @ | | | 0908 | | | | | | | | |
| 0921 | 0192 | 41-45 | 7.64 | 2.088 | — | 9.42 | 27.86 | 1.08 | 1.396 | -141.0 | gray |
| 0923 | ↓ | ↓ | 7.58 | 2.165 | — | 8.22 | 27.58 | 1.11 | 1.421 | -146.9 | ↓ |
| 0925 | ↓ | ↓ | 7.56 | 2.196 | — | 7.67 | 27.39 | 1.12 | 1.436 | -149.4 | ↓ |
| Sampled @ | | | 0925 | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 0940 | E 0192 | 56-60 | 7.82 | 2.433 | — | 8.01 | 28.22 | 1.26 | 1.610 | -129.8 | gray |
| 0942 | ↓ | ↓ | 7.74 | 2.502 | — | 7.73 | 28.01 | 1.29 | 1.645 | -148.9 | ↓ |
| 0944 | ↓ | ↓ | 7.70 | 2.544 | — | 5.26 | 28.06 | 1.31 | 1.666 | -158.2 | ↓ |
| Sampled @ | | | 0944 | | | | | | | | |

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| Time | I DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0907 | 0185 | 16-20 | 7.80 | 1.549 | — | 3.32 | 27.21 | — | — | -168.9 | brown |
| 0909 | ↓ | ↓ | 7.43 | 1.568 | — | 2.14 | 27.11 | — | — | -174.3 | ↓ |
| 0911 | ↓ | ↓ | 7.37 | 1.568 | — | 2.00 | 27.09 | — | — | -176.2 | ↓ |
| Sampled @ | | | 0911 | | | | | | | | not shown on display |
| | | | | | | | | | | | |
| 0917 | 0185 | 21-25 | 7.54 | 1.449 | — | 3.26 | 26.90 | 0.72 | 0.943 | -131.7 | lt brown |
| 0919 | ↓ | ↓ | 7.41 | 1.464 | — | 1.64 | 26.49 | 0.74 | 0.957 | -133.0 | ↓ |
| 0921 | ↓ | ↓ | 7.36 | 1.476 | — | 1.51 | 26.48 | 0.74 | 0.961 | -133.7 | ↓ |
| Sampled @ | | | 0921 | | | | | | | | |
| | | | | | | | | | | | |
| 0933 | 0185 | 26-30 | 7.39 | 1.705 | — | 11.11 | 26.93 | 0.86 | 1.110 | -134.0 | lt brown |
| 0935 | ↓ | ↓ | 7.37 | 1.709 | — | 10.24 | 26.94 | 0.86 | 1.113 | -137.0 | ↓ |
| 0937 | ↓ | ↓ | 7.35 | 1.712 | — | 8.81 | 26.92 | 0.86 | 1.112 | -138.7 | ↓ |
| Sampled @ | | | 0937 | | | | | | | | |
| | | | | | | | | | | | |
| 0945 | 0185 | 31-35 | 7.31 | 1.972 | — | 5.01 | 26.96 | 1.9 | 1.297 | -148.6 | lt brown |
| 0947 | ↓ | ↓ | 7.33 | 1.999 | — | 3.30 | 26.96 | 1.01 | 1.294 | -149.5 | ↓ |
| 0949 | ↓ | ↓ | 7.34 | 1.982 | — | 2.92 | 26.93 | 1.00 | 1.276 | -149.5 | ↓ |
| Sampled @ | | | 0949 | | | | | | | | |
| | | | | | | | | | | | |
| 1000 | 0185 | 36-40 | 7.44 | 1.846 | — | 4.75 | 27.47 | 0.94 | 1.206 | -186.6 | gray |
| 1002 | ↓ | ↓ | 7.43 | 1.857 | — | 2.64 | 27.46 | 0.94 | 1.209 | -190.6 | ↓ |
| 1004 | ↓ | ↓ | 7.43 | 1.862 | — | 2.26 | 27.45 | 0.94 | 1.214 | -193.6 | ↓ |
| Sampled @ | | | 1004 | | | | | | | | |
| | | | | | | | | | | | |
| 1018 | 0185 | 41-45 | 7.63 | 1.051 | — | 1.90 | 28.68 | 0.41 | 0.540 | -228.3 | gray |
| 1020 | ↓ | ↓ | 7.60 | 0.713 | — | 1.65 | 28.73 | 0.32 | 0.423 | -229.2 | ↓ |
| 1022 | ↓ | ↓ | 7.59 | 0.617 | — | 1.48 | 28.75 | 0.29 | 0.392 | -230.5 | ↓ |
| Sampled @ | | | 1022 | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/2/12 M. Stackhouse.

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1043 | 0185 | 56-60 | 7.68 | 2.611 | — | 9.01 | 28.01 | 1.37 | 1.739 | -186.6 | gray |
| 1045 | ↓ | ↓ | 7.67 | 2.696 | — | 5.17 | 27.95 | 1.40 | 1.771 | -192.8 | ↓ |
| 1047 | ↓ | ↓ | 7.666 | 2.749 | — | 4.00 | 27.97 | 1.43 | 1.812 | -197.5 | ↓ |
| Sampled @ 1047 | | | | | | | | | | | |

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| Time | H DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1208 | 0186 | 26-30 | 7.96 | 0.665 | — | 5.40 | 28.02 | 0.24 | 0.303 | -189.7 | gray |
| 1210 | ↓ | ↓ | 7.81 | 0.383 | — | 4.80 | 27.97 | 0.15 | 0.207 | -193.9 | ↓ |
| 1212 | ↓ | ↓ | 7.72 | 0.310 | — | 4.90 | 27.94 | 0.14 | 0.197 | -196.6 | ↓ |
| Sampled @ 1212 | | | | | | | | | | | |
| 1223 | 0186 | 31-35 | 7.56 | 1.739 | — | 4.81 | 27.72 | 0.90 | 1.129 | -153.7 | gray |
| 1225 | ↓ | ↓ | 7.47 | 1.834 | — | 3.62 | 27.52 | 0.94 | 1.212 | -156.1 | ↓ |
| 1227 | ↓ | ↓ | 7.42 | 1.899 | — | 3.31 | 27.20 | 0.97 | 1.245 | -156.9 | ↓ |
| Sampled @ 1227 | | | | | | | | | | | |
| 1236 | 0186 | 36-40 | 7.68 | 2.006 | — | 8.22 | 27.34 | 1.04 | 1.367 | -163.5 | gray |
| 1238 | ↓ | ↓ | 7.60 | 2.108 | — | 5.61 | 26.82 | 1.09 | 1.389 | -164.2 | ↓ |
| 1240 | ↓ | ↓ | 7.56 | 2.145 | — | 5.29 | 26.60 | 1.09 | 1.402 | -164.3 | ↓ |
| Sampled @ 1240 | | | | | | | | | | | |
| 1253 | 0186 | 41-45 | 7.71 | 1.753 | — | 5.56 | 27.72 | 0.95 | 1.238 | -188.7 | gray |
| 1255 | ↓ | ↓ | 7.69 | 1.982 | — | 3.41 | 27.50 | 1.03 | 1.330 | -199.5 | ↓ |
| 1257 | ↓ | ↓ | 7.68 | 2.082 | — | 3.60 | 27.28 | 1.08 | 1.388 | -202.5 | ↓ |
| Sampled @ 1257 | | | | | | | | | | | |
| 1310 | 0186 | 56-60 | 7.71 | 2.662 | — | 1.68 | 27.58 | 1.39 | 1.786 | -210.3 | gray |
| 1312 | ↓ | ↓ | 7.70 | 2.799 | — | 1.52 | 27.32 | 1.45 | 1.834 | -211.5 | ↓ |
| 1314 | ↓ | ↓ | 7.70 | 2.810 | — | 1.47 | 27.13 | 1.44 | 1.810 | -211.0 | ↓ |
| Sampled @ 1314 | | | | | | | | | | | |
| | ~~0186~~ | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/2/12 M. Stackhouse

| Time | G DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1345 | 0187 | 26-30 | 8.21 | 0.831 | — | 4.30 | 28.12 | 0.40 | 0.534 | -194.0 | gray |
| 1347 | ↓ | ↓ | 8.06 | 0.817 | — | 3.41 | 28.00 | 0.40 | 0.528 | -201.6 | ↓ |
| 1349 | ↓ | ↓ | 8.01 | 0.809 | — | 3.10 | 28.01 | 0.39 | 0.524 | -205.4 | ↓ |
| Sampled @ 1349 | | | | | | | | | | | |
| 1359 | 0187 | 31-35 | 7.85 | 1.610 | — | 6.33 | 27.07 | 0.88 | 1.171 | +19.5 | gray |
| 1401 | ↓ | ↓ | 7.53 | 1.959 | — | 3.81 | 25.52 | 1.03 | 1.333 | -114.1 | ↓ |
| 1403 | ↓ | ↓ | 7.39 | 2.083 | — | 3.18 | 24.62 | 1.07 | 1.359 | -109.1 | ↓ |
| Sampled @ 1403 | | | | | | | | | | | |
| 1414 | 0187 | 36-40 | 7.69 | 1.872 | — | 4.12 | 27.50 | 0.96 | 1.243 | -173.8 | gray |
| 1416 | ↓ | ↓ | 7.57 | 1.945 | — | 2.93 | 27.36 | 1.02 | 1.295 | -179.9 | ↓ |
| 1418 | ↓ | ↓ | 7.52 | 2.039 | — | 2.46 | 27.20 | 1.05 | 1.353 | -182.2 | |
| Sampled @ 1418 | | | | | | | | | | | |
| 1453 | 0187 | 41-45 | 7.72 | 1.726 | — | 4.51 | 28.59 | 0.90 | 1.191 | -170.6 | gray |
| 1455 | ↓ | ↓ | 7.61 | 1.944 | — | 2.44 | 27.65 | 1.04 | 1.346 | -182.4 | ↓ |
| 1457 | ↓ | ↓ | 7.53 | 2.128 | — | 1.97 | 27.06 | 0.99 | 1.272 | -181.9 | |
| Sampled @ 1457 | | | | | | | | | | | |
| 1513 | 0187 | 56-60 | 7.75 | 2.313 | — | 2.79 | 27.92 | 1.16 | 1.474 | -212.2 | gray |
| 1515 | ↓ | ↓ | 7.72 | 2.262 | — | 1.86 | 27.84 | 1.15 | 1.473 | -218.8 | ↓ |
| 1517 | ↓ | ↓ | 7.72 | 2.273 | — | 1.70 | 27.75 | 1.16 | 1.484 | -223.6 | ↓ |
| Sampled @ 1517 | | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/2/12 M. Stackhouse

| Time | G DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1345 | 0187 | 26-30 | 8.21 | 0.831 | — | 4.30 | 28.12 | 0.40 | 0.534 | -194.0 | gray |
| 1347 | ↓ | ↓ | 8.06 | 0.817 | — | 3.41 | 28.00 | 0.40 | 0.528 | -201.6 | ↓ |
| 1349 | ↓ | ↓ | 8.01 | 0.809 | — | 3.10 | 28.01 | 0.39 | 0.524 | -205.4 | ↓ |
| Sampled @ 1349 | | | | | | | | | | | |
| 1359 | 0187 | 31-35 | 7.85 | 1.610 | — | 6.33 | 27.07 | 0.88 | 1.171 | +19.5 | gray |
| 1401 | ↓ | ↓ | 7.53 | 1.959 | — | 3.81 | 25.52 | 1.03 | 1.333 | -114.1 | ↓ |
| 1403 | ↓ | ↓ | 7.39 | 2.083 | — | 3.18 | 24.62 | 1.07 | 1.359 | -109.1 | ↓ |
| Sampled @ 1403 | | | | | | | | | | | |
| 1414 | 0187 | 36-40 | 7.69 | 1.872 | — | 4.12 | 27.50 | 0.96 | 1.243 | -173.8 | gray |
| 1416 | ↓ | ↓ | 7.57 | 1.945 | — | 2.93 | 27.36 | 1.02 | 1.295 | -179.9 | ↓ |
| 1418 | ↓ | ↓ | 7.52 | 2.039 | — | 2.46 | 27.20 | 1.05 | 1.353 | -182.2 | |
| Sampled @ 1418 | | | | | | | | | | | |
| 1453 | 0187 | 41-45 | 7.72 | 1.726 | — | 4.51 | 28.59 | 0.90 | 1.191 | -170.6 | gray |
| 1455 | ↓ | ↓ | 7.61 | 1.944 | — | 2.44 | 27.65 | 1.04 | 1.346 | -182.4 | ↓ |
| 1457 | ↓ | ↓ | 7.53 | 2.128 | — | 1.97 | 27.06 | 0.99 | 1.272 | -181.9 | |
| Sampled @ 1457 | | | | | | | | | | | |
| 1513 | 0187 | 56-60 | 7.75 | 2.313 | — | 2.79 | 27.92 | 1.16 | 1.474 | -212.2 | gray |
| 1515 | ↓ | ↓ | 7.72 | 2.262 | — | 1.86 | 27.84 | 1.15 | 1.473 | -218.8 | ↓ |
| 1517 | ↓ | ↓ | 7.72 | 2.273 | — | 1.70 | 27.75 | 1.16 | 1.484 | -223.6 | ↓ |
| Sampled @ 1517 | | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/2/12 & 10/3/12 M. Stackhouse

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1555 | 0188 | 26-30 | 8.01 | 0.923 | — | 4.02 | 27.50 | 0.45 | 0.598 | -160.1 | gray |
| 1557 | ↓ | ↓ | 7.67 | 0.912 | — | 3.02 | 27.36 | 0.44 | 0.589 | -171.8 | ↓ |
| 1559 | ↓ | ↓ | 7.55 | 0.897 | — | 2.56 | 27.31 | 0.44 | 0.579 | -170.4 | ↓ |
| Sampled @ 1559 | | | | | | | | | | | |
| 1609 | 0188 | 31-35 | 7.36 | 1.571 | — | 4.00 | 27.52 | 0.81 | 1.042 | -154.4 | gray |
| 1611 | ↓ | ↓ | 7.32 | 1.661 | — | 2.34 | 27.42 | 0.84 | 1.091 | -161.1 | ↓ |
| 1613 | ↓ | ↓ | 7.34 | 1.681 | — | 1.88 | 27.25 | 0.85 | 1.095 | -162.5 | ↓ |
| Sampled @ 1613 | | | | | | | | | | | |
| 0810 | 0188 | 36-40 | 8.00 | 1.081 | — | 12.69 | 24.37 | 0.42 | 0.520 | -97.9 | gray |
| 0812 | ↓ | ↓ | 7.95 | 0.713 | — | 10.68 | 24.47 | 0.32 | 0.422 | -119.7 | ↓ |
| 0814 | ↓ | ↓ | 7.95 | 0.622 | — | 9.03 | 24.59 | 0.29 | 0.392 | -134.7 | ↓ |
| Sampled @ 0814 | | | | | | | | | | | |
| 0828 | 0188 | 41-45 | 8.03 | 1.793 | — | 5.61 | 25.51 | 0.93 | 1.198 | -76.9 | gray |
| 0830 | ↓ | ↓ | 7.79 | 1.854 | — | 4.04 | 25.42 | 0.93 | 1.210 | -80.2 | ↓ |
| 0832 | ↓ | ↓ | 7.69 | 1.869 | — | 3.72 | 25.37 | 0.95 | 1.221 | -80.9 | ↓ |
| Sampled @ 0832 | | | | | | | | | | | |
| 0846 | 0188 | 56-60 | 7.83 | 2.051 | — | 4.03 | 25.44 | 1.07 | 1.365 | -110.7 | gray |
| 0848 | ↓ | ↓ | 7.80 | 2.133 | — | 4.04 | 25.42 | 1.11 | 1.417 | -118.5 | ↓ |
| 0850 | ↓ | ↓ | 7.78 | 2.208 | — | 3.78 | 25.37 | 1.15 | 1.461 | -122.3 | ↓ |
| Sampled @ 0850 | | | | | | | | | | | |

10/2/12

10/3/12

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/3/12 M. Stackhouse

| Time | V8 DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0948 | 0189 MWS | 51-55 | | Low Yield - Sample Only | | | | | | | brown/ silver |
| 0950 | 0174 | ↓ | | | | | | | | | |
| 0952 | ↓ | ↓ | | | — | | | | | | |
| Sampled @ | | | 0952 | | | | | | | | |
| | 0174 | | | | | | | | | | |
| 1013 | 0189 MWS | 56-60 | 8.14 | 2.583 | — | 3.11 | 27.48 | 1.35 | 1.709 | -63.4 | gray |
| 1015 | ↓ | ↓ | 7.87 | 2.654 | — | 1.87 | 26.70 | 1.37 | 1.737 | -74.8 | ↓ |
| 1017 | ↓ | ↓ | 7.76 | 2.681 | — | 1.63 | 26.37 | 1.38 | 1.746 | -79.9 | ↓ |
| Sampled @ | | | 1017 | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/3/12 M. Stackhouse.

| Time | V16 DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1513 | ~~0192~~ | 56-60 | 8.00 | 3.639 | — | 4.33 | 30.90 | 1.92 | 2.393 | -64.8 | gray |
| 1515 | 0149 | ↓ | 7.80 | 3.679 | — | 2.67 | 30.71 | 1.91 | 2.382 | -79.0 | ↓ |
| 1517 | ↓ | ↓ | 7.71 | 3.658 | — | 2.35 | 30.50 | 1.91 | 2.377 | -86.3 | ↓ |
| Sampled @ | | | 1517 | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/2/12 & 10/3/12 M. Stackhouse

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1555 | 0188 | 26-30 | 8.01 | 0.923 | — | 4.02 | 27.50 | 0.45 | 0.598 | -160.1 | gray |
| 1557 | ↓ | ↓ | 7.67 | 0.912 | — | 3.02 | 27.36 | 0.44 | 0.589 | -171.8 | ↓ |
| 1559 | ↓ | ↓ | 7.55 | 0.897 | — | 2.56 | 27.31 | 0.44 | 0.579 | -170.4 | ↓ |
| Sampled @ 1559 | | | | | | | | | | | |
| 1609 | 0188 | 31-35 | 7.36 | 1.571 | — | 4.00 | 27.52 | 0.81 | 1.042 | -154.4 | gray |
| 1611 | ↓ | ↓ | 7.32 | 1.661 | — | 2.34 | 27.42 | 0.84 | 1.091 | -161.1 | ↓ |
| 1613 | ↓ | ↓ | 7.34 | 1.681 | — | 1.88 | 27.25 | 0.85 | 1.095 | -162.5 | ↓ |
| Sampled @ 1613 | | | | | | | | | | | |
| 0810 | 0188 | 36-40 | 8.00 | 1.081 | — | 12.69 | 24.37 | 0.42 | 0.520 | -97.9 | gray |
| 0812 | ↓ | ↓ | 7.95 | 0.713 | — | 10.68 | 24.47 | 0.32 | 0.422 | -119.7 | ↓ |
| 0814 | ↓ | ↓ | 7.95 | 0.622 | — | 9.03 | 24.59 | 0.29 | 0.392 | -134.7 | ↓ |
| Sampled @ 0814 | | | | | | | | | | | |
| 0828 | 0188 | 41-45 | 8.03 | 1.793 | — | 5.61 | 25.51 | 0.93 | 1.198 | -76.9 | gray |
| 0830 | ↓ | ↓ | 7.79 | 1.854 | — | 4.04 | 25.42 | 0.93 | 1.210 | -80.2 | ↓ |
| 0832 | ↓ | ↓ | 7.69 | 1.869 | — | 3.72 | 25.37 | 0.95 | 1.221 | -80.9 | ↓ |
| Sampled @ 0832 | | | | | | | | | | | |
| 0846 | 0188 | 56-60 | 7.83 | 2.051 | — | 4.03 | 25.44 | 1.07 | 1.365 | -110.7 | gray |
| 0848 | ↓ | ↓ | 7.80 | 2.133 | — | 4.04 | 25.42 | 1.11 | 1.417 | -118.5 | ↓ |
| 0850 | ↓ | ↓ | 7.78 | 2.208 | — | 3.78 | 25.37 | 1.15 | 1.461 | -122.3 | ↓ |
| Sampled @ 0850 | | | | | | | | | | | |

10/2/12

10/3/12

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/3/12 M. Stackhouse

| Time | V8 DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0948 | 0189 MWS | 51-55 | | Low Yield - Sample Only | | | | | | | brown/ silver |
| 0950 | 0174 | ↓ | | | | | | | | | |
| 0952 | ↓ | ↓ | | | — | | | | | | |
| Sampled @ | | | 0952 | | | | | | | | |
| | 0174 | | | | | | | | | | |
| 1013 | 0189 MWS | 56-60 | 8.14 | 2.583 | — | 3.11 | 27.48 | 1.35 | 1.709 | -63.4 | gray |
| 1015 | ↓ | ↓ | 7.87 | 2.654 | — | 1.87 | 26.70 | 1.37 | 1.737 | -74.8 | ↓ |
| 1017 | ↓ | ↓ | 7.76 | 2.681 | — | 1.63 | 26.37 | 1.38 | 1.746 | -79.9 | ↓ |
| Sampled @ | | | 1017 | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

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| Time | A DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1050 | D190 | 26-30 | 8.03 | 1.273 | — | 7.80 | 28.87 | 0.69 | 0.748 | -57.0 | gray |
| 1052 | ↓ | ↓ | 7.72 | 1.065 | — | 5.41 | 28.64 | 0.50 | 0.660 | -60.2 | ↓ |
| 1054 | ↓ | ↓ | 7.65 | 0.993 | — | 4.66 | 28.66 | 0.48 | 0.633 | -61.7 | ↓ |
| Sampled @ 1054 | | | | | | | | | | | |
| 1103 | 0190 | 31-35 | 7.86 | 1.442 | — | 7.33 | 29.03 | 0.74 | 0.973 | -70.5 | gray |
| 1105 | ↓ | ↓ | 7.67 | 1.510 | — | 7.64 | 28.75 | 0.76 | 0.987 | -76.5 | ↓ |
| 1107 | ↓ | ↓ | 7.59 | 1.522 | — | 4.72 | 28.65 | 0.76 | 0.992 | -79.5 | ↓ |
| Sampled @ 1107 | | | | | | | | | | | |
| 1118 | 0190 | 36-40 | 7.69 | 1.539 | — | 8.72 | 30.32 | 0.80 | 1.057 | -96.7 | gray |
| 1120 | ↓ | ↓ | 7.66 | 1.664 | — | 6.20 | 30.13 | 0.84 | 1.099 | -103.2 | ↓ |
| 1122 | ↓ | ↓ | 7.65 | 1.710 | — | 5.41 | 29.94 | 0.86 | 1.123 | -104.7 | ↓ |
| Sampled @ 1122 | | 41-45 | | | | | | | | | |
| 1130 | 0190 | ↓ | 7.73 | 2.115 | — | 6.60 | 29.95 | 0.97 | 1.250 | -68.6 | gray |
| 1132 | ↓ | ↓ | 7.67 | 1.943 | — | 4.62 | 29.64 | 0.99 | 1.282 | -79.4 | ↓ |
| 1134 | ↓ | ↓ | 7.61 | 1.988 | — | 4.13 | 29.24 | 1.01 | 1.299 | -82.4 | ↓ |
| Sampled @ 1134 | | | | | | | | | | | |
| 1148 | 0190 | 56-60 | 7.75 | 2.828 | — | 4.81 | 30.64 | 1.48 | 1.883 | -81.6 | gray |
| 1150 | ↓ | ↓ | 7.69 | 2.937 | — | 3.16 | 30.20 | 1.82 | 1.927 | -87.1 | ↓ |
| 1152 | ↓ | ↓ | 7.67 | 2.985 | — | 2.90 | 30.03 | 1.55 | 1.986 | -88.9 | ↓ |
| Sampled @ 1152 | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 1325 | 0191 | 26-30 | 7.85 | 0.856 | — | 22.16 | 29.01 | 0.42 | 0.557 | -41.1 | gray |
| 1327 | ↓ | ↓ | 7.69 | 0.854 | — | 16.66 | 28.06 | 0.41 | 0548 | -35.0 | ↓ |
| 1329 | ↓ | ↓ | 7.86 | 0.835 | — | 12.51 | 27.63 | 0.40 | 0.536 | -30.7 | ↓ |
| Sampled @ 1329 | | | | | | | | | | | |
| 1340 | 0191 | 31-35 | 7.83 | 0.834 | — | 10.05 | 29.92 | 0.40 | 0.543 | -79.8 | gray |
| 1342 | ↓ | ↓ | 7.63 | 0.835 | — | 8.30 | 29.65 | 0.41 | 0.544 | -84.0 | ↓ |
| 1344 | ↓ | ↓ | 7.68 | 0.837 | — | 7.06 | 29.68 | 0.41 | 0.545 | -87.2 | ↓ |
| Sampled @ 1344 | | | | | | | | | | | |
| 1355 | 0191 | 36-40 | 7.70 | 1.904 | — | 7.00 | 30.14 | 0.95 | 1.229 | -24.4 | gray |
| 1357 | ↓ | ↓ | 7.47 | 1.883 | — | 4.33 | 29.45 | 0.95 | 1.220 | -29.3 | ↓ |
| 1359 | ↓ | ↓ | 7.38 | 1.876 | — | 3.54 | 29.26 | 0.94 | 1.220 | -29.0 | ↓ |
| Sampled @ 1359 | | | | | | | | | | | |
| 1416 | 0191 | 41-45 | 7.52 | 2.045 | — | 4.15 | 31.46 | 1.06 | 1.230 | -79.4 | gray |
| 1418 | ↓ | ↓ | 7.51 | 1.898 | — | 2.73 | 31.41 | 0.95 | 1.237 | -78.9 | ↓ |
| 1420 | ↓ | ↓ | 7.50 | 1.908 | — | 2.45 | 31.37 | 0.96 | 1.243 | -78.6 | ↓ |
| Sampled @ 1420 | | | | | | | | | | | |
| 1433 | 0191 | 56-60 | 7.67 | 2.994 | — | 4.78 | 30.90 | 1.54 | 1.931 | -61.5 | gray |
| 1435 | ↓ | ↓ | 7.62 | 2.965 | — | 3.14 | 30.14 | 1.53 | 1.929 | -69.3 | ↓ |
| 1437 | ↓ | ↓ | 7.60 | 2.976 | — | 2.79 | 29.70 | 1.54 | 1.942 | -71.9 | ↓ |
| Sampled @ 1437 | | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/3/12 M. Stackhouse.

| Time | V16 DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1513 | ~~0192~~ | 56-60 | 8.00 | 3.639 | — | 4.33 | 30.90 | 1.92 | 2.393 | -64.8 | gray |
| 1515 | 0149 | ↓ | 7.80 | 3.679 | — | 2.67 | 30.71 | 1.91 | 2.382 | -79.0 | ↓ |
| 1517 | ↓ | ↓ | 7.71 | 3.658 | — | 2.35 | 30.50 | 1.91 | 2.377 | -86.3 | |
| Sampled @ | | | 1517 | | | | | | | | |

Notes:
DPT = Direct Push Technology
ft BLS = feet below land surface
mS/cm = milliSiemens per centimeter (or millimhos per centimeter)
NTU = Nephelometric Turbidity Units
DO (mg/L) = Dissolved Oxygen (milligrams per liter)
Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681

Date: 10/3/12 M. Stackhouse

| Time | B DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1542 | 0189 | 16-20 | 7.78 | 1.451 | — | 8.06 | 30.59 | 0.72 | 0.948 | -72.4 | gray |
| 1544 | ↓ | ↓ | 7.66 | 1.458 | — | 6.11 | 30.43 | 0.72 | 0.945 | -74.6 | ↓ |
| 1546 | ↓ | ↓ | 7.62 | 1.450 | — | 5.40 | 30.29 | 0.72 | 0.939 | -75.0 | ↓ |
| Sampled @ 1546 | | | | | | | | | | | |
| 1554 | 0189 | 21-25 | 7.51 | 1.318 | — | 7.74 | 29.30 | 0.66 | 0.875 | -107.9 | gray |
| 1556 | ↓ | ↓ | 7.47 | 1.357 | — | 5.00 | 29.47 | 0.67 | 0.887 | -100.2 | ↓ |
| 1558 | ↓ | ↓ | 7.46 | 1.354 | — | 4.17 | 29.53 | 0.67 | 0.879 | -96.6 | ↓ |
| Sampled @ 1558 | | | | | | | | | | | |
| 1625 | 0189 | 26-30 | 7.64 | 1.241 | — | 7.31 | 31.00 | 0.60 | 0.786 | -46.2 | gray |
| 1627 | ↓ | ↓ | 7.53 | 1.200 | — | 5.39 | 30.60 | 0.59 | 0.776 | -46.7 | ↓ |
| 1629 | ↓ | ↓ | 7.47 | 1.190 | — | 4.66 | 30.30 | 0.58 | 0.769 | -45.8 | ↓ |
| Sampled @ 1629 | | | | | | | | | | | |
| 1636 | 0189 | 31-35 | 7.53 | 1.307 | — | 5.47 | 28.75 | 0.62 | 0.812 | -92.3 | gray |
| 1638 | ↓ | ↓ | 7.51 | 1.250 | — | 5.05 | 27.68 | 0.62 | 0.820 | -85.0 | ↓ |
| 1640 | ↓ | ↓ | 7.48 | 1.284 | — | 4.64 | 27.14 | 0.61 | 0.807 | -76.6 | ↓ |
| Sampled @ 1640 | | | | | | | | | | | |
| 1650 | 0189 | 36-40 | 7.69 | 1.724 | — | 6.02 | 29.28 | 0.89 | 1.164 | -56.4 | gray |
| 1652 | ↓ | ↓ | 7.54 | 1.816 | — | 4.71 | 28.66 | 0.92 | 1.192 | -54.4 | ↓ |
| 1654 | ↓ | ↓ | 7.46 | 1.841 | — | 3.87 | 28.44 | 0.93 | 1.200 | -47.4 | ↓ |
| Sampled @ 1654 | | | | | | | | | | | |
| 1702 | 0189 | 41-45 | 7.64 | 1.979 | — | 6.45 | 28.98 | 0.99 | 1.269 | -52.1 | gray |
| 1704 | ↓ | ↓ | 7.61 | 1.938 | — | 4.70 | 29.20 | 0.97 | 1.254 | -64.0 | ↓ |
| 1706 | ↓ | ↓ | 7.60 | 1.935 | — | 3.86 | 29.21 | 0.98 | 1.271 | -72.3 | ↓ |
| Sampled @ 1706 | | | | | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/3/12 M. Stackhouse.

| Time | B DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1716 | 0189 | 56-60 | 7.58 | 2.781 | — | 3.08 | 28.06 | 1.44 | 1.816 | -56.2 | |
| 1718 | ↓ | ↓ | 7.60 | 2.814 | — | 2.60 | 27.89 | 1.46 | 1.842 | -64.6 | ↓ |
| 1720 | ↓ | ↓ | 7.60 | 2.848 | — | 2.41 | 27.89 | 1.48 | 1.865 | -70.1 | ↓ |
| Sampled @ | | | 1720 | | | | | | | | |

Notes:
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NTU = Nephelometric Turbidity Units
DO (mg/L) = Dissolved Oxygen (milligrams per liter)
Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE/FR1681

Date: 10/4/12 M Stackhouse

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0816 | 0192 | 16-20 | 7.81 | 1.394 | — | 13.62 | 27.36 | 0.71 | 0.929 | -141.5 | gray |
| 0818 | ↓ | ↓ | 7.61 | 1.447 | — | 11.84 | 27.35 | 0.73 | 0.951 | -153.2 | ↓ |
| 0820 | ↓ | ↓ | 7.55 | 1.473 | — | 9.89 | 27.34 | 0.74 | 0.965 | -158.3 | ↓ |
| Sampled @ | | | 0820 | | | | | | | | |
| | | ~~21-25~~ | | | | | | | | | |
| 0828 | 0192 | 21-25 | 7.78 | 1.526 | — | 13.10 | 26.06 | 0.77 | 0.997 | -121.0 | gray |
| 0830 | ↓ | ↓ | 7.57 | 1.538 | — | 10.05 | 26.63 | 0.77 | 1.003 | -127.3 | ↓ |
| 0832 | ↓ | ↓ | 7.50 | 1.545 | — | 8.39 | 26.61 | 0.77 | 1.006 | -129.7 | ↓ |
| Sampled @ | | | 0832 | | | | | | | | |
| 0838 | 0192 | 26-30 | 7.79 | 1.611 | — | 4.53 | 27.53 | 0.81 | 1.044 | -111.1 | gray |
| 0840 | ↓ | ↓ | 7.61 | 1.603 | — | 3.11 | 27.42 | 0.80 | 1.040 | -119.9 | ↓ |
| 0842 | ↓ | ↓ | 7.53 | 1.599 | — | 2.90 | 27.37 | 0.80 | 1.039 | -230.2 | ↓ |
| Sampled @ | | | 0842 | | | | | | | | |
| 0851 | 0192 | 31-35 | 7.70 | 1.693 | — | 9.71 | 28.43 | 0.86 | 1.119 | -132.1 | gray |
| 0853 | ↓ | ↓ | 7.56 | 1.734 | — | 7.81 | 28.38 | 0.88 | 1.137 | -141.8 | ↓ |
| 0855 | ↓ | ↓ | 7.56 | 1.755 | — | 7.55 | 28.33 | 0.89 | 1.148 | -148.4 | ↓ |
| Sampled @ | | | 0855 | | | | | | | | |
| 0904 | 0192 | 36-40 | 7.62 | 1.731 | — | 6.22 | 28.21 | 0.87 | 1.120 | -159.5 | gray |
| 0906 | ↓ | ↓ | 7.61 | 1.719 | — | 5.15 | 28.16 | 0.86 | 1.112 | -162.3 | ↓ |
| 0908 | ↓ | ↓ | 7.61 | 1.705 | — | 4.83 | 28.13 | 0.85 | 1.101 | -164.9 | ↓ |
| Sampled @ | | | 0908 | | | | | | | | |
| 0921 | 0192 | 41-45 | 7.64 | 2.088 | — | 9.42 | 27.86 | 1.08 | 1.396 | -141.0 | gray |
| 0923 | ↓ | ↓ | 7.58 | 2.165 | — | 8.22 | 27.58 | 1.11 | 1.421 | -146.9 | ↓ |
| 0925 | ↓ | ↓ | 7.56 | 2.196 | — | 7.67 | 27.39 | 1.12 | 1.436 | -149.4 | ↓ |
| Sampled @ | | | 0925 | | | | | | | | |

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NTU = Nephelometric Turbidity Units
DO (mg/L) = Dissolved Oxygen (milligrams per liter)
Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/4/12 M. Stackhouse

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0940 | E 0192 | 56-60 | 7.82 | 2.433 | — | 8.01 | 28.22 | 1.26 | 1.610 | -129.8 | gray |
| 0942 | ↓ | ↓ | 7.74 | 2.502 | — | 7.73 | 28.01 | 1.29 | 1.645 | -148.9 | ↓ |
| 0944 | ↓ | ↓ | 7.70 | 2.544 | — | 5.26 | 28.06 | 1.31 | 1.666 | -158.2 | ↓ |
| Sampled @ | | | 0944 | | | | | | | | |

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)
Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR/681

Date: 10/4/12 M. Stackhouse

| Time | V6 DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1212 | 0148 | 51-55 | 7.65 | 2.006 | — | 12.71 | 30.84 | 1.01 | 1.302 | -174.5 | gray |
| 1214 | ↓ | ↓ | 7.51 | 2.003 | — | 10.77 | 30.65 | 1.01 | 1.303 | -175.2 | ↓ |
| 1216 | ↓ | ↓ | 7.49 | 2.005 | — | 9.12 | 30.74 | 1.01 | 1.304 | -176.1 | ↓ |
| Sampled @ 1216 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 1229 | 0148 | 56-60 | 7.64 | 2.611 | — | 3.52 | 32.68 | 1.33 | 1.694 | -174.3 | gray |
| 1231 | ↓ | ↓ | 7.63 | 2.600 | — | 3.08 | 32.14 | 1.32 | 1.684 | -178.0 | ↓ |
| 1233 | ↓ | ↓ | 7.62 | 2.581 | — | 2.82 | 31.97 | 1.31 | 1.68 | -180.1 | ↓ |
| Sampled @ 1233 | | | | | | | | | | | |

Notes:
DPT = Direct Push Technology
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NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)
Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR/681

Date: 10/4/12 M. Stackhouse

| Time | V6 DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1212 | 0148 | 51-55 | 7.65 | 2.006 | — | 12.71 | 30.84 | 1.01 | 1.302 | -174.5 | gray |
| 1214 | ↓ | ↓ | 7.51 | 2.003 | — | 10.77 | 30.65 | 1.01 | 1.303 | -175.2 | ↓ |
| 1216 | ↓ | ↓ | 7.49 | 2.005 | — | 9.12 | 30.74 | 1.01 | 1.304 | -176.1 | ↓ |
| Sampled @ 1216 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 1229 | 0148 | 56-60 | 7.64 | 2.611 | — | 3.52 | 32.68 | 1.33 | 1.694 | -174.3 | gray |
| 1231 | ↓ | ↓ | 7.63 | 2.600 | — | 3.08 | 32.14 | 1.32 | 1.684 | -178.0 | ↓ |
| 1233 | ↓ | ↓ | 7.62 | 2.581 | — | 2.82 | 31.97 | 1.31 | 1.68 | -180.1 | ↓ |
| Sampled @ 1233 | | | | | | | | | | | |

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DPT = Direct Push Technology
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DO (mg/L) = Dissolved Oxygen (milligrams per liter)
Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/4/12 M. Stackhouse

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1328 | 0138 | 51-55 | 7.65 | 2.511 | — | 32.01 | 34.42 | 1.25 | 1.597 | -171.9 | gray |
| 1330 | ↓ | ↓ | 7.62 | 2.425 | — | 16.91 | 34.03 | 1.21 | 1.555 | -175.2 | 01 |
| 1332 | ↓ | ↓ | 7.61 | 2.362 | — | 13.88 | 34.08 | 1.18 | 1.516 | -178.8 | ↓ |
| Sampled @ | | | 1332 | | | | | | | | |
| | | | | | | | | | | | |
| 1342 | 0138 | 56-60 | 7.63 | 2.692 | — | 4.65 | 32.55 | 1.39 | 1.768 | -169.9 | gray |
| 1344 | ↓ | ↓ | 7.61 | 2.733 | — | 3.93 | 32.34 | 1.40 | 1.787 | -176.9 | 01 |
| 1346 | ↓ | ↓ | 7.60 | 2.762 | — | 3.47 | 32.05 | 1.42 | 1.803 | -181.3 | ↓ |
| Sampled @ | | | 1346 | | | | | | | | |

Notes:
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NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)
Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/4/12 M. Stackhouse

| Time | V13 DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1431 | 0010 | 51-55 | Low Yield - Just Sampled | | | | | | | | gray |
| 1433 | ↓ | ↓ | | | | | | | | | ↓ |
| 1435 | ↓ | ↓ | | | — | | | | | | |
| Sampled | @ | 1435 | | | | | | | | | |
| | | | | | | | | | | | |
| 1450 | 0010 | 56-60 | 7.55 | 2.920 | — | 36.00 | 31.38 | 1.49 | 1.889 | -161.6 | gray |
| 1452 | ↓ | ↓ | 7.57 | 2.918 | — | 12.68 | 31.34 | 1.51 | 1.900 | -174.4 | ↓ |
| 1454 | ↓ | ↓ | 7.57 | 2.949 | — | 8.93 | 31.24 | 1.53 | 1.932 | -178.7 | ↓ |
| Sampled | @ | 1454 | | | | | | | | | |

Notes:
DPT = Direct Push Technology
ft BLS = feet below land surface
mS/cm = milliSiemens per centimeter (or millimhos per centimeter)
NTU = Nephelometric Turbidity Units
DO (mg/L) = Dissolved Oxygen (milligrams per liter)
Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/4/12 M. Stackhouse

| Time | V12 DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1525 | 0044 | 56-60 | 7.79 | 1.130 | — | 5.32 | 31.35 | 0.55 | 0.723 | -170.2 | gray |
| 1527 | ↓ | ↓ | ~~7.60~~ 7.38 | 1.102 | — | 4.62 | 31.35 | 0.53 | 0.708 | -174.8 | ↓ |
| 1529 | ↓ | ↓ | 7.55 | 1.083 | — | 4.19 | 31.32 | 0.53 | 0.701 | -173.2 | ↓ |
| Sampled @ | | | 1529 | | | | | | | | |
| MPS | 0044 | | | | | | | | | | |
| ↓ | ↓ | ↓ | | | | | | | | | |
| Sampled @ | | | | | | | | | | | |

Notes:
DPT = Direct Push Technology
ft BLS = feet below land surface
mS/cm = milliSiemens per centimeter (or millimhos per centimeter)
NTU = Nephelometric Turbidity Units
DO (mg/L) = Dissolved Oxygen (milligrams per liter)
Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE/FR1681

Date: 10/4/12 M. Stackhouse

| Time | V9 DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1612 | 0158 | 51-55 | 7.37 | 2.283 | — | 7.30 | 30.88 | 1.18 | 1.512 | -149.6 | gray |
| 1614 | ↓ | ↓ | 7.38 | 2.334 | — | 7.39 | 30.53 | 1.19 | 1.520 | -165.7 | ↓ |
| 1616 | ↓ | ↓ | 7.42 | 2.394 | — | 7.43 | 30.12 | 1.23 | 1.579 | -172.3 | ↓ |
| Sampled @ | | | 1616 | | | | | | | | |
| | | | | | | | | | | | |
| 1632 | 0158 | 56-60 | 7.60 | 2.664 | — | 3.80 | 28.89 | 1.38 | 1.744 | -209.2 | gray |
| 1634 | ↓ | ↓ | 7.57 | 2.694 | — | 2.45 | 28.94 | 1.39 | 1.759 | -205.4 | ↓ |
| 1636 | ↓ | ↓ | 7.56 | 2.711 | — | 2.21 | 28.96 | 1.40 | 1.767 | -202.4 | ↓ |
| Sampled @ | | | 1636 | | | | | | | | |

Notes:

DPT = Direct Push Technology

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NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681

Date: 10/4/12 M. Stackhouse

| Time | V10 DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1740 | 0193 | 67-71 | 7.75 | 2.644 | — | 16.40 | 30.12 | 1.38 | 1.759 | -174.6 | Grey |
| 1742 | ↓ | ↓ | 7.68 | 2.735 | — | 11.41 | 30.12 | 1.41 | 1.795 | -191.9 | ↓ |
| 1744 | ↓ | ↓ | 7.68 | 2.782 | — | 9.00 | 30.22 | 1.44 | 1.813 | -200.4 | ↓ |
| Sampled @ 1744 | | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CHREL location V11/DPT0194

Project No: FR1691

Date: 10/5/12 Sampler: Rachel Donahue

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1101 | 0194 | 51-55 | 7.42 | 3.557 | — | 22.66 | 30.80 | 1.89 | 2.365 | -101.1 | gray |
| 1103 | ↓ | ↓ | 7.27 | 3.717 | — | 14.31 | 30.49 | 1.95 | 2.432 | -132.4 | ↓ |
| 1105 | ↓ | ↓ | 7.24 | 3.730 | — | 10.25 | 30.34 | 1.94 | 2.413 | -146.1 | ↓ |
| | Sampled @ 1106 | | | | | | | | | | |
| | | | | | | | | | | | |
| 1123 | 0194 | 56-60 | 7.41 | 3.419 | — | 2.01 | 32.35 | 1.86 | 2.351 | -198.4 | gray |
| 1125 | ↓ | ↓ | 7.42 | 3.699 | — | 0.108 | 32.36 | 1.96 | 2.456 | -199.3 | ↓ |
| 1127 | ↓ | ↓ | 7.42 | 3.818 | — | 0.64 | 32.37 | 2.01 | 2.520 | -200.3 | ↓ |
| | Sampled @ 1128 | | | | | | | | | | |

NASA forms

Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CHR&I location VS / DPT0195

Project No: FR 1681

Date: 10/5/12 Sampler: Rachel Donahue

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1205 | 195 | 51-55 | 7.62 | 3.963 | — | 10.65 | 30.35 | 2.05 | 2.535 | -190.9 | gray |
| 1207 | ↓ | ↓ | 7.48 | 3.851 | — | 6.15 | 30.38 | 2.00 | 2.484 | -192.5 | |
| 1209 | ↓ | ↓ | 7.43 | 3.787 | — | 4.60 | 30.36 | 1.97 | 2.447 | -201.5 | ↓ |
| | Sampled @ 1210 | | | | | | | | | | |
| | | | | | | | | | | | |
| 1220 | 195 | 56-60 | 7.33 | 4.491 | — | 1.00 | 31.39 | 2.31 | 2.831 | -200.4 | gray |
| 1222 | ↓ | ↓ | 7.35 | 4.280 | — | 0.52 | 31.05 | 2.23 | 2.753 | -204.9 | ↓ |
| 1224 | ↓ | ↓ | 7.36 | 4.222 | — | 0.45 | 30.96 | 2.22 | 2.739 | -207.1 | |
| | Sampled @ 1225 | | | | | | | | | | |

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Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CHRG / Location V.2 / DPT0044

Project No: FR 1681

Date: 10/5/12 Sampler: Rachel Dinaro

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1324 | 0044 | 60-70 | 7.64 | 4.000 | — | 6.52 | 29.01 | 2.10 | 2583 | -202.3 | gray |
| 1326 | ↓ | ↓ | 7.60 | 3.867 | — | 4.71 | 29.21 | 1.99 | 2451 | -209.9 | ↓ |
| 1328 | ↓ | ↓ | 7.57 | 3.724 | — | 3.48 | 29.66 | 1.93 | 2392 | -214.6 | ↓ |
| | Sampled @ 1329 | | | | | | | | | | |

NASA forms

Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CAR4/LocationV14/DPT0155

Project No: FR11681

Date: 10/5/12 Sampler: Rachel Donahue

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1444 | 0155 | 50-60 | 7.99 | 3.527 | — | 17.45 | 27.78 | 1.82 | 2.264 | -120.6 | gray |
| 1451 | ↓ | ↓ | 7.61 | 3.428 | — | 12.69 | 27.82 | 1.78 | 2.227 | -169.2 | ↓ |
| 1453 | ↓ | ↓ | 7.52 | 3.410 | — | 11.78 | 27.83 | 1.78 | 2.213 | -180.1 | ↓ |
| | Sampled @1454 | | | | | | | | | | |

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# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CHRE/location V15/DPT071

Project No: FR16B1

Date: 10/5/12 Sampler: Rachel Donahue

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1554 | 071 | 56-60 | 7.82 | 3.279 | — | 12.84 | 27.83 | 1.77 | 2.230 | -141.9 | gray |
| 1556 | ↓ | ↓ | 7.65 | 3.554 | — | 9.09 | 27.00 | 1.90 | 2.305 | -179.9 | ↓ |
| 1558 | ↓ | ↓ | 7.61 | 3.468 | — | 7.84 | 26.85 | 1.84 | 2.411 | -197.0 | ↓ |
| | sampled @ | | 1559 | | | | | | | | |

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# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CHRG/13/DPT 127

Project No: FR1681

Date: 10/5/12 Sampler: Rachel Bonacine

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1710 | 127 | 50-60 | 7.87 | 28.00 | — | 4.87 | 29.75 | 2.37 | 2.908 | -173.2 | gray |
| 1712 | | | 7.73 | 4.468 | — | 3.41 | 28.51 | 2.36 | 2897 | -194.2 | ↓ |
| 1714 | ↓ | ↓ | 7.71 | 4.450 | — | 3.18 | 28.38 | 2.35 | 2.888 | -204.7 | ↓ |
| | sampled @ 1715 | | | | | | | | | | |

NASA forms

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CHRE / FR1681 / 25*2

Date: 3/18/13 Crystal Towns

| Time | Z DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1002 | 0916 | 8-12 | | | – | | | | | | |
| 1004 | ↓ | ↓ | | Low | Yield / No | parameters | collected | | | | |
| 1006 | ↓ | ↓ | | | – | | | | | | |
| | Sampled at 1007 | | | | | | | | | | |
| 1015 | 0196 | 16-20 | 8.76 | 1.521 | – | 4.90 | 23.85 | 0.79 | 1.027 | -69.9 | grey |
| 1017 | ↓ | ↓ | 7.38 | 1.559 | – | 0.41 | 24.24 | 0.80 | 1.028 | -63.4 | ↓ |
| 1019 | ↓ | ↓ | 7.13 | 1.554 | – | 0.14 | 24.35 | 0.78 | 1.010 | -59.9 | ↓ |
| | Sampled at 1020 | | | | | | | | | | |
| 1026 | 0196 | 21-25 | 7.01 | 1.659 | – | 0.15 | 24.60 | 0.84 | 1.090 | -54.0 | grey |
| 1028 | ↓ | ↓ | 6.90 | 1.666 | – | 0.17 | 24.60 | 0.85 | 1.093 | -55.9 | ↓ |
| 1030 | ↓ | ↓ | 6.87 | 1.670 | – | 0.15 | 24.64 | 0.85 | 1.094 | -55.9 | ↓ |
| | Sampled at 1031 | | | | | | | | | | |
| 1041 | 0196 | 26-30 | 7.13 | 1.643 | – | 3.14 | 25.07 | 0.83 | 1.066 | -76.1 | grey |
| 1043 | ↓ | ↓ | 6.98 | 1.646 | – | 0.40 | 25.19 | 0.82 | 1.062 | -65.0 | ↓ |
| 1045 | ↓ | ↓ | 6.88 | 1.636 | – | 0.13 | 25.26 | 0.82 | 1.056 | -61.7 | ↓ |
| | Sampled at 1046 | | | | | | | | | | |
| 1054 | 0196 | 31-35 | 7.36 | 0.999 | – | 7.30 | 25.13 | 0.88 | 1.138 | -160.2 | grey |
| 1056 | ↓ | ↓ | 7.35 | 1.760 | – | 2.29 | 25.33 | 0.89 | 1.141 | -165.4 | ↓ |
| 1058 | ↓ | ↓ | 7.35 | 1.766 | – | 0.32 | 25.28 | 0.88 | 1.137 | -171.4 | ↓ |
| | Sampled at 1059 | | | | | | | | 1.388 | | |
| 1113 | 0196 | 36-40 | 7.42 | 2.036 | – | 4.65 | 25.42 | 1.06 | ~~1.39~~ CT | -139.6 | grey |
| 1115 | ↓ | ↓ | 7.25 | 2.178 | – | 0.21 | 25.46 | 1.11 | 1.421 | -145.2 | ↓ |
| 1117 | ↓ | ↓ | 7.23 | 2.225 | – | 0.08 | 25.51 | 1.14 | 1.447 | -141.7 | ↓ |
| | Sampled at 1118 | | | | | | | | | | |
| 1129 | 0196 | 41-45 | 7.62 | 2.312 | – | 1.40 | 24.73 | 1.20 | 1.523 | -103.2 | grey |
| 1131 | ↓ | ↓ | 7.32 | 2.361 | – | 1.84 | 24.91 | 1.22 | 1.550 | -115.3 | ↓ |
| 1133 | ↓ | ↓ | 7.22 | 2.390 | – | 0.22 | 24.90 | 0.16 | 1.564 | -117.2 | ↓ |
| | Sampled at 1134 | | | | | | | | | | |
| 1147 | 0196 | 56-60 | 7.66 | 3.998 | – | 7.29 | 25.06 | 2.61 | 3.224 | -166.8 | grey |
| 1149 | ↓ | ↓ | 7.44 | 5.143 | – | 0.91 | 25.22 | 2.78 | 3.363 | -178.5 | ↓ |
| 1151 | ↓ | ↓ | 7.45 | 5.167 | – | 0.12 | 25.16 | 2.75 | 3.337 | -181.8 | ↓ |
| | Sampled at 1152 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681 / 25 * 2

Date: 3/19/13 Crystal Towers

| Time | 2. DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1504 | 0196 | 66-70 | 7.32 | 6.437 | — | 7.23 | 30.19 | 3.18 | 3.866 | -177.7 | grey |
| 1506 | ↓ | ↓ | 7.28 | 6.726 | — | 1.02 | 30.17 | 3.38 | 4.097 | -182.9 | ↓ |
| 1508 | ↓ | ↓ | 7.28 | 7.091 | — | 0.17 | 30.14 | 3.55 | 4.296 | -184.9 | ↓ |
| Sampled at | | 1509 | | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/18/13 Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1255 | 0197 | 8-12 | 7.45 | 0.842 | – | 1.72 | 27.30 | 0.75 | 0.967 | -117.8 | grey |
| 1257 | ↓ | ↓ | 7.22 | 1.534 | – | 2.59 | 27.23 | 0.73 | 0.942 | -117.6 | ↓ |
| 1259 | ↓ | ↓ | 7.11 | 1.491 | – | 0.36 | 27.19 | 0.71 | 0.925 | -113.5 | ↓ |
| | Sampled at 1300 | | | | | | | | | | |
| 1306 | 0197 | 16-20 | 7.23 | 1.423 | – | 3.12 | 26.77 | 0.68 | 0.891 | -83.3 | dk brown |
| 1308 | ↓ | ↓ | 7.04 | 1.406 | – | 0.39 | 26.64 | 0.68 | 0.887 | -85.9 | ↓ |
| 1310 | ↓ | ↓ | 6.99 | 1.410 | – | 0.09 | 26.61 | 0.68 | 0.891 | -87.3 | ↓ |
| | Sampled at 1311 | | | | | | | | | | |
| 1316 | 0197 | 21-25 | ↑ | ↑ | – | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| 1318 | ↓ | ↓ | 7.39 | 1.430 | – | 2.33 | 26.71 | 0.69 | 0.906 | -76.4 | grey |
| 1320 | ↓ | ↓ | 7.07 | 1.443 | – | 0.29 | 26.72 | 0.70 | 0.911 | -80.6 | ↓ |
| | Sampled at 1321 | | 7.02 | 1.449 | | 0.17 | 26.69 | 0.70 | 0.914 | -83.6 | ↓ |
| 1329 | 0197 | 26-30 | 7.46 | 1.458 | – | 4.20 | 26.68 | 0.70 | 0.914 | -75.8 | grey |
| 1331 | ↓ | ↓ | 7.11 | 1.450 | – | 0.24 | 26.67 | 0.70 | 0.941 | -83.0 | ↓ |
| 1333 | ↓ | ↓ | 7.03 | 1.458 | – | 0.11 | 26.74 | 0.70 | 0.919 | -83.7 | ↓ |
| | Sampled at 1334 | | | | | | | | | | |
| 1344 | 0197 | 31-35 | 7.56 | 1.177 | – | 0.52 | 26.99 | 0.56 | 0.740 | -171.5 | grey |
| 1346 | ↓ | ↓ | 7.51 | 1.191 | – | 0.06 | 27.00 | 0.57 | 0.751 | -176.0 | ↓ |
| 1348 | ↓ | ↓ | 7.50 | 1.206 | – | 0.04 | 27.02 | 0.58 | 0.761 | -180.3 | ↓ |
| | Sampled at 1349 | | | | | | | | | | |
| 1355 | 0197 | 36-40 | 7.73 | 2.195 | – | 6.78 | 26.59 | 1.12 | 1.435 | -112.5 | grey |
| 1357 | ↓ | ↓ | 7.27 | 2.343 | – | 0.50 | 26.83 | 1.18 | 1.506 | -122.6 | ↓ |
| 1359 | ↓ | ↓ | 7.19 | 2.427 | – | 0.07 | 26.82 | 1.21 | 1.544 | -119.4 | ↓ |
| | Sampled at 1400 | | | | | | | | | | |
| 1416 | 0197 | 41-45 | 7.39 | 2.373 | – | 0.37 | 26.52 | 1.18 | 1.507 | -145.3 | grey |
| 1418 | ↓ | ↓ | 7.33 | 2.392 | – | 0.07 | 26.50 | 1.19 | 1.515 | -149.0 | ↓ |
| 1420 | ↓ | ↓ | 7.31 | 2.399 | – | 0.04 | 26.49 | 1.19 | 1.518 | -151.1 | ↓ |
| | Sampled at 1421 | | | | | | | | | | |
| 1441 | 0197 | 56-60 | 7.41 | 5.023 | – | 2.31 | 25.64 | 2.70 | 3.289 | -161.5 | grey |
| 1443 | ↓ | ↓ | 7.42 | 5.162 | – | 0.24 | 25.61 | 2.75 | 3.345 | -171.8 | ↓ |
| 1445 | ↓ | ↓ | 7.42 | 5.238 | – | 0.07 | 25.60 | 2.79 | 3.393 | -176.9 | ↓ |
| | Sampled at 1446 | | | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/18/13 Crystal Tolons

| Time | AA DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1523 | 0198 | 8-12 | 7.81 | 0.737 | – | 8.02 | 24.68 | 0.62 | 0.796 | -70.9 | ~~dk brown~~ grey |
| 1525 | ↓ | ↓ | 7.51 | 1.158 | – | 1.96 | 24.54 | 0.56 | 0.726 | -92.5 | ↓ |
| 1527 | ↓ | ↓ | 7.29 | 1.081 | – | 0.19 | 24.41 | 0.54 | 0.701 | -91.6 | ↓ |
| | Sampled at 1528 | | | | | | | | | | |
| 1533 | 0198 | 16-20 | 7.44 | 1.220 | – | 4.64 | 25.95 | 0.60 | 0.788 | -117.5 | grey |
| 1535 | ↓ | ↓ | 7.32 | 1.257 | – | 0.54 | 26.10 | 0.61 | 0.802 | -125.5 | ↓ |
| 1537 | ↓ | ↓ | 7.27 | 1.266 | – | 0.10 | 26.09 | 0.62 | 0.809 | -128.7 | ↓ |
| | Sampled at 1538 | | | | | | | | | | |
| 1543 | 0198 | 21-25 | 7.14 | 1.364 | – | 1.18 | 25.78 | 0.67 | 0.877 | -63.1 | grey |
| 1545 | ↓ | ↓ | 7.00 | 1.374 | – | 0.15 | 25.76 | 0.68 | 0.883 | -65.6 | ↓ |
| 1547 | ↓ | ↓ | 6.94 | 1.381 | – | 0.08 | 25.74 | 0.68 | 0.887 | -67.0 | ↓ |
| | Sampled at 1548 | | | | | | | | | | |
| 1555 | 0198 | 26-30 | 7.21 | 1.472 | – | 1.53 | 25.61 | 0.73 | 0.951 | -74.9 | grey |
| 1557 | ↓ | ↓ | 7.07 | 1.486 | – | 0.19 | 25.61 | 0.74 | 0.957 | -80.2 | ↓ |
| 1559 | ↓ | ↓ | 7.02 | 1.491 | – | 0.06 | 25.59 | 0.74 | 0.960 | -85.0 | ↓ |
| | Sampled at 1600 | | | | | | | | | | |
| 1606 | 0198 | 31-35 | 7.20 | 1.472 | – | 1.26 | 25.12 | 0.74 | 0.957 | -70.0 | grey |
| 1608 | ↓ | ↓ | 7.08 | 1.477 | – | 0.18 | 25.10 | 0.74 | 0.959 | -76.2 | ↓ |
| 1610 | ↓ | ↓ | 7.03 | 1.481 | – | 0.07 | 2511 | 0.74 | 0.961 | -79.7 | ↓ |
| | Sampled at 1611 | | | | | | | | | | |
| 1618 | 0198 | 36-40 | 7.47 | 1.989 | – | 2.53 | 25.41 | 1.03 | 1.317 | -94.2 | grey |
| 1620 | ↓ | ↓ | 7.18 | 2.072 | – | 0.34 | 25.17 | 1.05 | 1.339 | -117.4 | ↓ |
| 1622 | ↓ | ↓ | 7.11 | 2.096 | – | 0.06 | 25.17 | 1.05 | 1.347 | -120.4 | ↓ |
| | Sampled at 1623 | | | | | | | | | | |
| 1633 | 0198 | 41-45 | 7.37 | 2.177 | – | 0.70 | 25.49 | 1.13 | 1.441 | -136.9 | grey |
| 1635 | ↓ | ↓ | 7.32 | 2.264 | – | 0.09 | 25.48 | 1.15 | 1.465 | -147.6 | ↓ |
| 1637 | ↓ | ↓ | 7.31 | 2.278 | – | 0.04 | 25.47 | 1.16 | 1.469 | -152.7 | ↓ |
| | Sampled at 1638 | | | | | | | | | | |
| 1650 | 0198 | 56-60 | 7.53 | 4.801 | – | 3.61 | 25.03 | 2.94 | 3.639 | -91.4 | grey |
| 1652 | ↓ | ↓ | 7.39 | 5.760 | – | 0.42 | 25.06 | 3.17 | 3.818 | -124.9 | ↓ |
| 1654 | ↓ | ↓ | 7.37 | 5.939 | – | 0.07 | 25.05 | 3.25 | 3.905 | -137.6 | ↓ |
| | Sampled at 1655 | | | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/19/13 Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0748 | 0199 | 8-12 | 6.71 | 1.103 | – | 1.38 | 21.04 | 0.60 | 0.777 | -50.4 | dk brown |
| 0750 | ↓ | ↓ | 6.56 | 1.107 | – | 0.41 | 21.00 | 0.60 | 0.780 | -51.5 | ↓ |
| 0752 | ↓ | ↓ | 6.52 | 1.108 | – | 0.39 | 20.98 | 0.60 | 0.780 | -51.8 | ↓ |
| | Sampled at 0753 | | | | | | | | | | |
| 0759 | 0199 | 16-20 | 6.91 | 1.101 | – | 8.52 | 21.24 | 0.63 | 0.826 | -98.0 | dk brown |
| 0801 | ↓ | ↓ | 6.87 | 1.202 | – | 2.75 | 21.65 | 0.64 | 0.839 | -100.8 | ↓ |
| 0803 | ↓ | ↓ | 6.86 | 1.218 | – | 0.52 | 21.91 | 0.65 | 0.844 | -99.0 | ↓ |
| | Sampled at 0804 | | | | | | | | | | |
| 0813 | 0199 | 21-25 | 7.18 | 1.163 | – | 1.72 | 22.32 | 0.61 | 0.802 | -121.8 | brown |
| 0815 | ↓ | ↓ | 7.09 | 1.183 | – | 0.26 | 22.92 | 0.61 | 0.803 | -112.0 | ↓ |
| 0817 | ↓ | ↓ | 7.01 | 1.189 | – | 0.13 | 22.98 | 0.62 | 0.803 | -106.9 | ↓ |
| | Sampled at 0818 | | | | | | | | | | |
| 0825 | 0199 | 26-30 | 7.10 | 1.251 | – | 1.77 | 21.70 | 0.67 | 0.872 | -65.1 | brown |
| 0827 | ↓ | ↓ | 6.90 | 1.263 | – | 0.28 | 21.77 | 0.68 | 0.879 | -65.8 | ↓ |
| 0829 | ↓ | ↓ | 6.84 | 1.272 | – | 0.14 | 21.78 | 0.68 | 0.883 | -67.2 | ↓ |
| | Sampled at 0830 | | | | | | | | | | |
| 0839 | 0199 | 31-35 | 7.34 | 1.263 | – | 5.06 | 21.67 | 0.69 | 0.903 | -122.7 | grey |
| 0841 | ↓ | ↓ | 7.13 | 1.323 | – | 0.33 | 22.07 | 0.71 | 0.918 | -124.2 | ↓ |
| 0843 | ↓ | ↓ | 7.08 | 1.339 | – | 0.08 | 22.20 | 0.71 | 0.922 | -125.8 | ↓ |
| | Sampled at 0844 | | | | | | | | | | |
| 0852 | 0199 | 36-40 | 7.37 | 1.682 | – | 5.23 | 21.74 | 0.93 | 1.198 | -129.2 | grey |
| 0854 | ↓ | ↓ | 7.13 | 1.782 | – | 0.60 | 22.11 | 0.97 | 1.252 | -140.2 | ↓ |
| 0856 | ↓ | ↓ | 7.11 | 1.856 | – | 0.07 | 22.08 | 1.01 | 1.298 | -143.7 | ↓ |
| | Sampled at 0857 | | | | | | | | | | |
| 0907 | 0199 | 41-45 | 7.40 | 2.306 | – | 6.91 | 22.26 | 1.27 | 1.605 | -92.2 | grey |
| 0909 | ↓ | ↓ | 7.14 | 2.379 | – | 1.22 | 22.70 | 1.30 | 1.652 | -101.8 | ↓ |
| 0911 | ↓ | ↓ | 7.06 | 2.458 | – | 0.15 | 22.87 | 1.33 | 1.681 | -103.0 | ↓ |
| | Sampled at 0912 | | | | | | | | | | |
| 0926 | 0199 | 56-60 | 7.54 | 2.331 | – | 6.48 | 22.48 | 2.20 | 2.882 | -134.1 | grey |
| 0928 | ↓ | ↓ | 7.28 | 4.507 | – | 1.70 | 22.74 | 2.56 | 3.107 | -163.5 | ↓ |
| 0930 | ↓ | ↓ | 7.28 | 4.591 | – | 0.19 | 22.72 | 2.58 | 3.135 | -170.4 | ↓ |
| | Sampled at 0931 | | | | | | | | | | |

Notes:

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/19/13 Crystal Towns

| Time | AC DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1006 | 0200 | 8-12 | 7.12 | 1.046 | – | 6.81 | 21.90 | 0.53 | 0.687 | -64.6 | dk brown |
| 1008 | ↓ | ↓ | 7.29 | 0.979 | – | 1.00 | 22.10 | 0.51 | 0.666 | -72.0 | ↓ |
| 1010 | ↓ | ↓ | 7.10 | 0.964 | – | 0.23 | 22.15 | 0.50 | 0.659 | -72.5 | ↓ |
| | Sampled at 1011 | | | | | | | | | | |
| 1016 | 0200 | 16-20 | 6.99 | 1.160 | – | 0.26 | 23.35 | 0.60 | 0.782 | -73.8 | brown |
| 1018 | ↓ | ↓ | 6.93 | 1.168 | – | 0.08 | 23.38 | 0.60 | 0.786 | -76.3 | ↓ |
| 1020 | ↓ | ↓ | 6.91 | 1.175 | – | 0.05 | 23.43 | 0.60 | 0.789 | -78.1 | ↓ |
| | Sampled at 1021 | | | | | | | | | | |
| 1031 | 0200 | 21-25 | 7.12 | 1.452 | – | 3.91 | 24.67 | 0.74 | 0.963 | -64.9 | grey |
| 1033 | ↓ | ↓ | 6.88 | 1.484 | – | 0.47 | 24.82 | 0.75 | 0.972 | -68.1 | ↓ |
| 1035 | ↓ | ↓ | 6.79 | 1.496 | – | 0.07 | 24.99 | 0.75 | 0.977 | -69.5 | ↓ |
| | Sampled at 1036 | | | | | | | | | | |
| 1042 | 0200 | 26-30 | 7.34 | 1.730 | – | 5.53 | 24.20 | 0.89 | 1.145 | -78.0 | grey |
| 1044 | ↓ | ↓ | 6.94 | 1.744 | – | 0.71 | 24.25 | 0.90 | 1.154 | -93.9 | ↓ |
| 1046 | ↓ | ↓ | 6.85 | 1.754 | – | 0.12 | 24.24 | 0.90 | 1.161 | -97.8 | ↓ |
| | Sampled at 1047 | | | | | | | | | | |
| 1057 | 0200 | 31-35 | 7.48 | 1.756 | – | 6.50 | 24.60 | 1.07 | 1369 | -96.2 | grey |
| 1059 | ↓ | ↓ | 7.05 | 2.123 | – | 0.93 | 25.02 | 1.09 | 1.391 | -105.6 | ↓ |
| 1101 | ↓ | ↓ | 6.91 | 2.152 | – | 0.14 | 25.33 | 1.09 | 1.393 | -104.2 | ↓ |
| | Sampled at 1102 | | | | | | | | | | |
| 1113 | 0200 | 36-40 | 7.44 | 1.180 | – | 5.80 | 25.15 | 1.16 | 1.417 | -114.7 | grey |
| 1115 | ↓ | ↓ | 7.17 | 2.299 | – | 1.82 | 25.69 | 1.16 | 1.417 | -131.3 | ↓ |
| 1117 | ↓ | ↓ | 7.09 | 2.305 | – | 0.21 | 25.74 | 1.16 | 1.419 | -136.8 | ↓ |
| | Sampled at 1118 | | | | | | | | | | |
| 1129 | 0200 | 41-45 | 7.59 | 2.430 | – | 7.06 | 25.60 | 1.26 | 1.595 | -92.9 | grey |
| 1131 | ↓ | ↓ | 7.23 | 2.505 | – | 1.34 | 25.55 | 1.29 | 1.630 | -110.6 | ↓ |
| 1133 | ↓ | ↓ | 7.11 | 2.550 | – | 0.18 | 25.56 | 1.31 | 1.652 | -113.0 | ↓ |
| | Sampled at 1134 | | | | | | | | | | |
| 1147 | 0200 | 56-60 | 7.53 | 3.177 | – | 8.34 | 25.70 | 2.51 | 3182 | -111.3 | grey |
| 1149 | ↓ | ↓ | 7.36 | 5.267 | – | 1.49 | 25.62 | 2.82 | 3.440 | -139.1 | ↓ |
| 1151 | ↓ | ↓ | 7.32 | 5.396 | – | 0.13 | 25.70 | 2.86 | 3.456 | -146.9 | ↓ |
| | Sampled at 1152 | | | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/19/13 Crystal Forms

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1253 | 0201 | 8-12 | 7.56 | 1.425 | – | 6.12 | 27.03 | 0.67 | 0.876 | -17.5 | dk brown |
| 1255 | ↓ | ↓ | 7.08 | 1.381 | – | 0.94 | 26.82 | 0.66 | 0.853 | -31.9 | ↓ |
| 1257 | ↓ | ↓ | 6.86 | 1.347 | – | 0.34 | 26.82 | 0.64 | 0.842 | -36.0 | ↓ |
| | Sampled at 1258 | | | | | | | | | | |
| 1303 | 0201 | 16-20 | 7.39 | 1380 | – | 6.22 | 30.22 | 0.62 | 0.824 | -79.3 | dk brown |
| 1305 | ↓ | ↓ | 7.05 | 1.402 | – | 1.08 | 29.12 | 0.64 | 0.845 | -103.0 | ↓ |
| 1307 | ↓ | ↓ | 6.95 | 1.389 | – | 0.19 | 27.69 | 0.66 | 0.861 | -107.2 | ↓ |
| | Sampled at 1308 | | | | | | | | | | |
| 1319 | 0201 | 21-25 | 7.02 | 1.307 | – | 0.82 | 28.77 | 0.60 | 0.793 | -73.4 | brown |
| 1321 | ↓ | ↓ | 6.91 | 1.309 | – | 0.15 | 28.65 | 0.60 | 0.795 | -75.1 | ↓ |
| 1323 | ↓ | ↓ | 6.88 | 1.309 | – | 0.08 | 28.69 | 0.60 | 0.795 | -76.9 | ↓ |
| | Sampled at 1324 | | | | | | | | | | |
| 1332 | 0201 | 26-30 | 6.89 | 1.447 | – | 0.29 | 28.74 | 0.67 | 0.878 | -89.0 | grey |
| 1334 | ↓ | ↓ | 6.84 | 1.448 | – | 0.08 | 28.72 | 0.67 | 0.879 | -89.5 | ↓ |
| 1336 | ↓ | ↓ | 6.82 | 1.449 | – | 0.05 | 28.73 | 0.67 | 0.880 | -89.4 | ↓ |
| | Sampled at 1337 | | | | | | | | | | |
| 1344 | 0201 | 31-35 | 7.28 | 1.440 | – | 1.71 | 30.01 | 0.65 | 0.861 | -138.1 | grey |
| 1346 | ↓ | ↓ | 7.14 | 1.446 | – | 0.23 | 29.35 | 0.66 | 0.870 | -140.9 | ↓ |
| 1348 | ↓ | ↓ | 7.09 | 1.447 | – | 0.06 | 29.02 | 0.67 | 0.876 | -137.6 | ↓ |
| | Sampled at 1349 | | | | | | | | | | |
| 1357 | 0201 | 36-40 | 7.38 | 2.039 | – | 6.29 | 28.82 | 0.99 | 1.290 | -111.1 | grey |
| 1359 | ↓ | ↓ | 7.10 | 2.190 | – | 1.18 | 28.75 | 1.04 | 1.335 | -121.6 | ↓ |
| 1401 | ↓ | ↓ | 7.04 | 2.211 | – | 0.16 | 28.72 | 1.05 | 1.345 | -122.7 | ↓ |
| | Sampled at 1402 | | | | | | | | | | |
| 1412 | 0201 | 41-45 | 7.65 | 2.179 | – | 8.32 | 29.67 | 1.07 | 1.383 | -118.7 | grey |
| 1414 | ↓ | ↓ | 7.18 | 2.359 | – | 1.47 | 29.46 | 1.12 | 1.444 | -134.8 | ↓ |
| 1416 | ↓ | ↓ | 7.07 | 2.441 | – | 0.21 | 29.35 | 1.16 | 1.487 | -131.2 | ↓ |
| | Sampled at 1417 | | | | | | | | | | |
| 1429 | 0201 | 56-60 | 7.64 | 3.433 | – | 7.19 | 28.80 | 2.71 | 3.519 | -114.1 | grey |
| 1431 | ~~1429~~ CF | ↓ | 7.23 | 6.413 | – | 3.01 | 28.57 | 3.39 | 4.091 | -150.9 | ↓ |
| 1433 | ~~1431~~ CF | ↓ | 7.18 | 6.749 | – | 0.37 | 28.47 | 3.43 | 4.110 | -160.7 | ↓ |
| | ~~1433~~ Sampled at 1434 | | | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/20/13 Crystal TANKS

| Time | ✓ DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0805 | 0202 | 8-12 | 6.91 | 0.824 | – | 5.56 | 20.98 | 0.44 | 0.581 | -43.1 | dk brown |
| 0807 | ↓ | ↓ | 6.63 | 0.828 | – | 1.30 | 21.07 | 0.44 | 0.583 | -52.2 | ↓ |
| 0809 | ↓ | ↓ | 6.53 | 0.831 | – | 0.62 | 21.09 | 0.44 | 0.584 | -57.0 | ↓ |
| | Sampled at 0810 | | | | | | | | | | |
| 0815 | 0202 | 16-20 | 6.98 | 0.951 | – | 4.73 | 21.45 | 0.51 | 0.673 | -27.7 | grey |
| 0817 | ↓ | ↓ | 6.80 | 0.974 | – | 0.94 | 22.19 | 0.51 | 0.669 | -35.7 | ↓ |
| 0819 | ↓ | ↓ | 6.74 | 0.978 | – | 0.23 | 22.29 | 0.51 | 0.671 | -37.3 | ↓ |
| | Sampled at 0820 | | | | | | | | | | |
| 0825 | 0202 | 21-25 | 7.04 | @ ~~1.140~~ | – | 1.63 | 22.17 | 0.60 | 0.790 | -74.4 | grey |
| 0827 | ↓ | ↓ | 6.86 | 1.160 | – | 0.31 | 22.22 | 0.61 | 0.803 | -81.4 | ↓ |
| 0829 | ↓ | ↓ | 6.80 | 1.180 | – | 0.11 | 22.34 | 0.62 | 0.811 | -84.1 | ↓ |
| | Sampled at 0830 | | | | | | | | | | |
| 0837 | 0202 | 26-30 | 6.93 | 1.207 | – | 0.44 | 21.85 | 0.65 | 0.840 | -51.3 | grey |
| 0839 | ↓ | ↓ | 6.82 | 1.220 | – | 0.11 | 21.99 | 0.65 | 0.846 | -49.3 | ↓ |
| 0841 | ↓ | ↓ | 6.77 | 1.231 | – | 0.08 | 21.99 | 0.66 | 0.853 | -49.9 | ↓ |
| | Sampled at 0842 | | | | | | | | | | |
| 0851 | 0202 | 31-35 | 7.48 | 0.605 | – | 4.47 | 21.36 | 0.59 | 0.765 | -51.3 | grey |
| 0853 | ↓ | ↓ | 7.16 | 1.083 | – | 1.22 | 22.03 | 0.58 | 0.761 | -74.6 | ↓ |
| 0855 | ↓ | ↓ | 6.97 | 1.122 | – | 0.19 | 22.20 | 0.60 | 0.778 | -68.1 | ↓ |
| | Sampled at 0856 | | | | | | | | | | |
| 0905 | 0202 | 36-40 | 7.27 | 1.552 | – | 5.22 | 22.12 | 0.88 | 1.144 | -81.1 | grey |
| 0907 | ↓ | ↓ | 7.04 | 1.752 | – | 0.71 | 22.90 | 0.94 | 1.209 | -82.0 | ↓ |
| 0909 | ↓ | ↓ | 6.94 | 1.808 | – | 0.15 | 23.29 | 0.95 | 1.223 | -77.0 | ↓ |
| | Sampled at 0910 | | | @ | | | | | | | |
| 0920 | 0202 | 41-45 | 7.63 | ~~0~~ 2.044 | – | 4.91 | 22.81 | 1.10 | 1.408 | -66.6 | grey |
| 0922 | ↓ | ↓ | 7.14 | 2.102 | – | 0.90 | 23.08 | 1.12 | 1.429 | -80.0 | ↓ |
| 0924 | ↓ | ↓ | 7.06 | 2.132 | – | 0.21 | 23.39 | 1.13 | 1.438 | -83.1 | ↓ |
| | Sampled at 0925 | | | | | | | | | | |
| 0936 | 0202 | 56-60 | 7.51 | 3.558 | – | 4.13 | 22.48 | 2.05 | 2.555 | -130.6 | grey |
| 0938 | ↓ | ↓ | 7.29 | 3.797 | – | 0.29 | 22.70 | 2.13 | 2.626 | -142.3 | ↓ |
| 0940 | ↓ | ↓ | 7.29 | 3.889 | – | 0.08 | 22.69 | 2.17 | 2.612 | -146.6 | ↓ |
| | Sampled at 0941 | | | | | | | | | | |

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CRHE

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681/25*2

Date: 3/21/13 Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1547 | 0202 | 66-70 | 7.48 | 4.920 | — | 8.01 | 22.85 | 2.50 | 3.420 | -97.5 | grey |
| 1549 | ↓ | ↓ | 7.31 | 5.252 | — | 2.16 | 23.32 | 2.96 | 3.572 | -128.7 | ↓ |
| 1551 | ↓ | ↓ | 7.31 | 5.368 | — | 1.11 | 23.28 | 3.02 | 3.641 | -140.1 | ↓ |
| | Sampled | at | 1552 | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/20/13 Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1251 | 0203 | 8-12 | 7.86 | 0.896 | – | 8.87 | 24.45 | 0.45 | 0.590 | -19.9 | dk brown |
| 1253 | ↓ | ↓ | 7.17 | 0.899 | – | 2.36 | 24.32 | 0.45 | 0.595 | -44.9 | ↓ |
| 1255 | ↓ | ↓ | 6.92 | 0.904 | – | 0.60 | 24.34 | 0.45 | 0.594 | -49.7 | ↓ |
| | Sampled at 1256 | | | | | | | | | | |
| 1303 | 0203 | 16-20 | 7.40 | 1.068 | – | 8.01 | 25.50 | 0.53 | 0.699 | -37.3 | grey |
| 1305 | ↓ | ↓ | 7.00 | 1.094 | – | 2.14 | 25.66 | 0.54 | 0.708 | -52.6 | ↓ |
| 1307 | ↓ | ↓ | 6.86 | 1.113 | – | 0.48 | 25.70 | 0.55 | 0.724 | -53.0 | ↓ |
| | Sampled at 1308 | | | | | | | | | | |
| 1313 | 0203 | 21-25 | 7.42 | 1.026 | – | 7.28 | 25.77 | 0.50 | 0.663 | -101.3 | grey |
| 1315 | ↓ | ↓ | 7.11 | 1.051 | – | 1.93 | 26.21 | 0.51 | 0.683 | -110.8 | ↓ |
| 1317 | ↓ | ↓ | 6.96 | 1.084 | – | 0.19 | 26.33 | 0.52 | 0.693 | -113.6 | ↓ |
| | Sampled at 1318 | | | | | | | | | | |
| 1325 | 0203 | 26-30 | 7.43 | 1.107 | – | 5.62 | 25.44 | 0.54 | 0.717 | -63.7 | grey |
| 1327 | ↓ | ↓ | 7.03 | 1.117 | – | 1.50 | 25.74 | 0.55 | 0.718 | -77.6 | ↓ |
| 1329 | ↓ | ↓ | 6.89 | 1.125 | – | 0.13 | 25.86 | 0.55 | 0.722 | -65.3 | ↓ |
| | Sampled at 1330 | | | | | | | | | | |
| 1337 | 0203 | 31-35 | 7.45 | 1.120 | – | 4.82 | 24.98 | 0.56 | 0.735 | -77.0 | grey |
| 1339 | ↓ | ↓ | 6.96 | 1.148 | – | 1.37 | 25.32 | 0.57 | 0.750 | -97.1 | ↓ |
| 1341 | ↓ | ↓ | 6.86 | 1.170 | – | 0.16 | 25.51 | 0.58 | 0.757 | -99.5 | ↓ |
| | Sampled at 1342 | | | | | | | | | | |
| 1352 | 0203 | 36-40 | 6.98 | 1.758 | – | 0.24 | 25.56 | 0.88 | 1.141 | -80.5 | grey |
| 1354 | ↓ | ↓ | 6.91 | 1.789 | – | 0.05 | 25.80 | 0.90 | 1.157 | -77.9 | ↓ |
| 1356 | ↓ | ↓ | 6.87 | 1.829 | – | 0.04 | 25.90 | 0.92 | 1.182 | -72.0 | ↓ |
| | Sampled at 1357 | | | | | | | | | | |
| 1407 | 0203 | 41-45 | 7.29 | 1.741 | – | 8.13 | 24.37 | 0.93 | 1.199 | -61.9 | grey |
| 1409 | ↓ | ↓ | 7.07 | 1.848 | – | 1.88 | 24.94 | 0.95 | 1.216 | -88.8 | ↓ |
| 1410 | ↓ | ↓ | 7.01 | 1.878 | – | 0.17 | 25.07 | 0.95 | 1.222 | -96.0 | ↓ |
| | Sampled at 1411 | | | | | | | | | | |
| 1423 | 0203 | 56-60 | 7.30 | 2.976 | – | 5.13 | 24.69 | 2.00 | 2.565 | -128.2 | grey |
| 1425 | ↓ | ↓ | 7.18 | 4.203 | – | 0.57 | 24.79 | 2.38 | 2.926 | -148.9 | ↓ |
| 1427 | ↓ | ↓ | 7.19 | 4.596 | – | 0.05 | 24.86 | 2.51 | 3.071 | -156.1 | ↓ |
| | Sampled at 1428 | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/20/13/3/24/13 Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1507 | 0204 | 8-12 | ~~7.197~~ | ~~0.026~~ | – | ~~5.60~~ 8.93 | ~~23.04~~ 21.67 | 0.55 | 0.706 | -40.1 | dk brown |
| 1509 | ↓ | ↓ | 6.84 | 1.029 | – | 0.53 | 23.14 | 0.52 | 0.685 | -42.2 | ↓ |
| 1511 | ↓ | ↓ | 6.69 | 1.006 | – | 0.12 | 23.14 | 0.51 | 0.672 | -42.2 | ↓ |
| | Sampled at 1512 | | | | | | | | | | |
| 1518 | 0204 | 16-20 | 7.05 | 1.104 | – | 3.17 | 23.23 | 0.57 | 0.747 | -48.9 | grey |
| 1520 | ↓ | ↓ | 6.83 | 1.132 | – | 0.33 | 24.20 | 0.58 | 0.757 | -61.7 | ↓ |
| 1522 | ↓ | ↓ | 6.78 | 1.162 | – | 0.05 | 24.49 | 0.59 | 0.772 | -62.0 | ↓ |
| | Sampled at 1523 | | | | | | | | | | |
| 1528 | 0204 | 21-25 | 7.39 | 0.959 | – | 6.10 | 23.61 | 0.49 | 0.654 | -93.0 | grey |
| 1530 | ↓ | ↓ | 7.14 | 1.001 | – | 2.43 | 23.90 | 0.52 | 0.686 | -118.5 | ↓ |
| 1532 | ↓ | ↓ | 7.03 | 1.056 | – | 0.28 | 24.26 | 0.54 | 0.712 | -120.6 | ↓ |
| | Sampled at 1533 | | | | | | | | | | |
| 1538 | 0204 | 26-30 | 7.19 | 1.031 | – | 1.62 | 23.81 | 0.53 | 0.693 | -73.8 | grey |
| 1540 | ↓ | ↓ | 7.05 | 1.049 | – | 0.28 | 23.86 | 0.53 | 0.704 | -81.7 | ↓ |
| 1542 | ↓ | ↓ | 6.99 | 1.065 | – | 0.11 | 23.92 | 0.54 | 0.713 | -84.4 | ↓ |
| | Sampled at 1543 | | | | | | | | | | |
| 0728 | 0204 | 31-35 | 6.82 | 0.975 | – | 8.23 | 17.81 | 0.58 | 0.755 | 41.1 | grey |
| 0730 | ↓ | ↓ | 6.44 | 1.016 | – | 1.25 | 18.40 | 0.58 | 0.758 | -14.3 | ↓ |
| 0732 | ↓ | ↓ | 6.44 | 1.025 | – | 0.72 | 18.66 | 0.58 | 0.761 | -42.4 | ↓ |
| | Sampled at 0733 | | | | | | | | | | |
| 0743 | 0204 | 36-40 | 7.07 | 1.361 | – | 7.94 | 15.77 | 0.86 | 1.115 | -49.9 | grey |
| 0745 | ↓ | ↓ | 6.98 | 1.401 | – | 1.74 | 17.02 | 0.91 | 1.161 | -73.9 | ↓ |
| 0747 | ↓ | ↓ | 6.93 | 1.551 | – | 0.33 | 18.28 | 0.91 | 1.166 | -80.4 | ↓ |
| | Sampled at 0748 | | | | | | | | | | |
| 0756 | 0204 | 41-45 | 7.25 | 1.685 | – | 8.45 | 15.78 | 1.07 | 1.359 | -35.9 | grey |
| 0758 | ↓ | ↓ | 7.08 | 1.859 | – | 2.30 | 18.22 | 1.12 | 1.419 | -69.0 | ↓ |
| 0800 | ↓ | ↓ | 7.00 | 1.927 | – | 0.42 | 18.54 | 1.14 | 1.441 | -78.6 | ↓ |
| | Sampled at 0801 | | | | | | | | | | |
| 0812 | 0204 | 56-60 | 7.15 | 3.633 | – | 2.40 | 15.62 | 2.42 | 2.960 | -100.4 | grey |
| 0814 | ↓ | ↓ | 7.13 | 3.777 | – | 2.48 | 15.65 | 2.49 | 3.027 | -113.2 | ↓ |
| 0816 | ↓ | ↓ | 7.14 | 3.853 | – | 0.12 | 15.65 | 2.56 | 3.101 | -119.8 | ↓ |
| | Sampled at 0817 | | | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/21/13 Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0836 | 0205 | 8-12 | 7.56 | 0.799 | – | 6.45 | 17.77 | 0.43 | 0.562 | +15.1 | dk brown |
| 0838 | ↓ | ↓ | 7.13 | 0.733 | – | 0.96 | 18.83 | 0.41 | 0.535 | 9.2 | ↓ |
| 0840 | ↓ | ↓ | 6.93 | 0.723 | – | 0.26 | 19.00 | 0.40 | 0.528 | 7.0 | ↓ |
| | Sampled at 0841 | | | | | | | | | | |
| 0846 | 0205 | 16-20 | 7.09 | 0.829 | – | 7.39 | 19.78 | 0.47 | 0.617 | -30.8 | grey |
| 0848 | ↓ | ↓ | 6.99 | 0.862 | – | 1.38 | 20.07 | 0.47 | 0.622 | -55.4 | ↓ |
| 0850 | ↓ | ↓ | 6.97 | 0.873 | – | 0.33 | 20.27 | 0.48 | 0.625 | -66.1 | ↓ |
| | Sampled at 0851 | | | | | | | | | | |
| 0856 | 0205 | 21-25 | 7.19 | 0.839 | – | 3.42 | 19.58 | 0.46 | 0.611 | -12.6 | grey |
| 0858 | ↓ | ↓ | 7.04 | 0.848 | – | 0.74 | 19.95 | 0.47 | 0.612 | -25.0 | ↓ |
| 0900 | ↓ | ↓ | 6.97 | 0.855 | – | 0.20 | 20.25 | 0.47 | 0.614 | -31.0 | ↓ |
| | Sampled at 0901 | | | | | | | | | -2.1 (2) | |
| 0905 | 0205 | 26-30 | 7.31 | 0.847 | – | 8.88 | 17.29 | 0.50 | 0.653 | ~~-21.1~~ | grey |
| 0907 | ↓ | ↓ | 7.03 | 0.884 | – | 1.67 | 18.87 | 0.50 | 0.651 | -26.7 | ↓ |
| 0909 | ↓ | ↓ | 6.95 | 0.894 | – | 0.30 | 19.53 | 0.50 | 0.652 | -32.4 | ↓ |
| | Sampled at 0910 | | | | | | | | | | |
| 0915 | 0205 | 31-35 | 7.22 | 0.841 | – | 6.08 | 19.20 | 0.47 | 0.620 | -10.0 | grey |
| 0917 | ↓ | ↓ | 7.10 | 0.864 | – | 1.60 | 20.08 | 0.48 | 0.626 | -87.0 | ↓ |
| 0919 | ↓ | ↓ | 7.03 | 0.884 | – | 0.31 | 20.98 | 0.47 | 0.624 | -91.6 | ↓ |
| | Sampled at 0920 | | | | | | | | | | |
| 0926 | 0205 | 36-40 | 7.45 | 1.023 | – | 6.09 | 19.42 | 0.58 | 0.755 | -57.5 | grey |
| 0928 | ↓ | ↓ | 7.25 | 1.060 | – | 1.45 | 20.89 | 0.57 | 0.747 | -108.0 | ↓ |
| 0930 | ↓ | ↓ | 7.20 | 1.061 | – | 0.22 | 21.03 | 0.57 | 0.746 | -123.5 | ↓ |
| | Sampled at 0931 | | | | | | | | | | |
| 0939 | 0205 | 41-45 | 7.47 | 1.434 | – | 6.79 | 18.95 | 0.88 | 1.133 | -34.6 | grey |
| 0941 | ↓ | ↓ | 7.24 | 1.605 | – | 1.97 | 20.52 | 0.93 | 1.197 | -80.2 | ↓ |
| 0943 | ↓ | ↓ | 7.08 | 1.764 | – | 0.24 | 21.71 | 0.98 | 1.259 | -87.0 | ↓ |
| | Sampled at 0944 | | | | | | | | | | |
| 0953 | 0205 | 56-60 | 7.41 | 3.322 | – | 9.11 | 19.02 | 2.53 | 3.159 | -1.1 | grey |
| 0955 | ↓ | ↓ | 7.18 | 4.598 | – | 1.72 | 20.28 | 2.79 | 3.369 | -78.0 | ↓ |
| 0957 | ↓ | ↓ | 7.16 | 4.765 | – | 0.32 | 20.57 | 2.83 | 3.414 | -100.5 | ↓ |
| | Sampled at 0958 | | | | | | | | | | |

Notes:

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Temp (°C) = Temperature (degrees Celsius)

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/21/13 Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1020 | 0206 | 8-12 | 7.45 | 0.540 | – | 10.70 | 19.30 | 0.53 | 0.692 | 14.9 | dk brown |
| 1022 | ↓ | ↓ | 7.39 | 0.932 | – | 4.96 | 19.93 | 0.51 | 0.660 | -1.9 | ↓ |
| 1024 | ↓ | ↓ | 7.10 | 0.912 | – | 1.17 | 20.40 | 0.49 | 0.643 | -10.1 | ↓ |
| | Sampled at 1025 | | | | | | | | | | |
| 1029 | 0206 | 16-20 | 7.13 | 0.911 | – | 2.00 | 20.81 | 0.49 | 0.647 | -25.0 | grey |
| 1031 | ↓ | ↓ | 6.98 | 0.924 | – | 0.34 | 21.42 | 0.49 | 0.647 | -41.2 | ↓ |
| 1033 | ↓ | ↓ | 6.93 | 0.936 | – | 0.10 | 21.87 | 0.49 | 0.649 | -46.3 | ↓ |
| | Sampled at 1034 | | | | | | | | | | |
| 1039 | 0206 | 21-25 | 7.35 | 0.794 | – | 8.64 | 19.80 | 0.43 | 0.513 | -14.3 | grey |
| 1041 | ↓ | ↓ | 7.16 | 0.805 | – | 2.69 | 20.62 | 0.43 | 0.513 | -45.6 | ↓ |
| 1043 | ↓ | ↓ | 7.05 | 0.811 | – | 0.49 | 20.74 | 0.44 | 0.515 | -59.1 | ↓ |
| | Sampled at 1044 | | | | | | | | | | |
| 1048 | 0206 | 26-30 | 7.39 | 0.401 | – | 7.64 | 19.49 | 0.31 | 0.446 | -43.2 | grey |
| 1050 | ↓ | ↓ | 7.32 | 0.743 | – | 6.91 | 20.24 | 0.43 | 0.564 | -110.2 | ↓ |
| 1052 | ↓ | ↓ | 7.25 | 0.804 | – | 1.48 | 20.83 | 0.44 | 0.576 | -130.0 | ↓ |
| | Sampled at 1053 | | | | | | | | | | |
| 1101 | 0206 | 31-35 | 7.74 | 0.743 | – | 7.44 | 20.52 | 0.40 | 0.533 | -79.6 | grey |
| 1103 | ↓ | ↓ | 7.45 | 0.765 | – | 1.57 | 21.42 | 0.40 | 0.536 | -119.9 | ↓ |
| 1105 | ↓ | ↓ | 7.31 | 0.770 | – | 0.30 | 21.43 | 0.41 | 0.539 | -132.2 | ↓ |
| | Sampled at 1106 | | | | | | | | | | |
| 1131 | 0206 | 36-40 | 7.14 | 1.211 | – | 0.82 | 21.89 | 0.66 | 0.860 | -105.4 | grey |
| 1133 | ↓ | ↓ | 7.12 | 1.277 | – | 0.25 | 22.05 | 0.69 | 0.894 | -109.8 | ↓ |
| 1135 | ↓ | ↓ | 7.11 | 1.313 | – | 0.16 | 22.28 | 0.70 | 0.905 | -110.2 | ↓ |
| | Sampled at 1136 | | | | | | | | | | |
| 1145 | 0206 | 41-45 | 7.38 | 1.482 | – | 6.74 | 20.32 | 0.86 | 1.107 | -68.4 | grey |
| 1147 | ↓ | ↓ | 7.17 | 1.587 | – | 1.55 | 20.73 | 0.89 | 1.139 | -85.1 | ↓ |
| 1149 | ↓ | ↓ | 7.10 | 1.627 | – | 0.39 | 20.82 | 0.91 | 1.169 | -92.6 | ↓ |
| | Sampled at 1150 | | | | | | | | | | |
| 1159 | 0206 | 56-60 | 7.17 | 5.062 | – | 7.29 | 21.02 | 2.97 | 3.554 | -85.5 | grey |
| 1201 | ↓ | ↓ | 7.11 | 5.081 | – | 2.25 | 21.39 | 2.96 | 3.559 | -110.9 | ↓ |
| 1203 | ↓ | ↓ | 7.09 | 5.095 | – | 0.58 | 21.30 | 2.98 | 3.575 | -124.3 | ↓ |
| | Sampled at 1204 | | | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/21/13 Crystal Downs

| Time | AB DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1343 | 0207 | 8-12 | 7.84 | 0.882 | – | 4.35 | 22.59 | 0.45 | 0.585 | 3.3 | dk brown |
| 1345 | ↓ | ↓ | 7.48 | 0.852 | – | 0.89 | 22.60 | 0.44 | 0.575 | -20.1 | ↓ |
| 1347 | ↓ | ↓ | 7.24 | 0.838 | – | 0.39 | 22.63 | 0.43 | 0.567 | -28.1 | ↓ |
| | Sampled at 1348 | | | | | | | | | | |
| 1353 | 0207 | 16-20 | 7.41 | 0.610 | – | 8.06 | 23.41 | 0.61 | 0.794 | 12.0 | grey-brown |
| 1355 | ↓ | ↓ | 7.05 | 1.199 | – | 3.35 | 23.72 | 0.61 | 0.802 | -42.1 | ↓ |
| 1357 | ↓ | ↓ | 6.90 | 1.215 | – | 0.51 | 23.98 | 0.62 | 0.811 | -62.6 | ↓ |
| | Sampled at 1358 | | | | | | | | | | |
| 1404 | 0207 | 21-25 | 7.14 | 1.299 | ✓ | 2.23 | 23.67 | 0.67 | 0.872 | -31.9 | grey-brown |
| 1406 | ↓ | ↓ | 6.91 | 1.317 | – | 0.38 | 23.99 | 0.67 | 0.877 | -41.4 | ↓ |
| 1408 | ↓ | ↓ | 6.81 | 1.331 | – | 0.10 | 24.23 | 0.68 | 0.881 | -44.7 | ↓ |
| | Sampled at 1409 | | | | | | | | | | |
| 1414 | 0207 | 26-30 | 7.47 | 1.176 | – | 5.85 | 24.61 | 0.59 | 0.780 | -21.7 | grey |
| 1416 | ↓ | ↓ | 7.28 | 1.211 | – | 2.17 | 24.83 | 0.61 | 0.800 | -53.5 | ↓ |
| 1418 | ↓ | ↓ | 7.20 | 1.239 | – | 1.08 | 24.91 | 0.61 | 0.815 | -68.3 | ↓ |
| | Sampled at 1419 | | | | | | | | | | |
| 1428 | 0207 | 31-35 | 7.44 | 1.778 | – | 9.11 | 22.99 | 0.95 | 1.224 | -49.0 | grey |
| 1430 | ↓ | ↓ | 7.15 | 1.859 | – | 3.77 | 23.71 | 0.99 | 1.267 | -78.0 | ↓ |
| 1432 | ↓ | ↓ | 7.00 | 1.929 | – | 0.66 | 24.01 | 1.01 | 1.288 | -84.8 | ↓ |
| | Sampled at 1433 | | | | | | | | | | |
| 1441 | 0207 | 36-40 | 7.40 | 2.049 | – | 4.59 | 24.42 | 1.07 | 1.368 | -47.3 | grey |
| 1443 | ↓ | ↓ | 7.09 | 2.116 | – | 0.93 | 24.89 | 1.09 | 1.394 | -69.1 | ↓ |
| 1445 | ↓ | ↓ | 6.99 | 2.159 | – | 0.19 | 25.19 | 1.10 | 1.407 | -70.8 | ↓ |
| | Sampled at 1446 | | | | | | | | | | |
| 1455 | 0207 | 41-45 | 7.12 | 2.110 | – | 2.26 | 24.04 | 1.10 | 1.405 | -70.7 | grey |
| 1457 | ↓ | ↓ | 7.03 | 2.132 | – | 0.72 | 24.17 | 1.11 | 1.418 | -77.4 | ↓ |
| 1459 | ↓ | ↓ | 6.97 | 2.160 | – | 0.19 | 24.29 | 1.12 | 1.430 | -78.1 | ↓ |
| | Sampled at 1500 | | | | | | | | | | |
| 1513 | 0207 | 56-60 | 7.33 | 4.038 | – | 10.84 | 23.10 | 2.28 | 2.816 | -116.7 | grey |
| 1515 | ↓ | ↓ | 7.26 | 4.356 | – | 3.48 | 23.41 | 2.52 | 3.089 | -138.9 | ↓ |
| 1517 | ↓ | ↓ | 7.24 | 4.685 | – | 1.40 | 23.54 | 2.60 | 3.160 | -146.8 | ↓ |
| | Sampled at 1518 | | | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/21/13 - 3/22/13

| Time | AE DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1632 | 0208 | 8-12 | 7.18 | 0.865 | – | 6.28 | 20.43 | 0.46 | 0.598 | 13.5 | dk brown |
| 1634 | ↓ | ↓ | 7.32 | 0.834 | – | 2.13 | 20.90 | 0.44 | 0.583 | -30.0 | ↓ |
| 1636 | ↓ | ↓ | 7.20 | 0.824 | – | 1.21 | 20.92 | 0.44 | 0.579 | -48.4 | ↓ |
| | Sampled at 1637 | | | | | | | | | | |
| 1642 | 0208 | 16-20 | 7.29 | 0.809 | – | 4.63 | 21.37 | 0.43 | 0.564 | -29.1 | dk brown |
| 1644 | ↓ | ↓ | 7.19 | 0.811 | – | 1.76 | 21.70 | 0.43 | 0.562 | -64.3 | ↓ |
| 1646 | ↓ | ↓ | 7.14 | 0.811 | – | 0.65 | 21.93 | 0.42 | 0.557 | -82.2 | ↓ |
| | Sampled at 1647 | | | | | | | | | | |
| 1652 | 0208 | 21-25 | 7.26 | 1.010 | – | 6.70 | 21.92 | 0.53 | 0.702 | -34.0 | grey |
| 1654 | ↓ | ↓ | 7.10 | 1.019 | – | 2.65 | 22.08 | 0.54 | 0.704 | -56.0 | ↓ |
| 1656 | ↓ | ↓ | 7.03 | 1.027 | – | 0.90 | 22.20 | 0.54 | 0.707 | -66.3 | ↓ |
| | Sampled at 1658 | | | | | | | | | | |
| 1705 | 0208 | 26-30 | 7.30 | 1.352 | – | 8.22 | 21.60 | 0.74 | 0.956 | -17.4 | grey |
| 1707 | ↓ | ↓ | 7.05 | 1.419 | – | 2.26 | 23.04 | 0.75 | 0.969 | -45.5 | ↓ |
| 1709 | ↓ | ↓ | 6.97 | 1.443 | – | 0.50 | 23.08 | 0.75 | 0.975 | -55.3 | ↓ |
| | Sampled at 1710 | | | | | | | | | | |
| 1718 | 0208 | 31-35 | 7.16 | 0.875 | – | 8.33 | 21.32 | 0.95 | 1.207 | -40.1 | grey |
| 1720 | ↓ | ↓ | 7.00 | 1.750 | – | 3.60 | 22.34 | 0.94 | 1.202 | -75.5 | ↓ |
| 1722 | ↓ | ↓ | 6.91 | 1.773 | – | 0.70 | 22.71 | 0.94 | 1.209 | -85.5 | ↓ |
| | Sampled at 1723 | | | | | | | | | | |
| 0734 | 0208 | 36-40 | 7.39 | 1.421 | – | 1.49 | 19.15 | 0.84 | 1.090 | -74.2 | grey |
| 0736 | ↓ | ↓ | 7.17 | 1.571 | – | 0.45 | 20.74 | 0.90 | 1.156 | -97.5 | ↓ |
| 0738 | ↓ | ↓ | 7.01 | 1.613 | – | 0.38 | 20.89 | 0.93 | 1.197 | -100.4 | ↓ |
| | Sampled at 0739 | | | | | | | | | | |
| 0747 | 0208 | 41-45 | 8.66 | 1.160 | – | 2.25 | 18.16 | 0.68 | 0.882 | -31.5 | grey |
| 0749 | ↓ | ↓ | 9.14 | 1.189 | – | 0.22 | 18.18 | 0.69 | 0.892 | -27.8 | ↓ |
| 0751 | ↓ | ↓ | 9.40 | 1.201 | – | 0.13 | 18.35 | 0.70 | 0.904 | -26.5 | ↓ |
| | Sampled at 0752 | | | | | | | | | | |
| 0806 | 0208 | 56-60 | 9.12 | 3.465 | – | 9.14 | 15.80 | 2.33 | 2.831 | -0.9 | grey |
| 0808 | ↓ | ↓ | 8.56 | 3.699 | – | 1.56 | 17.43 | 2.33 | 2.840 | -96.0 | ↓ |
| 0810 | ↓ | ↓ | 8.42 | 3.778 | – | 0.48 | 17.49 | 2.37 | 2.882 | -136.3 | ↓ |
| | Sampled at 0811 | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/22/13 Crystal Downs

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0858 | 0209 | 8-12 | 7.83 | 0.824 | – | 6.46 | 20.94 | 0.44 | 0.571 | 12.7 | dk brown |
| 0900 | ↓ | ↓ | 7.42 | 0.815 | – | 2.21 | 22.14 | 0.42 | 0.557 | -17.3 | ↓ |
| 0902 | ↓ | ↓ | 7.12 | 0.817 | – | 0.67 | 22.57 | 0.42 | 0.556 | -25.4 | ↓ |
| | Sampled at 0903 | | | | | | | | | | |
| 0908 | 0209 | 16-20 | 7.29 | 0.837 | – | 9.54 | 20.87 | 0.45 | 0.597 | -71.7 | dk brown |
| 0910 | ↓ | ↓ | 6.97 | 0.886 | – | 0.68 | 23.02 | 0.45 | 0.601 | -79.7 | ↓ |
| 0912 | ↓ | ↓ | 6.95 | 0.892 | – | 0.29 | 23.11 | 0.46 | 0.603 | -85.1 | ↓ |
| | Sampled at 0913 | | | | | | | | | | |
| 0918 | 0209 | 21-25 | 7.47 | 0.912 | – | 6.68 | 21.74 | 0.51 | 0.664 | -29.5 | grey-brown |
| 0920 | ↓ | ↓ | 7.18 | 0.976 | – | 3.01 | 22.80 | 0.51 | 0.668 | -61.8 | ↓ |
| 0922 | ↓ | ↓ | 7.02 | 0.991 | – | 0.83 | 22.93 | 0.51 | 0.673 | -75.2 | ↓ |
| | Sampled at 0923 | | | | | | | | | | |
| 0928 | 0209 | 26-30 | 7.47 | 0.669 | – | 9.33 | 21.32 | 0.52 | 0.678 | -21.4 | grey |
| 0930 | ↓ | ↓ | 7.28 | 0.975 | – | 5.10 | 21.49 | 0.52 | 0.682 | -50.2 | ↓ |
| 0932 | ↓ | ↓ | 7.11 | 0.978 | – | 1.54 | 21.15 | 0.52 | 0.687 | -63.4 | ↓ |
| | Sampled at 0933 | | | | | | | | | | |
| 0939 | 0209 | 31-35 | 7.45 | 0.458 | – | 9.54 | 22.32 | 0.42 | 0.554 | -54.0 | grey |
| 0941 | ↓ | ↓ | 7.25 | 0.831 | – | 3.18 | 23.67 | 0.42 | 0.560 | -105.2 | ↓ |
| 0943 | ↓ | ↓ | 7.13 | 0.848 | – | 0.79 | 23.95 | 0.43 | 0.568 | -122.7 | ↓ |
| | Sampled at 0944 | | | | | | | | | | |
| 0952 | 0209 | 36-40 | 7.66 | 1.064 | – | 5.02 | 23.45 | 0.56 | 0.735 | -73.4 | grey |
| 0954 | ↓ | ↓ | 7.33 | 1.114 | – | 1.09 | 23.59 | 0.57 | 0.752 | -122.1 | ↓ |
| 0956 | ↓ | ↓ | 7.25 | 1.136 | – | 0.29 | 23.90 | 0.58 | 0.759 | -137.9 | ↓ |
| | Sampled at 0957 | | | | | | | | | | |
| 1007 | 0209 | 41-45 | 7.59 | 1.641 | – | 5.06 | 23.41 | 0.88 | 1.146 | -31.7 | grey |
| 1009 | ↓ | ↓ | 7.35 | 1.751 | – | 1.15 | 23.84 | 0.93 | 1.195 | -89.7 | ↓ |
| 1011 | ↓ | ↓ | 7.24 | 1.825 | – | 0.25 | 23.94 | 0.96 | 1.234 | -109.6 | ↓ |
| | Sampled at 1012 | | | | | | | | | | |
| 1024 | 0209 | 56-60 | 7.42 | 2.839 | – | 8.58 | 22.64 | 2.29 | 2.930 | -41.7 | grey |
| 1026 | ↓ | ↓ | 7.26 | 4.629 | – | 2.59 | 23.51 | 2.61 | 3.183 | -112.5 | ↓ |
| 1028 | ↓ | ↓ | 7.21 | 4.801 | – | 0.83 | 23.68 | 2.65 | 3.214 | -133.0 | ↓ |
| | Sampled at 1029 | | | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/22/13 Crystal Towns

| Time | H DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1059 | 0210 | 8-12 | 7.61 | 1.202 | – | 8.19 | 23.80 | 0.61 | 0.791 | -36.5 | dk brown |
| 1101 | ↓ | ↓ | 7.29 | 1.199 | – | 3.93 | 24.58 | 0.60 | 0.780 | -67.1 | ↓ |
| 1103 | ↓ | ↓ | 7.05 | 1.185 | – | 1.84 | 24.67 | 0.59 | 0.772 | -78.1 | ↓ |
| | Sampled at 1104 | | | | | | | | | | |
| 1108 | 0210 | 16-20 | 7.07 | 1.216 | – | 3.18 | 26.32 | 0.59 | 0.782 | -89.6 | grey |
| 1110 | ↓ | ↓ | 6.93 | 1.257 | – | 1.08 | 26.79 | 0.61 | 0.798 | -95.1 | ↓ |
| 1112 | ↓ | ↓ | 6.85 | 1.274 | – | 0.56 | 26.82 | 0.61 | 0.803 | -96.7 | ↓ |
| | Sampled at 1113 | | | | | | | | | | |
| 1117 | 0210 | 21-25 | 7.20 | 1.246 | – | 5.42 | 26.12 | 0.61 | 0.795 | -45.3 | grey |
| 1119 | ↓ | ↓ | 6.94 | 1.267 | – | 1.39 | 26.56 | 0.61 | 0.804 | -58.9 | ↓ |
| 1121 | ↓ | ↓ | 6.82 | 1.282 | – | 0.41 | 26.94 | 0.61 | 0.806 | -62.7 | ↓ |
| | Sampled at 1122 | | | | | | | | | | |
| 1126 | 0210 | 26-30 | 7.42 | 1.173 | – | 5.63 | 25.47 | 0.60 | 0.782 | -10.8 | grey |
| 1128 | ↓ | ↓ | 7.07 | 1.231 | – | 1.63 | 26.99 | 0.59 | 0.772 | -32.2 | ↓ |
| 1130 | ↓ | ↓ | 6.89 | 1.242 | – | 0.24 | 27.56 | 0.59 | 0.771 | -41.1 | ↓ |
| | Sampled at 1131 | | | | | | | | | | |
| 1136 | 0210 | 31-35 | 7.41 | 1.218 | – | 5.97 | 25.73 | 0.61 | 0.802 | -37.0 | grey |
| 1138 | ↓ | ↓ | 7.10 | 1.271 | – | 1.40 | 26.93 | 0.61 | 0.798 | -78.7 | ↓ |
| 1140 | ↓ | ↓ | 6.95 | 1.282 | – | 0.17 | 27.20 | 0.61 | 0.803 | -92.7 | ↓ |
| | Sampled at 1141 | | | | | | | | | | |
| 1147 | 0210 | 36-40 | 7.46 | 1.574 | – | 5.09 | 26.01 | 0.79 | 1.028 | -57.7 | grey |
| 1149 | ↓ | ↓ | 7.10 | 1.648 | – | 4.60 | 26.58 | 0.83 | 1.092 | -97.0 | ↓ |
| 1151 | ↓ | ↓ | 6.95 | 1.809 | – | 0.15 | 27.27 | 0.91 | 1.179 | -102.9 | ↓ |
| | Sampled at 1152 | | | | | | | | | | |
| 1159 | 0210 | 41-45 | 7.32 | 2.063 | – | 1.41 | 25.00 | 1.06 | 1.361 | -96.9 | grey |
| 1201 | ↓ | ↓ | 7.20 | 2.115 | – | 0.18 | 24.96 | 1.09 | 1.394 | -126.9 | ↓ |
| 1203 | ↓ | ↓ | 7.15 | 2.159 | – | 0.07 | 24.97 | 1.11 | 1.418 | -138.4 | ↓ |
| | Sampled at 1204 | | | | | | | | | | |
| 1214 | 0210 | 56-60 | 7.27 | 4.844 | – | 6.34 | 24.87 | 2.62 | 3.180 | -24.6 | grey |
| 1216 | ↓ | ↓ | 7.12 | 4.971 | – | 1.03 | 25.73 | 2.64 | 3.210 | -92.5 | ↓ |
| 1218 | ↓ | ↓ | 7.08 | 5.036 | – | 0.08 | 25.76 | 2.66 | 3.238 | -122.5 | ↓ |
| | Sampled at 1219 | | | | | | | | | | |

Notes:

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/22/13 – 3/25/13 Crystal Towns

| Time | Q DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1241 | 0211 | 8-12 | 7.63 | 0.541 | – | 7.90 | 25.56 | 0.50 | 0.660 | -41.5 | dk. brown |
| 1243 | ↓ | ↓ | 7.28 | 1.027 | – | 4.02 | 25.90 | 0.49 | 0.652 | -78.2 | ↓ |
| 1245 | ↓ | ↓ | 7.00 | 1.009 | – | 1.02 | 25.61 | 0.49 | 0.641 | -80.0 | ↓ |
| | Sampled at 1246 | | | | | | | | | | |
| 0805 | 0211 | 16-20 | 6.58 | 6.117 | – | 6.91 | 21.06 | 0.60 | 0.786 | 72.5 | brown |
| 0807 | ↓ | ↓ | 6.11 | 1.142 | – | 2.32 | 22.12 | 0.61 | 0.794 | 37.7 | ↓ |
| 0809 | ↓ | ↓ | 6.03 | 1.161 | – | 0.44 | 22.58 | 0.61 | 0.794 | 7.6 | ↓ |
| | Sampled at 0810 | | | | | | | | | | |
| 0816 | 0211 | 21-25 | 7.09 | 1.144 | – | 7.64 | 21.25 | 0.62 | 0.810 | -31.3 | brown |
| 0818 | ↓ | ↓ | 6.88 | 1.198 | – | 2.00 | 22.80 | 0.62 | 0.822 | -65.0 | ↓ |
| 0820 | ↓ | ↓ | 6.77 | 1.215 | – | 0.51 | 22.75 | 0.64 | 0.829 | -77.9 | ↓ |
| | Sampled at 0821 | | | | | | | | | | |
| 0826 | 0211 | 26-30 | 7.13 | 1.207 | – | 6.36 | 20.74 | 0.66 | 0.862 | -23.2 | grey |
| 0828 | ↓ | ↓ | 6.93 | 1.240 | – | 1.44 | 21.99 | 0.67 | 0.866 | -38.4 | ↓ |
| 0830 | ↓ | ↓ | 6.81 | 1.285 | – | 0.31 | 23.14 | 0.67 | 0.875 | -47.7 | ↓ |
| | Sampled at 0831 | | | | | | | | | | |
| 0839 | 0211 | 31-35 | 7.24 | 1.151 | – | 6.69 | 21.20 | 0.63 | 0.819 | -30.0 | grey |
| 0841 | ↓ | ↓ | 7.06 | 1.172 | – | 2.54 | 21.80 | 0.63 | 0.819 | -69.0 | ↓ |
| 0843 | ↓ | ↓ | 6.94 | 1.196 | – | 0.35 | 22.28 | 0.63 | 0.826 | -89.6 | ↓ |
| | Sampled at 0844 | | | | | | | | | | |
| 0851 | 0211 | 36-40 | 7.28 | 1.020 | – | 7.92 | 21.62 | 0.81 | 1.057 | -24.6 | grey |
| 0853 | ↓ | ↓ | 7.12 | 1.567 | – | 3.00 | 22.31 | 0.85 | 1.095 | -70.8 | ↓ |
| 0855 | ↓ | ↓ | 7.05 | 1.629 | – | 0.44 | 22.93 | 0.86 | 1.114 | -94.6 | ↓ |
| | Sampled at 0856 | | | | | | | | | | |
| 0905 | 0211 | 41-45 | 7.31 | 2.014 | – | 6.51 | 21.34 | 1.13 | 1.429 | -18.9 | grey |
| 0907 | ↓ | ↓ | 7.16 | 2.095 | – | 2.29 | 22.24 | 1.14 | 1.453 | -59.1 | ↓ |
| 0909 | ↓ | ↓ | 7.08 | 2.125 | – | 0.45 | 22.28 | 1.15 | 1.459 | -80.9 | ↓ |
| | Sampled at 0910 | | | | | | | | | | |
| 0923 | 0211 | 56-60 | 7.34 | 2.192 | – | 6.78 | 21.60 | 2.46 | 3.005 | -36.7 | grey |
| 0925 | ↓ | ↓ | 7.11 | 4.470 | – | 3.31 | 22.50 | 2.56 | 3.119 | -112.9 | ↓ |
| 0927 | ↓ | ↓ | 7.09 | 4.649 | – | 0.51 | 22.75 | 2.64 | 3.206 | -136.5 | ↓ |
| | Sampled at 0928 | | | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/25/13 Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0952 | 0212 | 8-12 | 7.44 | 1.100 | – | 7.09 | 20.93 | 0.59 | 0.756 | -20.4 | dk brown |
| 0954 | ↓ | ↓ | 7.50 | 1.066 | – | 2.41 | 22.31 | 0.55 | 0.713 | -23.1 | ↓ |
| 0956 | ↓ | ↓ | 7.28 | 1.029 | – | 0.59 | 22.61 | 0.53 | 0.687 | -32.9 | ↓ |
| | Sampled at 0957 | | | | | | | | | | |
| 1001 | 0212 | 16-20 | 7.20 | 1.007 | – | 4.66 | 22.21 | 0.53 | 0.689 | -43.5 | brown |
| 1003 | ↓ | ↓ | 7.06 | 1.018 | – | 1.29 | 23.45 | 0.52 | 0.681 | -63.3 | ↓ |
| 1005 | ↓ | ↓ | 6.98 | 1.037 | – | 0.30 | 24.00 | 0.52 | 0.690 | -74.3 | ↓ |
| | Sampled at 1006 | | | | | | | | | | |
| 1011 | 0212 | 21-25 | 7.34 | 0.992 | – | 5.40 | 23.21 | 0.51 | 0.669 | -40.9 | grey |
| 1013 | ↓ | ↓ | 7.16 | 1.009 | – | 1.12 | 24.02 | 0.51 | 0.671 | -67.5 | ↓ |
| 1015 | ↓ | ↓ | 7.08 | 1.019 | – | 0.30 | 24.20 | 0.51 | 0.676 | -81.9 | ↓ |
| | Sampled at 1016 | | | | | | | | | | |
| 1021 | 0212 | 26-30 | 7.28 | 1.108 | – | ~~0.47~~ 4.07 (CF) ~~0.47~~ | 23.43 | 0.57 | 0.742 | -78.9 | grey |
| 1023 | ↓ | ↓ | 7.08 | 1.118 | – | 0.76 | 24.26 | 0.56 | 0.763 | -83.0 | ↓ |
| 1025 | ↓ | ↓ | 6.95 | 1.129 | – | ~~0.56~~ 0.13 (CF) | 24.66 | 0.57 | 0.745 | -88.6 | ↓ |
| | Sampled at 1026 | | | | | | | | | | |
| 1033 | 0212 | 31-35 | 7.41 | 1.065 | – | 6.60 | 22.54 | 0.55 | 0.721 | -41.1 | grey |
| 1035 | ↓ | ↓ | 7.18 | 1.058 | – | 1.76 | 23.36 | 0.54 | 0.704 | -98.2 | ↓ |
| 1037 | ↓ | ↓ | 7.08 | 1.057 | – | 0.28 | 24.03 | 0.53 | 0.702 | -118.9 | ↓ |
| | Sampled at 1038 | | | | | | | | | | |
| 1048 | 0212 | 36-40 | 7.30 | 1.397 | – | 4.13 | 23.93 | 0.73 | 0.945 | -48.9 | grey |
| 1050 | ↓ | ↓ | 7.17 | 1.445 | – | 0.75 | 24.44 | 0.74 | 0.954 | -80.2 | ↓ |
| 1052 | ↓ | ↓ | 7.11 | 1.456 | – | ~~0.43~~ 0.13 (CF) | 24.63 | ~~0.8~~ 0.73 (CF) | 0.945 | -104.0 | ↓ |
| | Sampled at 1053 | | | | | | | | | | |
| 1103 | 0212 | 41-45 | 7.42 | 1.963 | – | 4.70 | 23.33 | 1.07 | 1.369 | -30.1 | grey |
| 1105 | ↓ | ↓ | 7.15 | 2.104 | – | 0.51 | 24.50 | 1.11 | 1.412 | -72.3 | ↓ |
| 1107 | ↓ | ↓ | 7.04 | 2.178 | – | 0.12 | 24.83 | 1.12 | 1.432 | -83.6 | ↓ |
| | Sampled at 1108 | | | | | | | | | | |
| 1120 | 0212 | 56-60 | 7.31 | 2.294 | – | 6.04 | 22.77 | 1.26 | 1.596 | -20.0 | grey |
| 1122 | ↓ | ↓ | 7.18 | 3.999 | – | 5.66 | 23.99 | 2.45 | 3.026 | -106.8 | ↓ |
| 1124 | ↓ | ↓ | 7.14 | 4.719 | – | 1.86 | 24.31 | 2.58 | 3.149 | -142.1 | ↓ |
| | Sampled at 1125 | | | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/25/13 Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1151 | 0213 | 8-12 | 7.10 | 0.659 | – | 7.23 | 22.03 | 0.63 | 0.815 | -66.5 | dk brown |
| 1153 | ↓ | ↓ | 7.58 | 1.185 | – | 3.45 | 23.70 | 0.60 | 0.783 | -79.3 | ↓ |
| 1155 | ↓ | ↓ | 7.27 | 1.171 | – | 0.89 | 23.82 | 0.60 | 0.779 | -95.5 | ↓ |
| | Sampled at 1156 | | | | | | | | | | |
| 1200 | 0213 | 16-20 | 7.23 | 1.299 | – | 4.72 | 24.29 | 0.66 | 0.858 | -42.4 | brown |
| 1202 | ↓ | ↓ | 6.95 | 1.316 | – | 1.44 | 25.11 | 0.66 | 0.859 | -57.0 | ↓ |
| 1204 | ↓ | ↓ | 6.83 | 1.344 | – | 0.39 | 25.87 | 0.66 | 0.866 | -68.8 | ↓ |
| | Sampled at 1205 | | | | | | | | | | |
| 1209 | 0213 | 21-25 | 7.32 | 1.219 | – | 5.12 | 24.36 | 0.62 | 0.814 | -54.0 | grey |
| 1211 | ↓ | ↓ | 7.07 | 1.259 | – | 2.16 | 25.01 | 0.64 | 0.833 | -94.1 | ↓ |
| 1213 | ↓ | ↓ | 6.95 | 1.308 | – | 0.43 | 25.22 | 0.66 | 0.862 | -109.8 | ↓ |
| | Sampled at 1214 | | | | | | | | | | |
| 1305 | 0213 | 26-30 | | | – | | | | | | |
| 1307 | ↓ | ↓ | Low Yield = No Parameters Collected | | | | | | | | |
| 1309 | ↓ | ↓ | | | | | | | | | |
| | Sampled at 1310 | | | | | | | | | | |
| 1318 | 0213 | 31-35 | 7.67 | 1.235 | – | 4.46 | 24.87 | 0.62 | 0.819 | -48.1 | grey |
| 1320 | ↓ | ↓ | 7.38 | 1.308 | – | 1.01 | 26.62 | 0.64 | 0.845 | -102.6 | ↓ |
| 1322 | ↓ | ↓ | 7.19 | 1.369 | – | 0.46 | 27.25 | 0.66 | 0.864 | -120.2 | ↓ |
| | Sampled at 1323 | | | | | | | | | | |
| 1329 | 0213 | 36-40 | 7.28 | 1.766 | – | 5.74 | 26.33 | 0.90 | 1.172 | -79.6 | grey |
| 1331 | ↓ | ↓ | 7.06 | 1.924 | – | 1.57 | 27.32 | 0.96 | 1.246 | -98.7 | ↓ |
| 1333 | ↓ | ↓ | 6.95 | 2.078 | – | 0.42 | 27.58 | 1.02 | 1.307 | -105.2 | ↓ |
| | Sampled at 1334 | | | | | | | | | | |
| 1342 | 0213 | 41-45 | 7.27 | 1.269 | – | 5.80 | 24.88 | 1.19 | 1.512 | -81.4 | grey |
| 1344 | ↓ | ↓ | 7.17 | 2.392 | – | 3.35 | 25.91 | 1.23 | 1.569 | -111.6 | ↓ |
| 1346 | ↓ | ↓ | 7.07 | 2.509 | – | 0.96 | 26.16 | 1.26 | 1.605 | -125.3 | ↓ |
| | Sampled at 1347 | | | | | | | | | | |
| 1358 | 0213 | 56-60 | 7.49 | 1.708 | – | 5.46 | 25.34 | 1.79 | 2.223 | -16.6 | grey |
| 1400 | ↓ | ↓ | 7.32 | 3.501 | – | 3.04 | 26.28 | 1.79 | 2.224 | -105.7 | ↓ |
| 1402 | ↓ | ↓ | 7.27 | 3.542 | – | 1.05 | 26.10 | 1.84 | 2.294 | -144.6 | ↓ |
| | Sampled at 1403 | | | | | | | | | | |

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ORP (mV) = Oxidation Reduction Potential (milliVolts)

CRHE

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: FR1681 /25*2

Date: 3/26/13 Crystal Towns

| Time | K DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0746 | 0213 | 66-70 | 7.55 | 1.652 | — | 9.29 | 11.42 | 2.26 | 2.785 | 54.4 | grey |
| 0748 | ↓ | ↓ | 10.21 | 3.423 | — | 7.00 | 11.91 | 2.49 | 3.012 | 15.0 | ↓ |
| 0750 | ↓ | ↓ | 11.06 | 3.586 | — | 3.04 | 13.16 | 2.54 | 3.078 | -11.5 | ↓ |
| | Sampled at | | 0751 | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/25/13 Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1429 | 0214 | 8-12 | 7.63 | 1.032 | – | 5.86 | 23.89 | 0.51 | 0.672 | -39.1 | dk brown |
| 1431 | ↓ | ↓ | 7.51 | 1.007 | – | 3.32 | 24.58 | 0.58 | 0.652 | -41.7 | ↓ |
| 1433 | ↓ | ↓ | 7.24 | 0.981 | – | 1.52 | 24.69 | 0.48 | 0.636 | -54.4 | ↓ |
| | Sampled at 1434 | | | | | | | | | | |
| 1435 | 0214 | 16-20 | 6.86 | 1.366 | – | 4.14 | 26.59 | 0.66 | 0.857 | -43.9 | gray |
| 1437 | ↓ | ↓ | 6.77 | 1.364 | – | 1.56 | 26.85 | 0.66 | 0.869 | -58.6 | ↓ |
| 1439 | ↓ | ↓ | 6.72 | 1.395 | – | 0.73 | 26.79 | 0.67 | 0.882 | -66.6 | ↓ |
| | Sampled at 1440 | | | | | | | | | | |
| 1444 | 0214 | 21-25 | 7.34 | 1.253 | – | 5.64 | 26.22 | 0.61 | 0.805 | -32.9 | grey |
| 1446 | ↓ | ↓ | 7.19 | 1.285 | – | 3.00 | 26.71 | 0.62 | 0.820 | -82.7 | ↓ |
| 1448 | ↓ | ↓ | 7.06 | 1.324 | – | 1.09 | 26.84 | 0.64 | 0.848 | -101.6 | ↓ |
| | Sampled at 1449 | | | | | | | | | | |
| 1454 | 0214 | 26-30 | 7.29 | 1.345 | – | 4.42 | 26.21 | 0.66 | 0.866 | -27.1 | grey |
| 1456 | ↓ | ↓ | 7.13 | 1.370 | – | 1.62 | 26.24 | 0.67 | 0.873 | -37.1 | ↓ |
| 1458 | ↓ | ↓ | 7.04 | 1.378 | – | 0.59 | 26.19 | 0.67 | 0.878 | -47.3 | ↓ |
| | Sampled at 1459 | | | | | | | | | | |
| 1504 | 0214 | 31-35 | 7.55 | 0.989 | – | 7.10 | 26.30 | 0.63 | 0.819 | -3.6 | grey |
| 1506 | ↓ | ↓ | 7.32 | 1.305 | – | 3.68 | 27.32 | 0.62 | 0.814 | -48.9 | ↓ |
| 1508 | ↓ | ↓ | 7.18 | 1.316 | – | 1.41 | 27.48 | 0.62 | 0.820 | -79.7 | ↓ |
| | Sampled at 1509 | | | | | | | | | | |
| 1515 | 0214 | 36-40 | 7.61 | 1.291 | – | 7.16 | 24.79 | 0.65 | 0.853 | -1.7 | grey |
| 1517 | ↓ | ↓ | 7.36 | 1.334 | – | 3.72 | 26.04 | 0.65 | 0.855 | -29.7 | ↓ |
| 1519 | ↓ | ↓ | 7.21 | 1.346 | – | 1.72 | 25.99 | 0.66 | 0.862 | -61.2 | ↓ |
| | Sampled at 1520 | | | | | | | (CF) | | | |
| 1527 | 0214 | 41-45 | 7.51 | 2.230 | – | 7.25 | 25.10 | 1.20 | 1.528 | 3.5 | grey |
| 1529 | ↓ | ↓ | 7.22 | 2.431 | – | 3.40 | 26.38 | 1.22 | 1.554 | -50.8 | ↓ |
| 1531 | ↓ | ↓ | 7.11 | 2.456 | – | 1.63 | 26.25 | 1.23 | 1.563 | -85.4 | ↓ |
| | Sampled at 1532 | | | | | | | | | | |
| 1541 | 0214 | 56-60 | 7.47 | 3.704 | – | 7.22 | 25.19 | 2.01 | 2.491 | 4.6 | grey |
| 1543 | ↓ | ↓ | 7.31 | 3.986 | – | 3.39 | 26.23 | 2.10 | 2.606 | -78.3 | ↓ |
| 1545 | ↓ | ↓ | 7.26 | 4.158 | – | 1.78 | 26.19 | 2.17 | 2.676 | -125.8 | ↓ |
| | Sampled at 1546 | | | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE/FR1601/25*2

Date: 03/26/2013 Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1556 | 0214 | 66-70 | 6.62 | 1.927 | — | 6.40 | 21.51 | 1.69 | 2.250 | -92.7 | grey |
| 1558 | ↓ | ↓ | 7.37 | 3.748 | — | 4.60 | 22.76 | 2.18 | 2.696 | -103.0 | ↓ |
| 1600 | ↓ | ↓ | 7.36 | 4.098 | — | 2.01 | 22.69 | 2.33 | 2.861 | -125.8 | ↓ |
| | sampled at | | 1601 | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/26/13 Crystal Towns

| Time | M DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0850 | 0215 | 8-12 | 9.46 | 0.913 | – | 4.03 | 18.10 | 0.53 | 0.689 | -71.8 | dk brown |
| 0852 | ↓ | ↓ | 8.93 | 0.926 | – | 1.03 | 18.31 | 0.53 | 0693 | -97.7 | ↓ |
| 0854 | ↓ | ↓ | 8.62 | 0.933 | – | 0.42 | 18.41 | 0.53 | 0.695 | -112.3 | ↓ |
| | Sampled at 0855 | | | | | | | | | | |
| 0910 | 0215 | 16-20 | 7.26 | 0.902 | – | 0.17 | 13.74 | 0.57 | 0.736 | -111.5 | brown |
| 0912 | ↓ | ↓ | 7.24 | 0.870 | – | 0.16 | 12.53 | 0.57 | 0.739 | -110.2 | ↓ |
| 0914 | ↓ | ↓ | 7.22 | 0.863 | – | 0.11 | 12.40 | 0.57 | 0.742 | -109.5 | ↓ |
| | Sampled at 0915 | | | | | | | | | | |
| 0922 | 0215 | 21-25 | 7.39 | 0.934 | – | 4.69 | 16.60 | 0.56 | 0.732 | -60.7 | grey |
| 0924 | ↓ | ↓ | 7.24 | 0.998 | – | 2.73 | 19.84 | 0.57 | 0.740 | -58.5 | ↓ |
| 0926 | ↓ | ↓ | 7.10 | 1.068 | – | 0.52 | 21.70 | 0.57 | 0.747 | -56.7 | ↓ |
| | Sampled at 0927 | | | | | | | | | | |
| 0932 | 0215 | 26-30 | 7.31 | 0.483 | – | 8.20 | 15.65 | 0.29 | 0.443 | -53.0 | grey |
| 0934 | ↓ | ↓ | 7.24 | 0.794 | – | 8.59 | 15.67 | 0.54 | 0.728 | -57.5 | ↓ |
| 0936 | ↓ | ↓ | 7.18 | 0.946 | – | 5.73 | 15.96 | 0.57 | 0.745 | -60.6 | ↓ |
| | Sampled at 0937 | | | | | | | | | | |
| 0944 | 0215 | 31-35 | 7.22 | 0.993 | – | 6.11 | 17.81 | 0.59 | 0.767 | -57.4 | grey |
| 0946 | ↓ | ↓ | 7.05 | 1.052 | – | 1.50 | 19.19 | 0.60 | 0.778 | -58.9 | ↓ |
| 0948 | ↓ | ↓ | 6.98 | 1.083 | – | 0.30 | 19.66 | 0.61 | 0.793 | -61.3 | ↓ |
| | Sampled at 0949 | | | | | | | | | | |
| 0958 | 0215 | 36-40 | 7.18 | 1.318 | – | 6.39 | 16.99 | 0.87 | 1.117 | -59.9 | grey |
| 1000 | ↓ | ↓ | 7.10 | 1.557 | – | 3.84 | 19.93 | 0.90 | 1.150 | -64.4 | ↓ |
| 1002 | ↓ | ↓ | 7.03 | 1.657 | – | 0.67 | 21.37 | 0.93 | 1.193 | -69.5 | ↓ |
| | Sampled at 1003 | | | | | | | | | | |
| 1011 | 0215 | 41-45 | 7.23 | 0.922 | – | 7.62 | 14.31 | ~~0~~ 1.09 (SP) | 1.372 | -75.9 | grey |
| 1013 | ↓ | ↓ | 7.20 | 1.770 | – | 7.24 | 17.30 | 1.10 | 1.391 | -75.0 | ↓ |
| 1015 | ↓ | ↓ | 7.11 | 1.867 | – | 2.04 | 18.51 | 1.10 | 1.391 | -77.1 | ↓ |
| | Sampled at 1016 | | | | | | | | | | |
| 1028 | 0215 | 56-60 | 7.02 | 3.312 | – | 0.03 | 18.81 | 2.00 | 2.449 | -134.0 | grey |
| 1030 | ↓ | ↓ | 7.03 | 3.338 | – | 0.03 | 18.86 | 2.01 | 2.470 | -139.9 | ↓ |
| 1032 | ↓ | ↓ | 7.05 | 3.373 | – | 0.02 | 19.05 | 2.03 | 2.485 | -143.6 | ↓ |
| | Sampled at 1033 | | | | | | | | | | |

Notes:

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: ~~3/26/13~~ (2) 3/26/13

Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1112 | 0216 | 8-12 | 7.62 | 0.499 | – | 9.40 | 16.93 | 0.49 | 0.637 | -69.9 | dk brown |
| 1114 | ↓ | ↓ | 7.18 | 0.833 | – | 5.38 | 19.09 | 0.46 | 0.600 | -55.1 | ↓ |
| 1116 | ↓ | ↓ | 7.51 | 0.819 | – | 1.85 | 19.23 | 0.45 | 0.591 | -57.1 | ↓ |
| | Sampled at 1117 | | | | | | | | | | |
| 1123 | 0216 | 16-20 | 6.96 | 0.744 | – | 3.16 | 18.83 | 0.46 | 0.616 | -54.3 | brown |
| 1125 | ↓ | ↓ | 6.89 | 0.887 | – | 2.19 | 20.31 | 0.49 | 0.652 | -60.8 | ↓ |
| 1127 | ↓ | ↓ | 6.83 | 0.936 | – | 0.35 | 21.24 | 0.51 | 0.666 | -68.1 | ↓ |
| | Sampled at 1128 | | | | | | | | | | |
| 1133 | 0216 | 21-25 | 7.03 | 0.519 | – | 6.12 | 17.40 | 0.53 | 0.693 | -54.7 | grey |
| 1135 | ↓ | ↓ | 6.98 | 0.944 | – | 0.96 | 19.98 | 0.52 | 0.688 | -52.1 | ↓ |
| 1137 | ↓ | ↓ | 6.89 | 0.973 | – | 0.64 | 20.92 | 0.53 | 0.690 | -51.4 | ↓ |
| | Sampled at 1138 | | | | | | | | | | |
| 1143 | 0216 | 26-30 | 7.21 | 0.463 | – | 3.59 | 18.44 | 0.50 | 0.644 | -30.4 | grey |
| 1145 | ↓ | ↓ | 7.19 | 0.808 | – | 2.49 | (2) 21.06 | 0.48 | 0.630 | -31.8 | ↓ |
| 1147 | ↓ | ↓ | 7.05 | 0.908 | – | 0.40 | 21.61 | 0.48 | 0.634 | -33.8 | ↓ |
| | Sampled at 1148 | | | | | | | | | | |
| 1155 | 0216 | 31-35 | 7.28 | 0.908 | – | 6.81 | 18.98 | 0.51 | 0.665 | -27.0 | grey |
| 1157 | ↓ | ↓ | 7.18 | 0.953 | – | 3.56 | 21.14 | 0.52 | 0.685 | -27.1 | ↓ |
| 1159 | ↓ | ↓ | 7.07 | 0.989 | – | 0.63 | 21.50 | 0.53 | 0.694 | -27.3 | ↓ |
| | Sampled at 1200 | | | | | | | | | | |
| 1207 | 0216 | 36-40 | 7.34 | 0.741 | – | 6.25 | 19.76 | 0.81 | 1.042 | -9.7 | grey |
| 1209 | ↓ | ↓ | 7.08 | 1.530 | – | 2.42 | 21.69 | 0.85 | 1.096 | -20.9 | ↓ |
| 1211 | ↓ | ↓ | 6.93 | 1.650 | – | 0.29 | 22.91 | 0.89 | 1.147 | -30.8 | ↓ |
| | Sampled at 1212 | | | | | | | | | | |
| 1253 | 0216 | 41-45 | 7.55 | 1.854 | – | 8.84 | 20.72 | 1.04 | 1.328 | -7.9 | grey |
| 1255 | ↓ | ↓ | 7.37 | 1.907 | – | 3.27 | 21.42 | 1.05 | 1.339 | -24.0 | ↓ |
| 1257 | ↓ | ↓ | 7.26 | 1.928 | – | 0.95 | 21.56 | 1.06 | 1.350 | -44.4 | ↓ |
| | Sampled at 1258 | | | | | | | | | | |
| B10 | 0216 | 56-60 | 7.17 | 1.557 | – | 8.65 | 17.98 | 1.87 | 2.301 | -9.7 | grey |
| 1312 | ↓ | ↓ | 7.12 | 3.165 | – | 6.41 | 19.61 | 1.87 | 2.306 | -41.6 | ↓ |
| 1314 | ↓ | ↓ | 7.11 | 3.221 | – | 2.71 | 19.89 | 1.90 | 2.350 | -70.8 | ↓ |
| | Sampled at 1315 | | | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681 / 25*2

Date: 3/27/13

| Time | P DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1537 ~~1539~~ 1539 | 0216 | 60-70 | 6.88 | 2.480 | — | 6.80 | 23.01 | 2.66 | 3.223 | -28.3 | grey |
| ~~1539~~ 1539 | ↓ | ↓ | 6.82 | 4.916 | — | 4.76 | 23.62 | 2.76 | 3.354 | -38.0 | ↓ |
| ~~1541~~ 1541 | ↓ | ↓ | 6.79 | 5.196 | — | 2.13 | 24.05 | 2.93 | 3.555 | -76.4 | ↓ |
| 1541 | Sampled at | | ~~6.42~~ | | | | | | | | |
| | | | 1542 | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/26/13 Crystal Towns

| Time | BG DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1350 | 0217 | 8-12 | 7.32 | 0.424 | – | 8.40 | 17.78 | 0.44 | 0.574 | -102.3 | dk brown |
| 1352 | ↓ | ↓ | 7.81 | 0.776 | – | 6.21 | 20.14 | 0.42 | 0.547 | -84.6 | ↓ |
| 1354 | ↓ | ↓ | 7.75 | 0.751 | – | 3.61 | 20.56 | 0.40 | 0.522 | -75.4 | ↓ |
| | Sampled at 1355 | | | | | | | | | | |
| 1359 | 0217 | 16-20 | 6.91 | 1.045 | – | 7.16 | 20.91 | 0.58 | 0.756 | -49.4 | brown |
| 1401 | ↓ | ↓ | 6.77 | 1.098 | – | 3.69 | 21.96 | 0.58 | 0.764 | -54.0 | ↓ |
| 1403 | ↓ | ↓ | 6.71 | 1.115 | – | 1.65 | 22.27 | 0.59 | 0.766 | -58.3 | ↓ |
| | Sampled at 1404 | | | | | | | | | | |
| 1408 | 0217 | 21-25 | 7.11 | 0.585 | – | 7.12 | 19.57 | 0.63 | 0.811 | -37.2 | grey |
| 1410 | ↓ | ↓ | 6.98 | 1.175 | – | 5.60 | 21.57 | 0.64 | 0.834 | -41.5 | ↓ |
| 1412 | ↓ | ↓ | 6.86 | 1.215 | – | 2.17 | 21.73 | 0.65 | 0.857 | -45.5 | ↓ |
| | Sampled at 1413 | | | | | | | | | | |
| 1418 | 0217 | 26-30 | 7.08 | 1.113 | – | 4.81 | 19.36 | 0.63 | 0.815 | -40.4 | grey |
| 1420 | ↓ | ↓ | 6.97 | 1.158 | – | 2.78 | 20.61 | 0.64 | 0.832 | -40.3 | ↓ |
| 1422 | ↓ | ↓ | 6.90 | 1.171 | – | 0.65 | 20.83 | 0.64 | 0.832 | -41.7 | ↓ |
| | Sampled at 1423 | | | | | | | | | | |
| 1428 | 0217 | 31-35 | 7.05 | 1.577 | – | 7.68 | 19.95 | 0.90 | 1.158 | -35.5 | grey |
| 1430 | ↓ | ↓ | 6.93 | 1.655 | – | 2.78 | 21.45 | 0.91 | 1.165 | -43.4 | ↓ |
| 1432 | ↓ | ↓ | 6.86 | 1.700 | – | 0.50 | 22.32 | 0.92 | 1.177 | -49.9 | ↓ |
| | Sampled at 1433 | | | | | | | | | | |
| 1441 | ~~0~~ 0217 | 36-40 | 7.22 | 0.922 | – | 8.22 | 20.16 | 1.00 | 1.263 | -42.6 | grey |
| 1443 | ↓ | ↓ | 7.13 | 1.826 | – | 5.09 | 22.44 | 0.99 | 1.262 | -47.6 | ↓ |
| 1445 | ↓ | ↓ | 7.03 | 1.862 | – | 1.27 | 22.75 | 0.99 | 1.270 | -56.7 | ↓ |
| | Sampled at 1446 | | | | | | | | | | |
| 1455 | 0217 | 41-45 | 7.19 | 0.934 | – | 7.84 | 19.10 | 1.01 | 1.275 | -39.8 | grey |
| 1457 | ↓ | ↓ | 7.15 | ~~6~~ 1.805 | – | 5.84 | 21.30 | 1.00 | 1.282 | -43.4 | ↓ |
| 1459 | ↓ | ↓ | 7.06 | 1.847 | – | 1.74 | 21.39 | 1.02 | 1.296 | -50.6 | ↓ |
| | Sampled at 1500 | | | | | | | | | | |
| 1512 | 0217 | 56-60 | 7.19 | 1.455 | – | 6.43 | 19.95 | 1.78 | 2.206 | -31.9 | grey |
| 1514 | ↓ | ↓ | 7.04 | 3.127 | – | 4.30 | 21.17 | 1.78 | 2.199 | -51.9 | ↓ |
| 1516 | ↓ | ↓ | 7.03 | 3.148 | – | 1.24 | 21.34 | 1.78 | 2.200 | -70.9 | ↓ |
| | Sampled at 1517 | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE-FR1681-25*2

Date: 3/27/13 Crystal Towns

| Time | BG DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1620 | 0217 | 66-70 | 6.92 | 3.253 | — | 7.41 | 19.85 | 2.53 | 3.156 | -57.8 | grey |
| 1622 | ↓ | ↓ | 7.06 | 4.615 | — | 4.20 | 20.51 | 2.80 | 3.421 | -57.7 | ↓ |
| 1624 | ↓ | ↓ | | 4.999 | — | 1.90 | 21.84 | 3.00 | 3.646 | -61.6 | ↓ |
| | Sampled by | | 1625 | | | | | | | | |

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AD

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/27/13 Crystal Towns

| Time | ~~021~~ AD DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0744 | 0218 | 8-12 | 7.40 | 0.777 | – | 10.03 | 12.26 | 0.51 | 0.653 | -53.2 | dk brown |
| 0746 | ↓ | ↓ | 7.57 | 0.767 | – | 5.02 | 13.94 | 0.48 | 0.625 | -48.5 | ↓ |
| 0748 | ↓ | ↓ | 7.32 | 0.757 | – | 1.70 | 14.27 | 0.47 | 0.611 | -43.6 | ↓ |
| | Sampled at 0749 | | | | | | | | | | |
| 0754 | 0218 | 16-20 | 6.39 | 0.839 | – | 9.27 | 12.97 | 0.54 | 0.700 | -38.3 | grey |
| 0756 | ↓ | ↓ | 6.43 | 0.853 | – | 4.40 | 15.44 | 0.52 | 0.684 | -45.6 | ↓ |
| 0758 | ↓ | ↓ | 6.38 | 0.866 | – | 1.11 | 15.45 | 0.53 | 0.692 | -50.2 | ↓ |
| | Sampled at 0759 | | | | | | | | | | |
| 0805 | 0218 | 21-25 | 6.53 | 0.395 | – | 4.97 | 13.47 | 0.41 | 0.558 | -63.4 | grey |
| 0807 | ↓ | ↓ | 6.54 | 0.754 | – | 4.12 | 15.64 | 0.47 | 0.621 | -71.5 | ↓ |
| 0809 | ↓ | ↓ | 6.54 | 0.810 | – | 0.64 | 16.83 | 0.48 | 0.632 | -78.8 | ↓ |
| | Sampled at 0810 | | | | | | | | | | |
| 0817 | 0218 | 26-30 | 6.52 | 0.667 | – | 8.81 | 13.11 | 0.54 | 0.728 | -65.1 | grey |
| 0819 | ↓ | ↓ | 6.48 | 0.905 | – | 4.61 | 1384 | 0.59 | 0.766 | -73.5 | ↓ |
| 0821 | ↓ | ↓ | 6.45 | 0.947 | – | 0.80 | 14.54 | 0.60 | 0.775 | -81.8 | ↓ |
| | Sampled at 0822 | | | | | | | | | | |
| 0832 | 0218 | 31-35 | 6.53 | 0.721 | – | 7.07 | 13.24 | 0.91 | 1.154 | -63.5 | grey |
| 0834 | ↓ | ↓ | 6.38 | 1.412 | – | 5.04 | 14.66 | 0.91 | 1.167 | -70.6 | ↓ |
| 0836 | ↓ | ↓ | 6.35 | 1.471 | – | 1.36 | 15.46 | 0.91 | 1.186 | -76.7 | ↓ |
| | Sampled at 0837 | | | | | | | | | | |
| 0846 | 0218 | 36-40 | 6.55 | 0.768 | – | 5.24 | 13.24 | 0.85 | 1.073 | -65.3 | grey |
| 0848 | ↓ | ↓ | 6.51 | 1.334 | – | 4.31 | 15.41 | 0.84 | 1.072 | -70.0 | ↓ |
| 0850 | ↓ | ↓ | 6.46 | 1.387 | – | 1.31 | 16.97 | 0.84 | 1.079 | -74.6 | ↓ |
| | Sampled at 0851 | | | | | | | | | | |
| 0902 | 0218 | 41-45 | 6.63 | 1.465 | – | 5.10 | 13.77 | 0.95 | 1.207 | -65.5 | grey |
| 0904 | ↓ | ↓ | 6.56 | 1.482 | – | 5.67 | 14.45 | 0.95 | 1.214 | -68.9 | ↓ |
| 0906 | ↓ | ↓ | 6.52 | 1.509 | – | 4.14 | 14.78 | 0.97 | 1.236 | -72.9 | ↓ |
| | Sampled at 0907 | | | | | | | | | | |
| ~~0934~~ 0926 | 0218 | 56-60 | 6.52 | 2.832 | – | 5.41 | 13.19 | 1.97 | 2.441 | -46.9 | grey |
| 0926 | ↓ | ↓ | 6.34 | 3.145 | – | 2.61 | 15.34 | 2.14 | 2.621 | -62.5 | ↓ |
| 0928 | ↓ | ↓ | 6.39 | 3.330 | – | 0.27 | 15.47 | 2.18 | 2.652 | -76.6 | ↓ |
| | Sampled at 0929 | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

ate: 3/27/13 Crystal Towns

| Time | BH DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1001 | 0219 | 8-12 | 7.50 | 0.874 | – | 6.98 | 16.74 | 0.51 | 0.662 | -70.4 | dk brown |
| 1003 | ↓ | ↓ | 7.34 | 0.861 | – | 2.30 | 17.96 | 0.49 | 0.643 | -64.6 | ↓ |
| 1005 | ↓ | ↓ | 7.07 | 0.854 | – | 0.65 | 18.14 | 0.49 | 0.636 | -64.2 | ↓ |
| | Sampled at 1006 | | | | | | | | | | |
| 1023 | 0219 | 16-20 | 6.90 | 0.415 | – | 8.28 | 17.97 | 0.46 | 0.600 | -59.6 | brown |
| 1025 | ↓ | ↓ | 6.87 | 0.822 | – | 5.80 | 20.04 | 0.45 | 0.596 | -64.1 | ↓ |
| 1027 | ↓ | ↓ | 6.80 | 0.844 | – | 1.98 | 21.02 | 0.45 | 0.595 | -69.0 | ↓ |
| | Sampled at 1028 | | | | | | | | | | |
| 1036 | 0219 | 21-25 | 6.82 | 0.851 | – | 8.22 | 19.67 | 0.47 | 0.624 | -67.0 | grey |
| 1038 | ↓ | ↓ | 6.73 | 0.887 | – | 3.55 | 21.17 | 0.48 | 0.629 | -74.9 | ↓ |
| 1040 | ↓ | ↓ | 6.66 | 0.905 | – | 1.30 | 21.69 | 0.48 | 0.632 | -84.1 | ↓ |
| | Sampled at 1041 | | | | | | CT | | | | |
| 1050 | 0219 | 26-30 | 6.85 | 1.059 | – | 7.06 | 2 19.92 | 0.60 | 0.782 | -57.1 | grey |
| 1052 | ↓ | ↓ | 6.71 | 1.112 | – | 2.74 | 21.50 | 0.60 | 0.784 | -61.3 | ↓ |
| 1054 | ↓ | ↓ | 6.62 | 1.145 | – | 1.11 | 22.31 | 0.61 | 0.793 | -65.4 | ↓ |
| | Sampled at 1055 | | | | | | | | | | |
| 1102 | 0219 | 31-35 | 6.85 | 0.593 | – | 8.65 | 19.10 | 0.65 | 0.846 | -54.0 | grey |
| 1104 | ↓ | ↓ | 6.70 | @D: 1.158 | – | 4.59 | 20.13 | 0.64 | 0.835 | -74.9 | ↓ |
| 1106 | ↓ | ↓ | 6.61 | 1.206 | – | 1.85 | 21.35 | 0.65 | 0.853 | -91.2 | ↓ |
| | Sampled at 1107 | | | | | | | | | | |
| 1114 | 0219 | 36-40 | 6.88 | 0.725 | – | 5.38 | 18.39 | 0.77 | 1.002 | -57.3 | grey |
| 1116 | ↓ | ↓ | 6.74 | 1.421 | – | 4.88 | 19.64 | 0.82 | 1.066 | -67.8 | ↓ |
| 1118 | ↓ | ↓ | 6.62 | 1.518 | – | 1.52 | 20.71 | 0.85 | 1.103 | -80.9 | ↓ |
| | Sampled at 1119 | | | | | | | | | | |
| 1128 | 0219 | 41-45 | 6.85 | 0.765 | – | 5.43 | 18.23 | 0.87 | 1.108 | -48.8 | grey |
| 1130 | ↓ | ↓ | 6.73 | 1.537 | – | 4.41 | 20.00 | 0.88 | 1.126 | -55.0 | ↓ |
| 1132 | ↓ | ↓ | 6.63 | 1.597 | – | 1.52 | 20.41 | 0.89 | 1.145 | -64.6 | ↓ |
| | Sampled at 1133 | | | | | | | | | | |
| 1146 | 0219 | 56-60 | 6.42 | 3.373 | – | 4.54 | 20.91 | 2.16 | 2.646 | -49.6 | grey |
| 1148 | ↓ | ↓ | 6.44 | 3.787 | – | 1.44 | 20.34 | 2.30 | 2.842 | -58.5 | ↓ |
| 1150 | ↓ | ↓ | 6.49 | 4.114 | – | 0.46 | 21.11 | 2.42 | 2.965 | -67.5 | ↓ |
| | Sampled at 1151 | | | | | | | | | | |

es:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/27/13 Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1317 | 0220 | 8-12 | 7.50 | 0.439 | – | 7.18 | 20.43 | 0.43 | 0.561 | -80.0 | dk brown |
| 1319 | ↓ | ↓ | 8.00 | 0.780 | – | 4.94 | 21.79 | 0.40 | 0.532 | -64.5 | |
| 1321 | ↓ | ↓ | 7.69 | 0.764 | – | 2.73 | 22.04 | 0.40 | 0.524 | -55.6 | ↓ |
| | Sampled at 1322 | | | | | | | | | | |
| 1326 | 0220 | 16-20 | 6.82 | 0.483 | – | 5.44 | 20.17 | 0.45 | 0.592 | -49.5 | brown |
| 1328 | ↓ | ↓ | 6.81 | 0.847 | – | 3.85 | 21.86 | 0.44 | 0.586 | -55.1 | ↓ |
| 1330 | ↓ | ↓ | 6.72 | 0.853 | – | 1.68 | 22.39 | 0.44 | 0.584 | -61.8 | ↓ |
| | Sampled at 1331 | | | | | | | | | | |
| 1335 | 0220 | 21-25 | 6.79 | 0.886 | – | 7.03 | 22.51 | 0.46 | 0.608 | -58.7 | brown |
| 1337 | ↓ | ↓ | 6.75 | 0.911 | – | 3.14 | 23.13 | 0.46 | 0.611 | -64.5 | ↓ |
| 1339 | ↓ | ↓ | 6.70 | 0.920 | – | 1.79 | 23.99 | 0.46 | 0.613 | -71.3 | ↓ |
| | Sampled at 1340 | | | | | | | | | | |
| 1346 | 0220 | 26-30 | 7.00 | 0.946 | – | 6.27 | 22.46 | 0.49 | 0.643 | -43.5 | brown |
| 1348 | ↓ | ↓ | 6.84 | 0.953 | – | 3.37 | 23.34 | 0.49 | 0.643 | -45.6 | ↓ |
| 1350 | ↓ | ↓ | 6.67 | 0.964 | – | 1.74 | 23.66 | 0.49 | 0.645 | -51.3 | ↓ |
| | Sampled at 1351 | | | | | | | | | | |
| 1358 | 0220 | 31-35 | 6.79 | 0.559 | – | 8.52 | 21.91 | 0.54 | 0.704 | -44.8 | grey |
| 1400 | ↓ | ↓ | 6.63 | 1.042 | – | 4.56 | 23.31 | 0.54 | 0.704 | -53.8 | ↓ |
| 1402 | ↓ | ↓ | 6.54 | 1.059 | – | 2.40 | 23.90 | 0.54 | 0.706 | -64.6 | ↓ |
| | Sampled at ~~1403~~ 1403 | | | | | | | | | | |
| 1410 | 0220 | 36-40 | 6.80 | 1.188 | – | 5.24 | 23.44 | 0.62 | 0.813 | -41.0 | grey |
| 1412 | ↓ | ↓ | 6.51 | 1.239 | – | 2.74 | 24.54 | 0.63 | 0.818 | -49.9 | ↓ |
| 1414 | ↓ | ↓ | 6.38 | 1.260 | – | 1.29 | 24.97 | 0.63 | 0.825 | -60.1 | ↓ |
| | Sampled at 1415 | | | | | | | | | | |
| 1423 | 0220 | 41-45 | 6.93 | 0.763 | – | 7.92 | 22.93 | 0.79 | 1.032 | -28.1 | grey |
| 1425 | ↓ | ↓ | 6.67 | 1.596 | – | 6.12 | 24.02 | 0.87 | 1.131 | -33.9 | ↓ |
| 1427 | ↓ | ↓ | 6.48 | 1.805 | – | 2.57 | 24.92 | 0.94 | 1.209 | -46.0 | ↓ |
| | Sampled at 1428 | | | | | | | (CT) | | | |
| 1438 | 0220 | 56-60 | 6.78 | 3.726 | – | 6.26 | 21.77 | 2.17 | 2.691 | -23.4 | grey |
| 1440 | ↓ | ↓ | 6.67 | 4.046 | – | 3.04 | 22.92 | 2.37 | 2.910 | -38.7 | ↓ |
| 1442 | ↓ | ↓ | 6.64 | 4.425 | – | 0.82 | 23.52 | 2.46 | 3.000 | -59.7 | ↓ |
| | Sampled at 1443 | | | | | | | | | | |

Notes:

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CR.HE / FR1681 / 25*2

Date: 3/27/13 Crystal Towns

| Time | F DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1458 | 0220 | 66-70 | 6.93 | 1.569 | — | 4.99 | 21.08 | 1.89 | 2.343 | -49.1 | grey |
| 1500 | ↓ | ↓ | 6.88 | 3.415 | — | 3.74 | 22.24 | 1.96 | 2.411 | -58.9 | ↓ |
| 1502 | ↓ | ↓ | 6.75 | ~~3.45~~ cr 3.569 | — | 0.81 | 22.48 | 2.01 | 2.499 | -82.1 | ↓ |
| | sampled at | | 1503 | | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/28/13 Crystal Town

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0745 | 0221 | 8-12 | 7.61 | 0.793 | — | 7.60 | 15.74 | 0.52 | 0.658 | -12.7 | dk brown |
| 0747 | ↓ | ↓ | 7.17 | 0.859 | — | 4.53 | 16.35 | 0.51 | 0.668 | -5.4 | ↓ |
| 0749 | ↓ | ↓ | 6.82 | 0.852 | — | 1.82 | 16.63 | 0.50 | 0.646 | -7.9 | ↓ |
| | Sampled at 0752 | | | | | | | | | | |
| 0757 | 0221 | 16-20 | 6.04 | 1.218 | — | 8.84 | 15.15 | 0.76 | 0.978 | 27.8 | brown |
| 0759 | ↓ | ↓ | 6.08 | 1.248 | — | 5.64 | 16.16 | 0.75 | 0.964 | -35.2 | ↓ |
| 0801 | ↓ | ↓ | 6.13 | 1.263 | — | 2.14 | 17.41 | 0.75 | 0.968 | -40.2 | ↓ |
| | Sampled at 0802 | | | | | | | | | | |
| 0807 | 0221 | 21-25 | 6.60 | 0.805 | — | 6.62 | 12.94 | 0.52 | 0.681 | -46.1 | grey |
| 0809 | ↓ | ↓ | 6.58 | 0.823 | — | 4.37 | 14.19 | 0.52 | 0.679 | -49.7 | ↓ |
| 0811 | ↓ | ↓ | 6.54 | 0.845 | — | 1.45 | 14.75 | 0.52 | 0.684 | -53.2 | ↓ |
| | Sampled at 0812 | | | | | | | | | | |
| 0825 | 0221 | 26-30 | 6.61 | 0.890 | — | 9.15 | 12.41 | 0.59 | 0.766 | -38.4 | grey |
| 0827 | ↓ | ↓ | 6.49 | 0.946 | — | 5.41 | 15.98 | 0.58 | 0.744 | -41.7 | ↓ |
| 0829 | ↓ | ↓ | | | — | | | | | | ↓ |
| | Sampled at 0830 | | 6.65 | 0.549 | | 7.30 | 13.75 | 0.34 | 0.455 | -49.9 | grey |
| 0836 | 0221 | 31-35 | 6.63 | ~~0.5~~ 0.809 | — | 7.06 | 15.01 | 0.65 | 0.847 | -62.1 | ↓ |
| 0838 | ↓ | ↓ | 6.53 | 1.105 | — | 9.17 | 17.67 | 0.65 | 0.844 | -64.2 | ↓ |
| 0840 | ↓ | ↓ | | | — | | | | | | |
| | Sampled at 0841 | | | | | | | | | | ~~grey~~ (CT) |
| 0852 | 0221 | 36-40 | 6.69 | 0.548 | — | 7.36 | 12.81 | 0.36 | 0.476 | -44.2 | grey |
| 0854 | ↓ | ↓ | ~~6.42~~ 6.675 | 1.015 | — | 7.08 | 13.80 | 0.74 | 0.956 | -70.8 | ↓ |
| 0856 | ↓ | ↓ | 6.40 | 1.174 | — | 7.05 | 13.84 | 0.76 | 0.980 | -73.9 | ↓ |
| | Sampled at 0857 | | | | | | | | | | |
| 0913 | 0221 | 41-45 | 6.35 | 2.205 | — | 1.56 | 17.77 | 1.33 | 1.676 | -63.2 | grey |
| 0915 | ↓ | ↓ | 6.38 | 2.230 | — | 0.23 | 18.21 | 1.34 | 1.683 | -72.9 | ↓ |
| 0917 | ↓ | ↓ | 6.40 | 2.263 | — | 0.14 | 18.45 | 1.35 | 1.688 | -75.6 | ↓ |
| | Sampled at 0918 | | | | | | | | | | |
| 0931 | 0221 | 56-60 | 6.70 | 4.141 | — | 2.40 | 18.11 | 2.69 | 3.257 | -46.5 | grey |
| 0933 | ↓ | ↓ | 6.61 | 4.488 | — | 2.91 | 18.88 | 2.81 | 3.391 | -51.5 | ↓ |
| 0935 | ↓ | ↓ | 6.57 | 4.736 | — | 1.47 | 19.68 | 3.80 | 3.524 | -60.5 | ↓ |
| | Sampled at 0936 | | | | | | | | | | |

Notes:

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

ate: 3/28/13 Crystal Towns

| Time | G DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1004 | 0222 | 8-12 | 7.72 | 1.260 | – | 7.88 | 19.76 | 0.69 | 0.888 | -60.6 | dk brown |
| 1006 | ↓ | ↓ | 7.80 | 1.214 | – | 4.61 | 20.46 | 0.66 | 0.846 | -42.4 | ↓ |
| 1008 | ↓ | ↓ | 7.48 | 1.177 | – | 1.86 | 20.56 | 0.64 | 0.827 | -39.3 | ↓ |
| | Sampled at 1009 | | | | | | | | | | |
| 1014 | 0222 | 16-20 | 6.96 | 0.979 | – | 5.74 | 21.16 | 0.62 | 0.837 | -38.8 | brown |
| 1016 | ↓ | ↓ | 6.92 | 1.266 | – | 2.02 | 22.53 | 0.68 | 0.887 | -46.7 | ↓ |
| 1018 | ↓ | ↓ | 6.85 | 1.320 | – | 0.44 | 23.16 | 0.69 | 0.895 | -53.9 | ↓ |
| | Sampled at 1019 | | | | | | | | | | |
| 1027 | 0222 | 21-25 | 7.09 | 0.992 | – | 6.93 | 21.58 | 0.60 | 0.804 | -44.2 | grey |
| 1029 | ↓ | ↓ | 7.00 | 1.197 | – | 3.78 | 22.12 | 0.64 | 0.832 | -47.9 | ↓ |
| 1031 | ↓ | ↓ | 6.93 | 1.213 | – | 1.38 | 22.21 | 0.64 | 0.835 | -57.6 | ↓ |
| | Sampled at 1032 | | | | | | | | | | |
| 1040 | 0222 | 26-30 | 7.10 | 1.212 | – | 6.01 | 21.20 | 0.64 | 0.838 | -39.5 | grey |
| 1042 | ↓ | ↓ | 6.96 | 1.223 | – | 4.23 | 22.94 | 0.64 | 0.829 | -39.2 | ↓ |
| 1044 | ↓ | ↓ | 6.80 | 1.245 | – | 1.23 | 24.14 | 0.63 | 0.826 | -41.2 | ↓ |
| | Sampled at 1045 | | | | | | | | | | |
| 1052 | 0222 | 31-35 | 6.23 | 1.483 | – | 0.48 | 24.57 | 0.77 | 0.997 | -63.6 | grey |
| 1054 | ↓ | ↓ | 6.25 | 1.530 | – | 0.13 | 24.78 | 0.77 | 1.002 | -67.6 | ↓ |
| 1056 | ↓ | ↓ | 6.25 | 1.542 | – | 0.09 | 24.98 | 0.78 | 1.005 | -71.4 | ↓ |
| | Sampled at 1057 | | | | | | | | 0.955 | | |
| 1105 | 0222 | 36-40 | 7.06 | 1.440 | – | 5.13 | 23.97 | 0.74 | ~~0.955~~ | -45.5 | grey |
| 1107 | ↓ | ↓ | 6.87 | 1.461 | – | 0.38 | 24.80 | 0.74 | 1.478 | -54.2 | ↓ |
| 1109 | ↓ | ↓ | 6.72 | 1.496 | – | 0.08 | 25.25 | 0.75 | 0.973 | -65.3 | ↓ |
| | Sampled at 1110 | | | | | | | | | | |
| 1120 | 0222 | 41-45 | 6.94 | 1.419 | – | 6.53 | 23.27 | 0.77 | 1.002 | -44.6 | grey |
| 1122 | ↓ | ↓ | 6.74 | 1.602 | – | 0.57 | 24.44 | 0.84 | 1.094 | -50.3 | ↓ |
| 1124 | ↓ | ↓ | 6.64 | 1.695 | – | 0.11 | 24.74 | 0.87 | 1.119 | -55.8 | ↓ |
| | Sampled at 1125 | | | | | | | | | | |
| 1136 | 0222 | 56-60 | 6.85 | 1.623 | – | 7.37 | 22.24 | 1.98 | 2.466 | -22.6 | grey |
| 1138 | ↓ | ↓ | 6.52 | 3.870 | – | 4.01 | 23.46 | 2.23 | 2.753 | -32.5 | ↓ |
| 1140 | ↓ | ↓ | 6.51 | 4.240 | – | 0.57 | 23.99 | 2.34 | 2.888 | -41.7 | ↓ |
| | Sampled at 1141 | | | | | | | | | | |

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1200
1240

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

.te: 3/28/13 BJ

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1253 | 0223 | 8-12 | 8.08 | 0.677 | – | 7.32 | 20.39 | 0.70 | 0.907 | -48.4 | brown |
| 1255 | ↓ | ↓ | 7.84 | 1.313 | – | 1.04 | 21.90 | 0.70 | 0.909 | -22.6 | ↓ |
| 1257 | ↓ | ↓ | 7.98 | 1.305 | – | 0.45 | 22.02 | 0.69 | 0.887 | -20.0 | ↓ |
| | Sampled at 1259 | | | | | | | | | | |
| 1302 | 0223 | 16-20 | 6.88 | 1.230 | – | 7.11 | 16.12 | 0.65 | 0.839 | -35.6 | black |
| 1304 | ↓ | ↓ | 6.78 | 1.260 | – | 0.25 | 23.52 | 0.64 | 0.858 | -41.1 | ↓ |
| 1306 | ↓ | ↓ | 6.74 | 1.266 | – | 0.12 | 23.69 | 0.65 | 0.846 | -48.4 | ↓ |
| | Sampled at 1309 | | | | | | | | | | |
| 1314 | 0223 | 21-25 | 7.09 | 1.115 | – | 6.55 | 15.42 | 0.58 | 0.771 | -55.1 | black |
| 1316 | ↓ | ↓ | 6.96 | 1.136 | – | 0.45 | 23.21 | 0.59 | 0.774 | -53.9 | ↓ |
| 1318 | ↓ | ↓ | 6.86 | 1.177 | – | 0.13 | 23.38 | 0.61 | 0.795 | -58.4 | ↓ |
| | Sampled at 1320 | ~~1320~~ | | | | | | | | | |
| 1324 | 0223 | 26-30 | 7.02 | 1.058 | – | 5.20 | 19.56 | 0.55 | 0.726 | -49.5 | brown |
| 1326 | ↓ | ↓ | 6.97 | 1.095 | – | 1.23 | 24.04 | 0.55 | 0.722 | -53.1 | ↓ |
| 1328 | ↓ | ↓ | 6.90 | 1.116 | – | 0.12 | 24.78 | 0.56 | 0.731 | -60.0 | ↓ |
| | Sampled at 1330 | | | | | | | | | | |
| 1334 | 0223 | 31-35 | 7.24 | 1.061 | – | 6.45 | 20.03 | 0.56 | 0.728 | -48.8 | brown |
| 1336 | ↓ | ↓ | 7.10 | 1.097 | – | 1.72 | 24.46 | 0.55 | 0.726 | -56.9 | ↓ |
| 1338 | ↓ | ↓ | 6.98 | 1.113 | – | 0.17 | 24.65 | 0.56 | 0.730 | -68.8 | ↓ |
| | Sampled at 1340 | | | | | | | | | | |
| 1344 | 0223 | ~~36~~ 36-40 | 7.11 | 1.107 | – | ~~5.41~~ ~~16.55~~ | 16.53 | 0.60 | 0.804 | -52.7 | brown |
| 1346 | ↓ | ↓ | 7.06 | 1.311 | – | 0.30 | 24.03 | 0.71 | 0.935 | -64.2 | ↓ |
| 1348 | ↓ | ↓ | 7.02 | 1.461 | – | 0.09 | 24.43 | 0.77 | 1.004 | -78.1 | ↓ |
| | Sampled at 1350 | | | | | | | | | | |
| 1407 | 0223 | 41-45 | 6.96 | 1.647 | – | 3.79 | 23.69 | 0.93 | 1.209 | -34.0 | brown |
| 1409 | ↓ | ↓ | 6.99 | 1.985 | – | 0.41 | ~~23.76~~ 23.76 | 1.08 | 1.383 | -50.8 | ↓ |
| 1411 | ↓ | ↓ | 6.73 | 2.134 | – | 0.10 | 23.98 | 1.14 | 1.455 | -63.6 | ↓ |
| | Sampled at 1413 | | | | | | | | | | |
| 1420 | 0223 | 56-60 | 6.88 | 2.986 | – | 6.60 | 22.98 | 3.03 | 3.870 | -35.7 | tannish |
| 1424 | ↓ | ↓ | 6.71 | 6.342 | – | 1.02 | 23.91 | 3.64 | 4.373 | -44.0 | ↓ |
| 1426 | ↓ | ↓ | 6.74 | 6.767 | – | 0.15 | 24.05 | 3.82 | 4.545 | -58.9 | ↓ |
| | Sampled at 1428 | | | | | | | | | | |

1440

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USDSTCP

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Site: 3/28/13 - 3/29/13 BI

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1457 | 0224 | 8-12 | 8.26 | 1.292 | – | 6.48 | 22.19 | 0.66 | 0.857 | -31.6 | black |
| 1459 | ↓ | ↓ | 7.87 | 1.238 | – | 2.11 | 22.73 | 0.64 | 0.832 | -25.2 | ↓ |
| 1501 | ↓ | ↓ | 7.44 | 1.221 | – | 0.41 | 22.87 | 0.63 | 0.826 | -25.0 | ↓ |
| | Sampled at 1504 | | | | | | | | | | |
| 1506 | 0224 | 16-20 | 7.10 | 1.154 | – | 5.19 | 23.90 | 0.59 | 0.769 | -33.1 | grey |
| 1508 | ↓ | ↓ | 7.02 | 1.171 | – | 1.93 | 24.64 | 0.59 | 0.768 | -39.3 | ↓ |
| 1510 | ↓ | ↓ | 6.94 | 1.177 | – | 0.39 | 24.76 | 0.59 | 0.768 | -47.2 | ↓ |
| | Sampled at 1512 | | | | | | | | | | |
| 1516 | 0224 | 21-25 | 7.19 | 0.690 | – | 7.10 | 23.32 | 0.66 | 0.863 | -37.7 | brown |
| 1518 | ↓ | ↓ | 7.07 | 1.315 | – | 3.27 | 24.72 | 0.67 | 0.871 | -43.2 | ↓ |
| 1520 | ↓ | ↓ | 6.94 | 1.346 | – | 0.68 | 25.07 | 0.69 | 0.879 | -49.3 | ↓ |
| | Sampled at 1522 | | | | | | | | | | |
| 1526 | 0224 | 26-30 | 6.96 | 1.630 | – | 1.63 | 23.89 | 0.83 | 1.072 | -40.4 | tan |
| 1528 | ↓ | ↓ | 6.69 | 1.637 | – | 0.29 | 24.76 | 0.83 | 1.063 | -43.3 | ↓ |
| 1530 | ↓ | ↓ | 6.56 | 1.621 | – | 0.14 | 24.94 | 0.81 | 1.047 | -44.5 | ↓ |
| | Sampled at 1532 | | | | | | | | | | |
| 820 | 0224 | 31-35 | 6.89 | 1.037 | – | 1.05 | 20.49 | 0.57 | 0.755 | 81.3 | tan |
| 822 | ↓ | ↓ | 6.37 | 1.090 | – | 0.25 | 20.51 | 0.60 | 0.782 | 51.2 | ↓ |
| 824 | ↓ | ↓ | 6.26 | 1.109 | – | 0.20 | 20.49 | 0.61 | 0.795 | 35.5 | ↓ |
| | Sampled at 826 | | | | | | | | | | |
| 832 | 0224 | 36-40 | 7.02 | 1.378 | – | 2.55 | 17.30 | 0.81 | 1.045 | 1.7 | brown |
| 834 | ↓ | ↓ | 7.00 | 1.436 | – | 0.37 | 19.01 | 0.84 | 1.079 | -3.9 | ↓ |
| 836 | ↓ | ↓ | 6.96 | 1.494 | – | 0.17 | 19.14 | 0.87 | 1.122 | -9.7 | ↓ |
| | Sampled at 840 | | | | | | | | | | |
| 847 | 0224 | 41-45 | 7.22 | 1.646 | – | 0.24 | 21.06 | 0.92 | 1.176 | -11.5 | brown |
| 849 | ↓ | ↓ | 7.16 | 1.700 | – | 0.12 | 21.36 | 0.94 | 1.221 | -16.4 | ↓ |
| 851 | ↓ | ↓ | 7.12 | 1.730 | – | 0.10 | 21.34 | 0.95 | 1.217 | -19.9 | ↓ |
| | Sampled at 855 | | | | | | | | | | |
| 905 | 0224 | 56-60 | 7.19 | 3.290 | – | 2.31 | 20.94 | 2.07 | 2.595 | -9.5 | black |
| 907 | ↓ | ↓ | 7.18 | 3.829 | – | 0.22 | 21.57 | 2.24 | 2.760 | -16.6 | ↓ |
| 909 | ↓ | ↓ | 7.20 | 4.040 | – | 0.11 | 21.73 | 2.34 | 2.890 | -26.0 | ↓ |
| | Sampled at 911 | | | | | | | | | | |

3/28/13

3/29/13

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

3/29 810 start –

920 start

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: ~~CHRE~~ CRHE / FR1681 / 25*2

Date: 3/29/13

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 944 | 0225 | 8-12 | 7.17 | 1.093 | – | 0.42 | 23.61 | 0.55 | 0.725 | -32.2 | tan |
| 946 | ↓ | ↓ | 7.08 | 1.073 | – | 0.35 | 23.68 | 0.54 | 0.713 | -39.7 | ↓ |
| 948 | ↓ | ↓ | 7.06 | 1.065 | – | 0.37 | 23.70 | 0.54 | 0.708 | -42.3 | ↓ |
| | Sampled at 950 | | | | | | | | | | |
| 1000 | 0225 | 16-20 | 7.34 | 1.103 | – | 7.32 | 22.89 | 0.57 | 0.749 | -22.6 | brown |
| 1002 | ↓ | ↓ | 7.21 | 1.146 | – | 1.46 | 24.74 | 0.57 | 0.755 | -23.6 | ↓ |
| 1004 | ↓ | ↓ | 7.08 | 1.170 | – | 0.17 | 25.60 | 0.57 | 0.756 | -27.9 | ↓ |
| | Sampled at 1006 | | | | | | | | | | |
| 1014 | 0225 | 21-25 | 7.28 | 1.109 | – | 1.10 | 25.99 | 0.55 | 0.720 | -25.0 | clearish |
| 1016 | ↓ | ↓ | 7.18 | 1.121 | – | 0.20 | 25.30 | 0.55 | 0.728 | -29.5 | ↓ |
| 1018 | ↓ | ↓ | 7.10 | 1.129 | – | 0.10 | 25.27 | 0.56 | 0.735 | -34.5 | ↓ |
| | Sampled at 1020 | | | | | | | | | | |
| 1024 | 0225 | 26-30 | 7.34 | 1.140 | – | 1.49 | 24.20 | 0.58 | 0.765 | -18.3 | ~~brown~~ cloudy |
| 1026 | ↓ | ↓ | 7.22 | 1.164 | – | 0.15 | 24.44 | 0.58 | 0.767 | -27.0 | ↓ |
| 1028 | ↓ | ↓ | 7.13 | 1.169 | – | 0.09 | 24.48 | 0.59 | 0.769 | -33.8 | ↓ |
| | Sampled at 1030 | | | | | | | | | | |
| 1034 | 0225 | 31-35 | 7.44 | 1.201 | – | 7.22 | 23.43 | 0.63 | 0.821 | -25.0 | cloudy |
| 1036 | ↓ | ↓ | 7.28 | 1.268 | – | 0.92 | 25.74 | 0.63 | 0.818 | -29.0 | ↓ |
| 1038 | ↓ | ↓ | 7.20 | 1.299 | – | 0.15 | 26.45 | 0.63 | 0.826 | -34.2 | ↓ |
| | Sampled at 1040 | | | | | | | | | | |
| 1044 | 0225 | 36-40 | 7.37 | 1.778 | – | 0.69 | 25.86 | 0.90 | 1.166 | -21.1 | cloudy |
| 1046 | ↓ | ↓ | 7.25 | 1.815 | – | 0.10 | 25.05 | 0.92 | 1.180 | -33.9 | ↓ |
| 1048 | ↓ | ↓ | 7.19 | 1.817 | – | 0.07 | 24.57 | 0.95 | 1.221 | -44.8 | ↓ |
| | Sampled at 1050 | | | | | | | | | | |
| 1054 | 0225 | 41-45 | 7.39 | 2.221 | – | 4.83 | 25.25 | 1.15 | 1.466 | -18.3 | brown |
| 1056 | ↓ | ↓ | 7.32 | 2.321 | – | 0.34 | 26.00 | 1.19 | 1.520 | -33.1 | ↓ |
| 1058 | ↓ | ↓ | 7.25 | 2.446 | – | 0.07 | 26.47 | 1.23 | 1.567 | -52.9 | ↓ |
| | Sampled at 1100 | | | | | | | | | | |
| 1104 | 0225 | 56-60 | 7.51 | 2.073 | – | 6.62 | 24.31 | ~~3.07~~ 2.01 | ~~2.67~~ | 1.5 | black |
| 1106 | ↓ | ↓ | 7.41 | 2.566 | – | 0.29 | 24.32 | 2.29 | 2.935 | -67.5 | ↓ |
| 1108 | ↓ | ↓ | 7.38 | 4.593 | – | 0.05 | 24.93 | 2.48 | 3.030 | -88.0 | ↓ |
| | Sampled at 1110 | | | | | | | | | | |

D, G, B, B1

225

Notes:

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

1355 start
1416 finish

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681 / 25*2

Date: 3/29/13

J

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1352 | 0225 | 66-0 | 7.74 | 5.020 | — | 0.30 | 29.47 | 2.57 | 3.131 | -11.6 | brown |
| 1354 | ↓ | ↓ | 7.65 | 5.046 | — | 0.11 | 27.3 | 2.58 | 3.140 | -33.7 | ↓ |
| 1356 | ↓ | ↓ | 7.58 | 5.044 | — | 0.07 | 27.34 | 2.58 | 3.142 | -47.7 | ↓ |
| sample @ | | 1358 | | | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** (CA) Project/Project Number: CRHE / FR1681 / 25*2

Date: 04/01/13 DPT 0226 (AM: on map)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8:54 | 0226 | 8-12 | 7.21 | 1.020 | – | 2.03 | 22.13 | 5.1 | 0.669 | -397.6 | cloudy white |
| 8:56 | ↓ | ↓ | 7.21 | 1.029 | – | 0.71 | 22.08 | 5.1 | 0.663 | -403.7 | " |
| 8:58 | ↓ | ↓ | 7.21 | 1.015 | – | 0.70 | 22.16 | 5.4 | 0.658 | -418.9 | " |
| | Sampled at 8:59 | | ~~7.19~~ | ~~1.490~~ | | ~~0.68~~ | ~~23.96~~ | ~~7.4~~ | ~~0.966~~ | -431.0 | brown cloudy (CS) |
| 9:07 | 0226 | 16-20 | 7.19 | 1.470 | – | 0.68 (CS) | 23.76 | 7.4 | 0.966 | -431.0 | |
| 9:09 | ↓ | ↓ | 7.19 | 1.487 | – | 0.30 | 24.32 | 7.5 | 0.968 | -458.1 | " |
| 9:11 | ↓ | ↓ | 7.19 | 1.475 | – | 0.29 | 24.13 | 7.4 | 0.963 | -472.9 | " |
| | Sampled at 9:12 | | ~~7.25~~ (CS) | ~~1.754~~ (CS) | | | | | | | |
| 9:21 | 0226 | 21-25 | 7.23 | 1.754 | – | 0.28 | 23.24 | 8.9 | 1.150 | -574.8 | brown cloudy |
| 9:23 | ↓ | ↓ | 7.23 | 1.777 | – | 0.32 | 23.54 | 9.0 | 1.159 | -577.0 | " |
| 9:25 | ↓ | ↓ | 7.23 | 1.788 | – | 0.26 | 23.60 | 9.1 | 1.64 | -579.4 | " |
| | Sampled at 9:27 | | | | | | | | | | |
| 9:33 | 0226 | 26-30 | 7.26 | 1.602 | – | 0.22 | 23.67 | 7.8 | 1.003 | -595.4 | cloudy gray |
| 9:35 | ↓ | ↓ | 7.26 | 1.507 | – | 0.21 | 23.95 | 7.5 | 0.973 | -596.2 | " |
| 9:37 | ↓ | ↓ | 7.26 | 1.491 | – | 0.21 | 24.05 | 7.4 | 0.965 | -596.5 | " |
| | Sampled at 9:38 | | | | | | | | | | |
| 9:47 | 0226 | 31-35 | 7.23 | 1.027 | – | 0.73 | 23.81 | 5.3 | 0.689 | -590.7 | v. cloudy brown |
| 9:49 | ↓ | ↓ | 7.23 | 1.001 | – | 0.45 | 23.92 | 4.9 | 0.651 | -592.6 | " |
| 9:51 | ↓ | ↓ | 7.24 | 0.988 | – | 0.39 | 24.09 | 4.9 | 0.645 | -594.2 | " |
| | Sampled at 9:52 | | | | | | | | | | |
| 10:04 | 0226 | 36-40 | 7.27 | 0.936 | – | 0.21 | 24.72 | 4.6 | 0.610 | -606.1 | brown cloudy |
| 10:06 | ↓ | ↓ | 7.27 | 0.908 | – | 0.19 | 24.58 | 4.6 | 0.611 | -606.6 | " |
| 10:08 | ↓ | ↓ | 7.28 | 0.874 | – | 0.20 | 24.59 | 4.3 | 0.575 | -607.4 | " |
| | Sampled at 10:09 | | | | | | | | | | |
| 10:25 | 0226 | 41-45 | 7.29 | 0.776 | – | 0.19 | 24.46 | 3.8 | 0.503 | -610.2 | brown cloudy |
| 10:27 | ↓ | ↓ | 7.29 | 0.764 | – | 0.17 | 24.45 | 3.7 | 0.499 | -610.4 | " |
| 10:29 | ↓ | ↓ | 7.29 | 0.761 | – | 0.16 | 24.44 | 3.7 | 0.496 | -610.6 | lt. brown cloudy |
| | Sampled at 10:30 | | | | | | | | | | |
| 10:44 | 0226 | 56-60 | 7.30 | 0.711 | – | 0.15 | 24.73 | 3.5 | 0.463 | -609.9 | lt. brown cloudy |
| 10:46 | ↓ | ↓ | 7.30 | 0.711 | – | 0.15 | 24.98 | 3.5 | 0.462 | -609.9 | " |
| 10:48 | ↓ | ↓ | 7.30 | 0.712 | – | 0.14 | 25.01 | 3.5 | 0.463 | -609.9 | " |
| | Sampled at | | 10:49 | | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 25*2

Date: 04/01/13 DPT0227 (AO on map)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11:18 | 0227 | 8-12 | 6.85 | 0.889 | – | 0.63 | 26.54 | 4.5 | 0.595 | -159.9 | milky brown |
| 11:20 | ↓ | ↓ | 6.78 | 0.862 | – | 0.65 | 26.01 | 4.3 | 0.564 | -151.7 | " |
| 11:22 | ↓ | ↓ | 6.76 | 0.850 | – | 0.69 | 25.83 | 4.2 | 0.555 | -147.7 | " |
| | Sampled at 11:23 | | | | | | | | | | |
| 11:28 (A) | 0227 | 16-20 | 6.88 | 0.892 | – | 0.81 | 26.60 | 5.2 | 0.730 | -174.6 | milky brown |
| 11:30 | ↓ | ↓ | 7.07 | (B) 1.396 | – | 0.19 | 27.48 | 6.8 | 0.895 | -227.8 | " |
| 11:32 | ↓ | ↓ | 7.09 | 1.413 | – | 0.18 | 27.62 | 7.0 | 0.917 | -243.9 | " |
| | Sampled at 11:33 | | | | | | | | | | |
| 11:44 | 0227 | 21-25 | 7.18 | 1.565 | – | 0.13 | 29.32 | 7.8 | 1.020 | -416.2 | cloudy brown |
| 11:46 | ↓ | ↓ | 7.21 | 1.575 | – | 0.11 | 29.45 | 7.8 | 1.019 | -457.3 | " |
| 11:48 | ↓ | ↓ | 7.21 | 1.616 | – | 0.11 | 29.27 | 8.0 | 1.041 | -469.1 | " |
| | Sampled at 11:49 | | | | | | | | | | |
| 12:02 | 0227 | 26-30 | 7.22 | 1.431 | – | 0.58 | 28.48 | 6.6 | 0.859 | -591.5 | milky brown |
| 12:04 | ↓ | ↓ | 7.20 | 1.324 | – | 0.12 | 29.42 | 6.6 | 0.864 | -590.4 | " |
| 12:06 | ↓ | ↓ | 7.17 | 1.332 | – | 0.12 | 29.26 | 6.6 | 0.866 | -589.4 | " |
| | Sampled at 12:07 | | | | | | | | | | |
| 12:40 | 0227 | 31-35 | 7.24 | 1.184 | – | 0.31 | 29.64 | 5.9 | 0.772 | -609.6 | milky brown |
| 12:42 | ↓ | ↓ | 7.24 | 1.184 | – | 0.22 | 29.60 | 5.8 | 0.770 | -610.5 | " |
| 12:44 | ↓ | ↓ | 7.23 | 1.183 | – | 0.19 | 29.56 | 5.8 | 0.769 | -611.4 | " |
| | Sampled at 12:45 | | | | | | | | | | |
| (D) 12:57 | 0227 | 36-40 | 7.22 | 1.332 | – | 0.11 | 29.63 | 6.3 | 0.836 | -622.7 | cloudy brown |
| (C) 12:59 | ↓ | ↓ | 7.22 | 1.350 | – | 0.11 | 29.72 | 6.7 | 0.876 | -623.0 | " |
| 13:01 | ↓ | ↓ | 7.23 | 1.345 | – | 0.12 | 29.78 | 6.7 | 0.878 | -623.1 | " |
| | Sampled at | | | | | | | | | | |
| 13:16 | 0227 | 41-45 | 6.94 | 1.817 | – | 0.30 | 29.43 | 8.9 | (E) 1.159 | -366.6 | milky brown |
| 13:18 | ↓ | ↓ | 6.92 | 1.813 | – | 0.24 | 28.76 | 9.1 | 1.180 | -346.6 | " |
| 13:20 | ↓ | ↓ | 6.91 | 1.810 | – | 0.24 | 28.80 | 9.1 | 1.176 | -349.4 | " |
| | Sampled at 13:21 | | | | | | | | | | |
| 13:35 | 0227 | 56-60 | 7.23 | 2.518 | – | 0.08 | 29.20 | 12.5 | 1.639 | -480.0 | milky brown |
| 13:37 | ↓ | ↓ | 7.27 | 2.583 | – | 0.10 | 29.46 | 13.2 | 1.674 | -498.5 | " |
| 13:39 | ↓ | ↓ | 7.30 | 2.609 | – | 0.10 | 29.40 | 13.3 | 1.694 | -504.8 | " |
| | Sampled at 13:40 | | | | | | | | | | |

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TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681 / 25*2

Date: 04/01/13 DPT 0228 (AN on map)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14:16 | 0228 | 8-12 | 7.28 | 2.144 | – | 0.19 | 27.92 | ~~1.43~~ 1.4 | 1.428 | -531.5 | milky brown |
| 14:18 | ↓ | ↓ | 7.28 | 2.045 | – | 0.18 | 27.75 | 1.07 | 1.362 | -542.1 | " |
| 14:20 | ↓ | ↓ | 7.28 | 1.932 | – | 0.19 | 27.50 | 1.02 | 1.277 | -549.2 | " |
| | Sampled at 14:21 | | ~~7.00~~ | | | | | | | | |
| 14:29 | 0228 | 16-20 | 7.29 | 1.713 | – | 0.14 | 26.28 | 8.4 | 1.109 | -585.4 | milky brown |
| 14:31 | ↓ | ↓ | 7.29 | 1.726 | – | 0.12 | 26.47 | 8.7 | 1.118 | -587.8 | " |
| 14:33 | ↓ | ↓ | 7.30 | 1.750 | – | 0.12 | 26.57 | 8.7 | 1.132 | -589.5 | " |
| | Sampled at 14:34 | | | | | | | | | | |
| 14:40 | 0228 | 21-25 | 7.32 | 1.704 | – | 0.92 | 27.13 | 8.5 | 1.090 | -601.2 | cloudy gray |
| 14:42 | ↓ | ↓ | 7.30 | 1.670 | – | 0.80 | 27.19 | 8.4 | 1.086 | -602.2 | " |
| 14:44 | ↓ | ↓ | 7.30 | 1.666 | – | 0.76 | 27.30 | 8.4 | 1.083 | -602.9 | " |
| | Sampled at 14:45 | | | | | | | | | | |
| 14:54 | 0228 | 26-30 | 7.29 | 1.511 | – | 0.08 | 27.25 | 7.5 | 0.974 | -607.1 | milky gray |
| 14:56 | ↓ | ↓ | 7.29 | 1.492 | – | 0.11 | 27.40 | 7.5 | 0.971 | -607.2 | " |
| 14:58 | ↓ | ↓ | 7.29 | 1.487 | – | 0.10 | 27.49 | 7.4 | 0.968 | -607.4 | " |
| | Sampled at 14:59 | | | | | | | | | | |
| 15:07 | 0228 | 31-35 | 7.29 | 1.380 | – | 0.10 | 28.01 | 6.8 | 0.892 | -613.2 | milky gray |
| 15:09 | ↓ | ↓ | 7.29 | 1.298 | – | 0.10 | 28.29 | 6.5 | 0.848 | -613.8 | " |
| 15:11 | ↓ | ↓ | 7.29 | 1.285 | – | 0.09 | 28.23 | 6.4 | 0.838 | -614.0 | " |
| | Sampled at 15:12 | | | | | | | | | | |
| 15:24 | 0228 | 36-40 | 7.29 | 1.151 | – | 0.09 | 27.72 | 5.7 | 0.752 | -617.3 | milky gray |
| 15:26 | ↓ | ↓ | 7.29 | 1.145 | – | 0.08 | 27.90 | 5.7 | 0.745 | -617.5 | " |
| 15:28 | ↓ | ↓ | 7.29 | 1.142 | – | 0.08 | 27.87 | 5.6 | 0.743 | -617.5 | " |
| | Sampled at 15:29 | | | | | | | | | | |
| 15:42 | 0228 | 41-45 | 7.29 | 1.040 | – | 0.08 | 27.44 | 5.1 | 0.674 | -619.0 | cloudy gray |
| 15:44 | ↓ | ↓ | 7.29 | 1.034 | – | 0.09 | 27.68 | 5.1 | 0.670 | -619.1 | " |
| 15:46 | ↓ | ↓ | 7.29 | 1.028 | – | 0.08 | 28.16 | 5.0 | 0.663 | -619.2 | " |
| | Sampled at 15:47 | | | | | | | | | | |
| 16:01 | 0228 | 56-60 | 7.28 | 1.008 | – | 0.20 | 29.37 | 4.9 | 0.655 | -620.1 | cloudy gray |
| 16:03 | ↓ | ↓ | 7.28 | 1.009 | – | 0.08 | 29.36 | 4.9 | 0.656 | -620.1 | " |
| 16:05 | ↓ | ↓ | 7.29 | 1.009 | – | 0.08 | 29.32 | 4.9 | 0.656 | -620.1 | " |
| | Sampled at 16:06 | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** (AH or map) Project/Project Number: CRHE / FR1681 / 25*2

Date: 04/01/13-04/02/13 DPT 0229 (23) * 16-20' down done 04/02/13

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16:46 | 0229 | 8-12 | 7.23 | 0.760 | – | 1.20 | 28.43 | 3.7 | 0.496 | -175.6 | cloudy gray |
| 16:48 | ↓ | ↓ | 7.22 | 0.758 | – | 1.21 | 28.44 | 3.7 | 0.493 | -178.6 | " |
| 16:50 | ↓ | ↓ | 7.21 | 0.755 | – | 1.41 | 28.42 | 3.7 | 0.491 | -181.7 | " |
| 04/01/13 | Sampled at 16:51 | | | | | | | | | | |
| 07:34 | 0229 | 16-20 | 6.87 | 1.919 | – | 0.48 | 21.26 | 9.8 | 1.248 | -167.0 | milky gray |
| 07:36 | ↓ | ↓ | 7.05 | 1.928 | – | 0.47 | 21.02 | 9.8 | 1.252 | -188.7 | " |
| 07:38 | ↓ | ↓ | 7.10 | 1.935 | – | 0.45 | 20.89 | 9.9 | 1.256 | -214.8 | " |
| 04/02/13 | Sampled at 07:39 | | | ~~1.93~~ (cs) | | | ~~19.92~~ | | | | |
| 07:48 | 0229 | 21-25 | 7.21 | 1.832 | – | 0.31 | 19.92 | 9.3 | 1.191 | -498.4 | milky gray |
| 07:50 | ↓ | ↓ | 7.24 | 1.824 | – | 0.30 | 20.06 | 9.3 | 1.188 | -502.1 | " |
| 07:52 | ↓ | ↓ | 7.26 | 1.808 | – | 0.31 | 20.12 | 9.3 | 1.179 | -503.9 | " |
| | Sampled at 07:53 | | | | | | | | | | |
| 08:20 | 0229 | 26-30 | 7.44 | 1.107 | – | 0.21 | 19~~.93~~ (cs) | 5.5 | 0.722 | -574.7 | milky gray |
| 08:22 | ↓ | ↓ | 7.44 | 1.103 | – | 0.21 | 20.09 | 5.5 | 0.718 | -575.5 | " |
| 08:24 | ↓ | ↓ | 7.45 | 1.100 | – | 0.21 | 20.14 | 5.5 | 0.715 | -576.2 | " |
| | Sampled at 08:25 | | | | | | ~~19~~ (cs) | | | | |
| 08:38 | 0229 | 31-35 | 7.46 | 0.980 | – | 0.17 | 20.37 | 4.9 | 0.639 | -585.3 | cloudy gray |
| 08:40 | ↓ | ↓ | 7.46 | 0.979 | – | 0.18 | 20.45 | 4.8 | 0.639 | -585.5 | " |
| 08:42 | ↓ | ↓ | 7.46 | 0.975 | – | 0.18 | 20.50 | 4.8 | 0.634 | -585.9 | " |
| | Sampled at 08:43 | | | | | | | | | | |
| 0900 | 0229 | 36-40 | 7.48 | 0.874 | – | 0.19 | 20.47 | 4.3 | 0.568 | -586.3 | cloudy gray |
| 09:02 | ↓ | ↓ | 7.48 | 0.871 | – | 0.18 | 20.46 | 4.3 | 0.566 | -586.1 | " |
| 09:04 | ↓ | ↓ | 7.48 | 0.870 | – | 0.18 | 20.48 | 4.3 | 0.566 | -586.0 | " |
| | Sampled at 09:05 | | | | | | | | | | |
| 09:16 | 0229 | 41-45 | 7.50 | 0.832 | – | 0.15 | 20.76 | 4.1 | 0.541 | -591.8 | milky gray |
| 09:18 | ↓ | ↓ | 7.50 | 0.830 | – | 0.13 | 20.82 | 4.1 | 0.540 | -592.1 | " |
| 09:20 | ↓ | ↓ | 7.50 | 0.829 | – | 0.15 | 20.85 | 4.1 | 0.539 | -592.3 | " |
| | Sampled at 09:21 | | | | | | | | | | |
| 09:40 | 0229 | 56-60 | 7.52 | 0.790 | – | 0.14 | 21.08 | 3.9 | 0.515 | -596.3 | milky gray |
| 09:42 | ↓ | ↓ | 7.52 | 0.790 | – | 0.13 | 21.10 | 3.9 | 0.514 | -596.9 | " |
| 09:44 | ↓ | ↓ | 7.53 | 0.790 | – | 0.13 | 21.12 | 3.9 | 0.513 | -597.0 | " |
| | Sampled at 09:45 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 25*2

Date: 04/02/13 DPT 0230 (AG on map)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:20 | 0230 | 8-12 | 7.53 | 0.919 | – | 0.19 | 24.08 | 4.5 | 0.597 | -585.5 | milky gray |
| 10:22 | ↓ | ↓ | 7.53 | 0.916 | – | 0.19 | 24.00 | 4.5 | 0.596 | -585.9 | " |
| 10:24 | ↓ | ↓ | 7.53 | 0.915 | – | 0.17 | 23.98 | 4.5 | 0.595 | -586.5 | " |
| | Sampled at 10:25 | | | | | | | | | | |
| 10:31 | 0230 | 16-20 | 7.54 | 0.887 | – | 0.16 | 23.63 | 4.4 | 0.576 | -594.2 | milky gray |
| 10:33 | ↓ | ↓ | 7.54 | 0.884 | – | 0.16 | 23.67 | 4.3 | 0.575 | -594.5 | " |
| 10:35 | ↓ | ↓ | 7.54 | 0.883 | – | 0.15 | 23.70 | 4.3 | 0.574 | -594.7 | " |
| | Sampled at 10:36 | | | | | | | | | | |
| 10:45 | 0230 | 21-25 | 7.55 | 0.849 | – | 0.14 | 24.01 | 4.2 | 0.552 | -582.6 | cloudy gray |
| 10:47 | ↓ | ↓ | 7.55 | 0.849 | – | 0.13 | 24.08 | 4.2 | 0.552 | -586.4 | " |
| 10:49 | ↓ | ↓ | 7.55 | 0.848 | – | 0.13 | 24.18 | 4.2 | 0.552 | -589.1 | " |
| | Sampled at 10:50 | | | | | | | | | | |
| 11:00 | 0230 | 26-30 | 7.56 | 0.819 | – | 0.13 | 23.45 | 4.0 | 0.533 | -598.2 | milky gray |
| 11:02 | ↓ | ↓ | 7.56 | 0.817 | – | 0.14 | 23.53 | 4.0 | 0.532 | -598.5 | " |
| 11:04 | ↓ | ↓ | 7.56 | 0.817 | – | 0.11 | 23.76 | 4.0 | 0.531 | -598.7 | " |
| | Sampled at 11:05 | | | | | | | | | | |
| 11:14 | 0230 | 31-35 | 7.56 | 0.796 | – | 0.12 | 23.51 | 4.0 | 0.518 | -600.5 | cloudy gray |
| 11:16 | ↓ | ↓ | 7.56 | 0.796 | – | 0.11 | 23.52 | 3.9 | 0.517 | -600.4 | " |
| 11:18 | ↓ | ↓ | 7.56 | 0.794 | – | 0.11 | 23.50 | 3.9 | 0.516 | -600.7 | " |
| | Sampled at 11:19 | | | | | | | | | | |
| 11:27 | 0230 | 36-40 | 7.56 | 0.767 | – | 0.12 | 24.02 | 3.8 | 0.500 | -602.0 | milky gray |
| 11:29 | ↓ | ↓ | 7.56 | 0.765 | – | 0.10 | 24.19 | 3.7 | 0.498 | -602.1 | " |
| 11:31 | ↓ | ↓ | 7.56 | 0.763 | – | 0.10 | 24.27 | 3.7 | 0.497 | -602.2 | " |
| | Sampled at 11:32 | | | | | | | (3) | | | |
| 13:23 | 0230 | 41-45 | 7.13 | 1.964 | – | 0.46 | 25.87 | 9.9 | 1.277 | -349.2 | cloudy gray |
| 13:25 | ↓ | ↓ | 7.05 | 1.950 | – | 0.26 | 26.07 | 9.9 | 1.267 | -331.2 | " |
| 13:27 | ↓ | ↓ | 7.04 | 1.948 | – | 0.22 | 26.12 | 9.9 | 1.267 | -315.5 | " |
| | Sampled at 13:28 | | | | | | | | | | |
| 13:45 | 0230 | 56-60 | 7.53 | 3.634 | – | 0.17 | 28.82 | 19.0 | 2.361 | -397.1 | milky gray |
| 13:47 | ↓ | ↓ | 7.54 | 3.635 | – | 0.14 | 28.81 | 19.0 | 2.363 | -421.3 | " |
| 13:49 | ↓ | ↓ | 7.54 | 3.630 | – | 0.13 | 28.79 | 19.0 | 2.362 | -445.1 | " |
| | Sampled at 13:50 | | | | | | | | | | |

Notes:

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 25*2

Date: 04/02/13 DPT0231 (AI or map)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16:02 | 0231 | 8-12 | 7.50 | 0.807 | – | 2.65 | 28.46 | 3.9 | 0.525 | -181.9 | milky gray |
| 16:04 | ↓ | ↓ | 7.46 | 0.807 | – | 2.95 | 28.28 | 3.9 | 0.525 | -189.3 | slightly cloudy gray |
| 16:06 | ↓ | ↓ | 7.44 | 0.801 | – | 3.23 | 27.99 | 3.9 | 0.520 | -196.4 | clear |
| | Sampled at 16:07 | | | | | | | | | | |
| 16:17 | 0231 | 16-20 | 7.33 | 1.844 | – | 0.31 | 27.64 | 8.9 | 1.177 | -171.1 | milky gray |
| 16:19 | ↓ | ↓ | 7.25 | 1.927 | – | 0.24 | 27.87 | 9.7 | 1.247 | -190.4 | " |
| 16:21 | ↓ | ↓ | 7.26 | 1.953 | – | 0.25 | 27.71 | 9.8 | 1.267 | -213.3 | " |
| | Sampled at 16:22 | | | | | | | | | | |
| 16:34 | 0231 | 21-25 | 7.32 | 1.344 | – | 0.15 | 27.27 | 6.7 | 0.876 | -386.0 | milky gray |
| 16:36 | ↓ | ↓ | 7.33 | 1.341 | – | 0.15 | 27.71 | 6.7 | 0.872 | -397.4 | " |
| 16:38 | ↓ | ↓ | 7.33 | 1.338 | – | 0.14 | 27.77 | 6.7 | 0.871 | -402.8 | " |
| | Sampled at 16:39 | | | | | | | | | | |
| 16:46 | 0231 | 26-30 | 7.35 | 1.247 | – | 0.12 | 27.32 | 6.4 | 0.837 | -407.2 | milky gray |
| 16:48 | ↓ | ↓ | 7.35 | 1.231 | – | 0.11 | 27.43 | 6.1 | 0.803 | -421.9 | " |
| 16:50 | ↓ | ↓ | 7.35 | 1.225 | – | 0.11 | 27.43 | 6.1 | 0.797 | -429.3 | " |
| | Sampled at 16:51 | | | | | | | | | | |
| 17:00 | 0231 | 31-35 | 7.37 | 1.125 | – | 0.18 | 26.71 | 5.6 | 0.732 | -436.8 | milky gray |
| 17:02 | ↓ | ↓ | 7.37 | 1.128 | – | 0.12 | 27.03 | 5.5 | 0.737 | -446.7 | " |
| 17:04 | ↓ | ↓ | 7.37 | 1.122 | – | 0.11 | 26.99 | 5.5 | 0.737 | -449.9 | " |
| | Sampled at 17:05 | | | | | | | | | | |
| 17:14 | 0231 | 36-40 | 7.38 | 1.009 | – | 0.11 | 25.24 | 5.3 | 0.696 | -451.8 | milky gray |
| 17:16 | ↓ | ↓ | 7.38 | 0.964 | – | 0.10 | 26.13 | 4.8 | 0.635 | -459.1 | " |
| 17:18 | ↓ | ↓ | 7.38 | 0.950 | – | 0.10 | 26.39 | 4.7 | 0.620 | -459.7 | " |
| | Sampled at 17:19 | | | | | | | | | | |
| 17:29 | 0231 | 41-45 | 7.34 | 0.834 | – | 0.09 | 25.79 | 4.1 | 0.543 | -485.0 | milky gray |
| 17:31 | ↓ | ↓ | 7.34 | 0.826 | – | 0.11 | 25.97 | 4.0 | 0.536 | -487.9 | " |
| 17:33 | ↓ | ↓ | 7.34 | 0.824 | – | 0.11 | 25.98 | 4.0 | 0.536 | -489.3 | " |
| | Sampled at 17:34 | | | | | | | | | | |
| 17:49 | 0231 | 56-60 | 7.32 | 6.759 | – | 0.11 | 23.89 | 3.7 | 0.488 | -501.7 | milky gray |
| 17:51 | ↓ | ↓ | 7.32 | 0.749 | – | 0.09 | 24.60 | 3.7 | 0.489 | -502.7 | " |
| 17:53 | ↓ | ↓ | 7.33 | 0.744 | – | 0.09 | 24.93 | 3.6 | 0.484 | -504.2 | " |
| | Sampled at 17:54 | | | | | | | | | | |

Notes:

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 25*2

Date: 04/03/13 DPT 0232 (B) on map

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 08:49 | 0232 | 8-12 | 7.13 | 0.962 | – | 0.81 | 22.04 | 4.8 | 0.627 | -256.8 | milky gray |
| 08:51 | ↓ | ↓ | 7.13 | 0.958 | – | 0.71 | 22.00 | 4.7 | 0.624 | -317.1 | " |
| 08:53 | ↓ | ↓ | 7.13 | 0.958 | – | 0.65 | 21.97 | 4.7 | 0.621 | -352.6 | " |
| | Sampled at 08:54 | | ~~7.18~~ | ~~0.685~~ | | 0.30 | ~~21.40~~ | ~~3.5~~ | 0.709 | -501.7 | milky gray (CS) |
| 09:04 | 0232 | 16-20 | 7.18 | 0.685 | – | 0.30 | 21.40 | 3.5 | 0.709 | -501.7 | milky gray |
| 09:06 | ↓ | ↓ | 7.19 | 0.678 | – | 0.28 | 21.59 | 3.3 | 0.442 | 509.5 | " |
| 09:08 | ↓ | ↓ | 7.20 | 0.669 | – | 0.28 | 21.66 | 3.3 | 0.439 | -511.6 | " |
| | Sampled at 09:09 | | | | | | | | | | |
| 09:19 | 0232 | 21-25 | 7.24 | 0.612 | – | 0.70 | 22.02 | 2.9 | 0.388 | -538.4 | milky gray |
| 09:21 | ↓ | ↓ | 7.24 | 0.582 | – | 0.23 | 22.03 | 2.8 | 0.378 | -540.1 | " |
| 09:23 | ↓ | ↓ | 7.24 | 0.580 | – | 0.22 | 22.07 | 2.8 | 0.376 | -541.1 | " |
| | Sampled at 09:24 | | | | | | ~~22.~~ (CS) | | | | |
| 09:31 | 0232 | 26-30 | 7.27 | 0.538 | – | 0.20 | 22.39 | 2.6 | 0.350 | -555.2 | milky gray |
| 09:33 | ↓ | ↓ | 7.27 | 0.538 | – | 0.19 | 22.42 | 2.6 | 0.350 | -555.6 | " |
| 09:35 | ↓ | ↓ | 7.27 | 0.537 | – | 0.19 | 22.43 | 2.6 | 0.349 | -555.9 | " |
| | Sampled at 09:36 | | | | | | | | | | |
| 09:45 | 0232 | 31-35 | 7.30 | (CS) 1.763 | – | 0.34 | 24.05 | ~~9.1~~ 8.9 (CS) | 1.121 | -339.5 | milky gray |
| 09:47 (D) | ↓ | ↓ | 7.31 | 1.798 | – | 0.31 | 23.92 | ~~9.1~~ 8.9 (CS) | 1.158 | -390.1 | " |
| 09:49 | ↓ | ↓ | 7.32 | 1.801 | – | 0.27 | 23.93 | 9.1 | 1.170 | -401.3 | " |
| ~~09:49~~ | Sampled at 09:50 | | | | | | | | | | |
| 10:02 | 0232 | 36-40 | 7.31 | 1.479 | – | 0.34 | 23.69 | 7.7 | 1.005 | -538.7 | milky gray |
| 10:04 | ↓ | ↓ | 7.32 | 1.375 | – | 0.18 | 23.88 | 7.4 | 0.933 | -543.4 | " |
| 10:06 | ↓ | ↓ | 7.33 | 1.320 | – | 0.17 | 23.99 | 7.1 | 0.863 | -546.4 | " |
| | Sampled at 10:07 | | | | | | | | | | |
| 10:20 | 0232 | 41-45 | 7.40 | 1.030 | – | 0.19 | 23.92 | ~~7.8~~ (CS) | ~~0.964~~ | -580.9 | milky gray |
| 10:22 | ↓ | ↓ | 7.40 | 0.914 | – | 0.14 | 24.11 | 4.6 | 0.610 | -582.0 | " |
| 10:24 | ↓ | ↓ | 7.40 | 0.884 | – | 0.12 | 24.48 | 4.4 | 0.578 | -582.9 | " |
| | Sampled at 10:25 | | | | | | ~~2~~ (CS) | | | | |
| 10:39 | 0232 | 56-60 | 7.43 | 0.612 | – | 0.11 | 24.70 | 3.1 | 0.410 | -589.0 | milky gray |
| 10:41 | ↓ | ↓ | 7.43 | 0.587 | – | 0.11 | 24.96 | 2.9 | 0.386 | -589.3 | " |
| 10:43 | ↓ | ↓ | 7.44 | 0.576 | – | 0.11 | 25.01 | 2.8 | 0.377 | -589.5 | " |
| | Sampled at 10:44 | | | | | | | | | | |

Notes:

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 25*2

Date: 04/03/2013 DPT0233 (BF on map)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11:38 | 0233 | 8-12 | 7.57 | 0.895 | – | 0.46 | 24.88 | 4.4 | 0.581 | -533.6 | cloudy brown |
| 11:40 | ↓ | ↓ | 7.57 | 0.896 | – | 0.44 | 24.88 | 4.4 | 0.581 | -536.4 | " |
| 11:42 | ↓ | ↓ | 7.58 | 0.899 | – | 0.44 | 24.88 | 4.4 | 0.584 | -539.3 | " |
| | Sampled at 11:43 | | | | | | | | | | |
| 11:50 | 0233 | 16-20 | 7.53 | 0.810 | – | 0.40 | 26.83 | 4.1 | 0.539 | -557.0 | milky gray |
| 11:52 | ↓ | ↓ | 7.53 | 0.794 | – | 0.24 | 26.55 | 3.9 | 0.518 | -558.3 | " |
| 11:54 | ↓ | ↓ | 7.54 | 0.769 | – | 0.20 | 26.33 | 3.8 | 0.502 | -561.9 | " |
| | Sampled at 11:55 | | | | | | | | | | |
| 12:02 | 0233 | 21-25 | 7.51 | 0.490 | – | 0.14 | 27.48 | 2.4 | 0.320 | -581.4 | cloudy brown |
| 12:04 | ↓ | ↓ | 7.51 | 0.487 | – | 0.14 | 27.46 | 2.3 | 0.317 | -582.2 | " |
| 12:06 | ↓ | ↓ | 7.51 | 0.485 | – | 0.14 | 27.46 | 2.3 | 0.316 | -582.5 | " |
| | Sampled at 12:07 | | | | | | | | | | |
| 12:44 | 0233 | 26-30 | 7.49 | 0.369 | – | 0.12 | 33.66 | 1.7 | 0.241 | -591.5 | cloudy brown |
| 12:46 | ↓ | ↓ | 7.49 | 0.368 | – | 0.08 | 33.49 | 1.7 | 0.239 | -592.3 | " |
| 12:48 | ↓ | ↓ | 7.49 | 0.367 | – | 0.08 | 33.37 | 1.7 | 0.239 | -592.7 | " |
| | Sampled at 12:49 | | | | | | | | | | |
| 12:56 | 0233 | 31-35 | 7.24 | 1.845 | – | 0.15 | 30.82 | 9.4 | 1.215 | -476.4 | milky brown |
| 12:58 | ↓ | ↓ | 7.24 | 1.843 | – | 0.09 | 31.29 | 9.3 | 1.198 | -497.8 | " |
| 13:00 | ↓ | ↓ | 7.22 | 1.863 | – | 0.09 | 31.56 | 9.2 | 1.201 | -499.8 | " |
| | Sampled at 13:01 | | | | | | | | | | |
| 13:14 | 0233 | 36-40 | 7.27 | 1.886 | – | 0.41 | 33.52 | 9.6 | 1.251 | -315.6 | milky gray |
| 13:16 | ↓ | ↓ | 7.23 | 2.132 | – | 0.10 | 30.89 | 10.6 | 1.374 | -497.7 | " |
| 13:18 | ↓ | ↓ | 7.21 | 2.151 | – | 0.09 | 30.38 | 10.8 | 1.395 | -500.4 | " |
| | Sampled at 13:19 | | | | | | | | | | |
| 13:30 | 0233 | 41-45 | 7.23 | 1.708 | – | 0.07 | 31.74 | 8.4 | 1.095 | -580.4 | cloudy gray |
| 13:32 | ↓ | ↓ | 7.24 | 1.621 | – | 0.06 | 30.94 | 8.2 | 1.056 | -577.7 | " |
| 13:34 | ↓ | ↓ | 7.24 | 1.596 | – | 0.06 | 30.78 | 8.0 | 1.038 | -576.0 | " |
| | Sampled at 13:35 | | | | | | | | | | |
| 13:48 | 0233 | 56-60 | 7.30 | 1.609 | – | 0.08 | 30.97 | 8.0 | 1.039 | -600.4 | cloudy brown |
| 13:50 | ↓ | ↓ | 7.29 | 1.592 | – | 0.07 | 30.75 | 8.0 | 1.037 | -600.7 | " |
| 13:52 | ↓ | ↓ | 7.29 | 1.586 | – | 0.07 | 30.61 | 7.9 | 1.032 | -601.0 | " |
| | Sampled at 13:53 | | | | | | | | | | |

Notes:

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 25*2

Date: 04/03/13 DPT 0234 (BE on map)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14:30 | 0234 | 8-12 | 7.21 | 1.278 | – | 0.27 | 27.16 | 6.3 | 0.831 | -437.9 | cloudy brown |
| 14:32 | ↓ | ↓ | 7.21 | 1.276 | – | 0.25 | 26.84 | 6.3 | 0.830 | -469.9 | " |
| 14:34 | ↓ | ↓ | 7.22 | 1.278 | – | 0.23 | 26.44 | 6.3 | 0.830 | -479.9 | " |
| | Sampled at 14:35 | | | | | | | | | | |
| 14:42 | 0234 | 16-20 | 7.32 | 1.088 | – | 0.12 | 27.60 | 5.4 | 0.733 | -557.7 | milky gray |
| 14:44 | ↓ | ↓ | 7.33 | 1.043 | – | 0.12 | 27.51 | 5.2 | 0.686 | -560.2 | " |
| 14:46 | ↓ | ↓ | 7.34 | 1.008 | – | 0.11 | 27.38 | 5.0 | 0.659 | -561.8 | " |
| | Sampled at 14:47 | | | | | | | | | | |
| 14:54 | 0234 | 21-25 | 7.39 | 0.932 | – | 0.10 | 27.07 | 4.7 | 0.623 | -577.0 | milky gray |
| 14:56 | ↓ | ↓ | 7.39 | 0.796 | – | 0.10 | 27.97 | 3.9 | 0.523 | -579.5 | " |
| 14:58 | ↓ | ↓ | 7.39 | 0.781 | – | 0.10 | 28.68 | 3.8 | 0.510 | -580.5 | " |
| | Sampled at 14:59 | | | | | | | | | | |
| 15:06 | 0234 | 26-30 | 7.43 | 0.610 | – | 0.07 | 30.32 | 2.9 | 0.398 | -591.6 | gray milky |
| 15:08 | ↓ | ↓ | 7.43 | 0.607 | – | 0.07 | 30.34 | 2.9 | 0.395 | -592.1 | " |
| 15:10 | ↓ | ↓ | 7.43 | 0.603 | – | 0.06 | 30.34 | 2.9 | 0.393 | -592.5 | " |
| | Sampled at 15:11 | | | | | | | | | | |
| 15:20 | 0234 | 31-35 | 7.46 | 0.492 | – | 0.06 | 30.66 | 2.4 | 0.325 | -601.4 | milky gray |
| 15:22 | ↓ | ↓ | 7.46 | 0.490 | – | 0.06 | 30.50 | 2.3 | 0.319 | -601.7 | " |
| 15:24 | ↓ | ↓ | 7.46 | 0.488 | – | 0.06 | 30.43 | 2.3 | 0.318 | -601.8 | " |
| | Sampled at 15:25 | | | | | | | | | | |
| 15:38 | 0234 | 36-40 | 7.49 | 0.434 | – | 0.06 | 30.08 | 2.1 | 0.282 | -607.3 | milky gray |
| 15:40 | ↓ | ↓ | 7.49 | 0.433 | – | 0.06 | 30.06 | 2.1 | 0.282 | -607.3 | " |
| 15:42 | ↓ | ↓ | 7.50 | 0.433 | – | 0.06 | 30.00 | 2.1 | 0.281 | -607.6 | " |
| | Sampled at 15:43 | | | | | ~~0.06~~ | ~~30.19~~ | ~~2.0~~ | ~~0.269~~ | ~~-609.2~~ | milky gray (CS) |
| 15:57 | 0234 | 41-45 | 7.51 | 0.412 | – | 0.06 | 30.19 | 2.0 | 0.269 | -609.2 | milky gray |
| 15:59 | ↓ | ↓ | 7.52 | 0.410 | – | 0.06 | 30.14 | 1.9 | 0.267 | -609.2 | " |
| 16:01 | ↓ | ↓ | 7.52 | 0.410 | – | 0.06 | 30.01 | 1.9 | 0.266 | -609.1 | " |
| | Sampled at 16:02 | | | | | | | | (CS) | | |
| 16:18 | 0234 | 56-60 | 7.44 | 3.780 (CS) | – | 0.12 | 25.26 | 19.4 | 2.416 | -498.3 | (CS) cloudy |
| 16:20 | ↓ | ↓ | 7.42 | 3.835 | – | 0.12 | 24.50 | 20.2 | 2.487 | -505.4 | " |
| 16:22 | ↓ | ↓ | 7.40 | 3.839 | – | 0.12 | 24.37 | 20.2 | 2.494 | -497.4 | " |
| | Sampled at 16:23 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681 / 25*2

Date: 04/03-04/13 DPT0235 (BC or map) (8-12' done 04/03/13 + rest 04/04/13)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/03/13 | | | | | | | | | | | |
| 16:48 | 0235 | 8-12 | 6.78 | 0.806 | – | 0.30 | 22.91 | 4.0 | 0.530 | -190.8 | cloudy |
| 16:50 | ↓ | ↓ | 6.74 | 0.802 | – | 0.31 | 22.29 | 4.0 | 0.521 | -193.7 | " |
| 16:52 | ↓ | ↓ | 6.65 | 0.798 | – | 0.31 | 22.18 | 3.9 | 0.514 | -197.4 | " |
| | Sampled at 16:53 | | | | | | | | | | |
| ~~16:58~~ ~~13:04~~ | 0235 | 16-20 | 7.10 | 0.874 | – | 0.96 | 22.82 | 4.3 | 0.569 | -287.8 | cloudy gray |
| 09:00 | ↓ | ↓ | 7.11 | 0.872 | – | 0.82 | 22.78 | 4.3 | 0.568 | -353.2 | " |
| 09:02 | ↓ | ↓ | 7.11 | 0.871 | – | 0.74 | 22.73 | 4.3 | 0.566 | -332.4 | " |
| | Sampled at 09:03 | | | | | | | | | | |
| 09:10 | 0235 | 21-25 | 6.92 | 0.820 | – | 0.32 | 22.92 | 4.0 | 0.536 | -300.7 | cloudy brown |
| 09:12 | ↓ | ↓ | 6.89 | 0.814 | – | 0.32 | 22.78 | 4.0 | 0.530 | -262.3 | " |
| 09:14 | ↓ | ↓ | 6.87 | 0.809 | – | 0.31 | 22.69 | 4.0 | 0.527 | -242.1 | " |
| | Sampled at 09:15 | | | | | | | | | | |
| 09:26 | 0235 | 26-30 | 8.21 | 0.484 | – | 0.41 | 22.86 | 2.4 | 0.314 | -150.9 | milky brown |
| 09:28 | ↓ | ↓ | 8.21 | 0.487 | – | 0.24 | 22.83 | 2.4 | 0.318 | -168.9 | " |
| 09:30 | ↓ | ↓ | 8.22 | 0.483 | – | 0.22 | 22.83 | 2.3 | 0.315 | -180.4 | " |
| | Sampled at 09:31 | | | | | | | | | | |
| 09:42 | 0235 | 31-35 | 7.31 | (cs) 1.140 | – | 0.16 | 23.72 | 5.7 | 0.742 | -408.6 | milky gray |
| 09:44 | ↓ | ↓ | 7.30 | 1.150 | – | 0.16 | 23.68 | 5.7 | 0.748 | -399.3 | " |
| 09:46 | ↓ | ↓ | 7.29 | 1.160 | – | 0.15 | 23.63 | 5.8 | 0.755 | -393.8 | " |
| | Sampled at 09:47 | | | | | | | | | | |
| 09:58 | 0235 | 36-40 | 7.22 | 1.279 | – | 0.17 | 23.35 | 6.4 | 0.831 | -385.6 | cloudy brown |
| 10:00 | ↓ | ↓ | 7.21 | 1.273 | – | 0.16 | 23.30 | 6.4 | 0.829 | -359.4 | " |
| 10:02 | ↓ | ↓ | 7.21 | 1.268 | – | 0.15 | 23.27 | 6.3 | 0.825 | -346.1 | " |
| | Sampled at 10:03 | | | | | | | | | | |
| 10:18 | 0235 | 41-45 | 7.31 | 1.343 | – | 0.14 | 22.94 | 6.7 | 0.876 | -374.6 | cloudy brown |
| 10:20 | ↓ | ↓ | 7.31 | 1.337 | – | 0.13 | 22.97 | 6.7 | 0.871 | -366.6 | " |
| 10:22 | ↓ | ↓ | 7.31 | 1.332 | – | 0.13 | 22.98 | 6.7 | 0.867 | -360.6 | " |
| | Sampled at 10:23 | | | | | ~~0.13~~ (cs) | | | | | |
| 10:35 | 0235 | 56-60 | 7.37 | 1.730 | – | 0.15 | 22.97 | 8.6 | 0.999 | -277.6 | cloudy brown |
| 10:37 | ↓ | ↓ | 7.36 | 1.752 | – | 0.18 | 22.96 | 8.8 | 1.133 | -275.7 | " |
| 10:39 | ↓ | ↓ | 7.36 | 1.776 | – | 0.19 | 22.96 | 8.9 | 1.148 | -266.5 | " |
| | Sampled at 10:40 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

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mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681 / 25*2

Date: 04/04/13 DPT0236 (At or near)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13:00 | 0236 | 8-12 | 7.22 | 0.979 | – | 1.11 | 24.65 | 4.8 | 0.637 | -134.7 | dk. brown cloudy |
| 13:02 | ↓ | ↓ | 7.20 | 0.970 | – | 1.81 | 24.65 | 4.8 | 0.634 | -140.1 | " |
| 13:04 | ↓ | ↓ | 7.19 | 0.950 | – | 2.35 | 24.66 | 4.7 | 0.620 | -137.6 | " |
| | Sampled at 13:05 | | | | | | | | | | |
| 13:16 | 0236 | 16-20 | 7.20 | 1.090 | – | 0.26 | 24.69 | 5.5 | 0.715 | -228.5 | cloudy brown |
| 13:17 | ↓ | ↓ | 7.20 | 1.086 | – | 0.24 | 24.64 | 5.4 | 0.706 | -262.5 | " |
| 13:19 | ↓ | ↓ | 7.21 | 1.085 | – | 0.22 | 24.61 | 5.4 | 0.706 | -290.3 | " |
| | Sampled at 13:20 | | | | | | | | | | |
| 13:32 | 0236 | 21-25 | 7.23 | 0.758 | – | 0.19 | 24.80 | 3.7 | 0.492 | -524.7 | cloudy brown |
| 13:34 | ↓ | ↓ | 7.25 | 0.754 | – | 0.19 | 24.73 | 3.7 | 0.491 | -528.6 | " |
| 13:36 | ↓ | ↓ | 7.25 | 0.754 | – | 0.20 | 24.66 | 3.7 | 0.490 | -530.1 | " |
| | Sampled at 13:37 | | | | | | | | | | |
| 13:43 | 0236 | 26-30 | 7.28 | 0.723 | – | 0.13 | 24.32 | 3.5 | 0.470 | -554.8 | milky gray |
| 13:45 | ↓ | ↓ | 7.28 | 0.719 | – | 0.13 | 24.39 | 3.5 | 0.467 | -555.1 | " |
| 13:47 | ↓ | ↓ | 7.28 | 0.716 | – | 0.14 | 24.43 | 3.5 | 0.466 | -555.5 | " |
| | Sampled at 13:48 | | | | | | | | | | |
| 13:59 | 0236 | 31-35 | 7.30 | 0.655 | – | 0.12 | 24.37 | 3.2 | 0.427 | -562.1 | gray milky |
| 14:01 | ↓ | ↓ | 7.30 | 0.655 | – | 0.12 | 24.37 | 3.2 | 0.425 | -562.4 | " |
| 14:03 | ↓ | ↓ | 7.31 | 0.653 | – | 0.11 | 24.37 | 3.2 | 0.425 | -562.5 | " |
| | Sampled at 14:04 | | | | | | | | | | |
| 14:19 | 0236 | 36-40 | 7.32 | 0.607 | – | 0.11 | 24.39 | 2.9 | 0.395 | -567.3 | cloudy brown |
| 14:21 | ↓ | ↓ | 7.32 | 0.604 | – | 0.11 | 24.40 | 2.9 | 0.393 | -567.9 | " |
| 14:23 | ↓ | ↓ | 7.32 | 0.604 | – | 0.11 | 24.42 | 2.9 | 0.393 | -567.9 | " |
| | Sampled at 14:24 | | | | | | | | | | |
| 14:36 | 0236 | 41-45 | 7.33 | 0.550 | – | 0.10 | 24.45 | 2.7 | 0.358 | -571.5 | brown milky |
| 14:38 | ↓ | ↓ | 7.33 | 0.554 | – | 0.10 | 24.45 | 2.6 | 0.358 | -571.7 | " |
| 14:40 | ↓ | ↓ | 7.33 | 0.555 | – | 0.09 | 24.45 | 2.6 | 0.355 | -571.8 | " |
| | Sampled at 14:41 | | | | | | | | | | |
| 14:55 | 0236 | 56-60 | 7.34 | 0.521 | – | 0.10 | 24.42 | 2.5 | 0.339 | -574.7 | milky brown |
| 14:57 | ↓ | ↓ | 7.34 | 0.520 | – | 0.10 | 24.41 | 2.5 | 0.338 | -574.8 | " |
| 14:59 | ↓ | ↓ | 7.34 | 0.520 | – | 0.10 | 24.39 | 2.5 | 0.338 | -574.9 | " |
| | Sampled at 15:00 | | | | | | | | | | |

Notes:

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 25*2

Date: 04/05/13 DPT0237 (AZ on map)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 09:26 | 0237 | 8-12 | 7.02 | 0.778 | – | 1.78 | 21.91 | 3.8 | 0.505 | -93.5 | milky gray |
| 09:28 | ↓ | ↓ | 7.04 | 0.773 | – | 1.44 | 21.89 | 3.8 | 0.502 | -98.7 | " |
| 09:30 | ↓ | ↓ | 7.05 | 0.772 | – | 1.33 | 21.87 | 3.8 | 0.501 | -102.7 | " |
| | Sampled at 09:31 | | | | | | | | | | |
| 09:40 | 0237 | 16-20 | 7.15 | 0.747 | – | 0.47 | 21.08 | 3.4 | 0.473 | -406.3 | milky gray |
| 09:42 | ↓ | ↓ | 7.14 | 0.704 | – | 0.40 | 21.20 | 3.5 | 0.464 | -424.8 | " |
| 09:44 | ↓ | ↓ | 7.15 | 0.693 | – | 0.40 | 21.44 | 3.4 | 0.452 | -439.4 | " |
| | Sampled at 09:45 | | | | | | | | | | |
| 09:51 | 0237 | 21-25 | 7.19 | 0.596 | – | 0.25 | 21.85 | 3.0 | 0.397 | -528.2 | milky gray |
| 09:53 | ↓ | ↓ | 719 | 0.564 | – | 0.24 | 22.04 | 2.8 | 0.370 | -538.9 | " |
| 09:55 | ↓ | ↓ | 7.18 | 0.553 | – | 0.26 | 22.46 | 2.7 | 0.361 | -530.2 | " |
| | Sampled at 09:56 | | | | | | | | | | |
| 10:02 | 0237 | 26-30 | 7.21 | 0.545 | – | 0.54 | 21.73 | 2.6 | 0.355 | -554.0 | milky gray |
| 10:04 | ↓ | ↓ | 7.21 | 0.545 | – | 0.74 | 21.68 | 2.6 | 0.354 | -554.9 | " |
| 10:06 | ↓ | ↓ | 7.22 | 0.354 | – | 0.85 | 21.65 | 2.6 | 0.354 | -555.5 | " |
| | Sampled at 10:07 | | | | | | | | | | |
| 10:15 | 0237 | 31-35 | 7.24 | 0.535 | – | 0.99 | 20.80 | 2.6 | 0.349 | -564.4 | milky gray |
| 10:17 | ↓ | ↓ | 7.24 | 0.533 | – | 1.09 | 20.76 | 2.6 | 0.347 | -564.8 | " |
| 10:19 | ↓ | ↓ | 7.23 | 0.530 | – | 1.58 | 20.73 | 2.6 | 0.345 | -565.0 | " |
| | Sampled at 10:20 | | | | | | | | | | |
| 11:18 | 0237 | 36-40 | 7.07 | 0.833 | – | 1.27 | 19.68 | 4.1 | 0.541 | -371.6 | cloudy gray |
| 11:20 | ↓ | ↓ | 7.08 | 0.831 | – | 1.01 | 19.70 | 4.1 | 0.541 | -397.4 | " |
| 11:22 | ↓ | ↓ | 7.09 | 0.829 | – | 0.86 | 19.72 | 4.1 | 0.541 | -409.( | " |
| | Sampled at 11:23 | | | | | | | | | | |
| 11:32 | 0237 | 41-45 | 7.21 | 0.809 | – | 0.29 | 20.30 | 3.9 | 0.520 | -517.4 | milky gray |
| 11:34 | ↓ | ↓ | 7.22 | 0.0806 | – | 0.27 | 20.41 | 3.9 | 0.526 | -519.5 | " |
| 11:36 | ↓ | ↓ | 7.21 | 0.794 | – | 0.26 | 20.52 | 3.9 | 0.519 | -520.5 | " |
| | Sampled at 11:37 | | | | | ~~0.19~~ | ~~22.42~~ | ~~3.6~~ | ~~0.482~~ | ~~-549.5~~ | ~~milky gray~~ (DS) |
| 11:47 | 0237 | 56-60 | 7.26 | 0.761 | – | 0.17 | 22.42 | 3.6 | 0.482 | -549.5 | milky gray |
| 11:49 | ↓ | ↓ | 7.26 | 0.770 | – | 0.14 | 22.54 | 3.7 | 0.498 | -548.6 | " |
| 11:51 | ↓ | ↓ | 7.26 | 0.779 | – | 0.14 | 22.60 | 3.8 | 0.505 | -548.3 | " |
| | Sampled at 11:52 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 25*2

Date: 04/05/13 DPT0238 (BA nmap)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:18 | 0238 | 8-12 | 7.11 | 0.900 | – | 0.32 | 23.43 | 4.6 | 0.603 | -248.1 | gray/cloudy |
| 12:20 | ↓ | ↓ | 7.07 | 0.914 | – | 0.28 | 23.25 | 4.5 | 0.597 | -251.9 | " |
| 12:22 | ↓ | ↓ | 7.02 | 0.906 | – | 0.55 | 22.98 | 4.5 | 0.591 | -254.1 | " |
| | Sampled at 12:23 | | | | | | | | | | |
| 12:31 | 0238 | 16-20 | 7.06 | 0.835 | – | 0.16 | 24.35 | 4.1 | 0.548 | -328.9 | gray/cloudy |
| 12:33 | ↓ | ↓ | 7.04 | 0.829 | – | 0.16 | 24.00 | 4.1 | 0.539 | -304.6 | " |
| 12:35 | ↓ | ↓ | 7.00 | 0.813 | – | 0.17 | 23.89 | 4.0 | 0.536 | -296.9 -296.9 | " |
| | Sampled at 12:36 | | | | | | | | | | |
| 12:43 | 0238 | 21-25 | 7.12 | 0.824 | – | 0.33 | 25.29 | 3.4 | 0.535 | -207.9 | milky gray/ |
| 12:45 | ↓ | ↓ | 7.11 | 0.824 | – | 0.16 | 25.48 | 4.0 | 0.536 | -247.9 | " |
| 12:47 | ↓ | ↓ | 7.09 | 0.817 | – | 0.13 | 25.44 | 4.0 | 0.532 | -267.1 | " |
| | Sampled at 12:48 | | | | | | | | | | |
| 12:53 | 0238 | 26-30 | 7.23 | 0.737 | – | 0.12 | 25.78 | 3.5 | 0.475 | -378.6 | milky gray/ |
| 12:55 | ↓ | ↓ | 7.21 | 0.741 | – | 0.11 | 25.90 | 3.6 | 0.481 | -384.3 | " |
| 12:57 | ↓ | ↓ | 7.20 | 0.741 | – | 0.09 | 25.91 | 3.6 | 0.482 | -383.9 | " |
| | Sampled at 12:58 | | | | | | | | | | |
| 13:06 | 0238 | 31-35 | 7.23 | 0.756 | – | 0.25 | 26.25 | 6.0 | 0.786 | -233.6 | cloudy gray/ |
| 13:08 | ↓ | ↓ | 7.21 | 0.717 | – | 0.23 | 26.18 | 5.6 | 0.723 | -291.6 | " |
| 13:10 | ↓ | ↓ | 7.20 | 0.701 | – | 0.18 | 26.17 | 5.4 | 0.705 | -320.8 | " |
| | Sampled at 13:11 | | | | | | | | | | |
| 13:22 | 0238 | 36-40 | 7.19 | 0.934 | – | 0.13 | 26.04 | 4.7 | 0.622 | -528.7 | milky gray/ |
| 13:24 | ↓ | ↓ | 7.20 | 0.909 | – | 0.11 | 26.09 | 4.5 | 0.597 | -531.0 | " |
| 13:26 | ↓ | ↓ | 7.20 | 0.899 | – | 0.11 | 26.13 | 4.4 | 0.586 | -533.0 | " |
| | Sampled at 13:27 | | | | | | | | | | |
| 13:37 | 0238 | 41-45 | 7.25 | 0.801 | – | 0.10 | 25.45 | 4.0 | 0.526 | -557.0 | milky gray/ |
| 13:39 | ↓ | ↓ | 7.25 | 0.798 | – | 0.09 | 25.43 | 3.9 | 0.520 | -558.6 | " |
| 13:41 | ↓ | ↓ | 7.26 | 0.794 | – | 0.08 | 25.42 | 3.9 | 0.517 | -559.3 | " |
| | Sampled at 13:42 | | | | | | | | | | |
| 13:57 | 0238 | 56-60 | 7.29 | 0.698 | – | 0.09 | 26.50 | 3.4 | 0.454 | -569.2 | milky gray/ |
| 13:59 | ↓ | ↓ | 7.29 | 0.691 | – | 0.08 | 26.35 | 3.4 | 0.451 | -569.7 | " |
| 14:01 | ↓ | ↓ | 7.29 | 0.688 | – | 0.08 | 25.94 | 3.3 | 0.445 | -569.8 | " |
| | Sampled at 14:02 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

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mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 25*2

Date: 04/05/13 DPT0239 (BB on map)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14:25 | 0239 | 8-12 | 7.39 | 0.656 | – | 0.18 | 25.91 | 3.2 | 0.426 | -502.9 | cloudy gray |
| 14:27 | ↓ | ↓ | 7.40 | 0.652 | – | 0.20 | 25.67 | 3.2 | 0.425 | -516.1 | " |
| 14:29 | ↓ | ↓ | 7.41 | 0.647 | – | 0.19 | 25.51 | 3.1 | 0.422 | -524.2 | " |
| | Sampled at 14:30 | | | | | | | | | | |
| 14:35 | 0239 | 16-20 | 7.49 | 0.600 | – | 0.19 | 25.41 | 3.6 | 0.417 | -560.6 | cloudy gray |
| 14:37 | ↓ | ↓ | 7.50 | 0.522 | – | 0.14 | 25.46 | 2.7 | 0.344 | -562.8 | " |
| 14:39 | ↓ | ↓ | 7.50 | 0.516 | – | 0.11 | 25.53 | 2.5 | 0.336 | -563.9 | " |
| | Sampled at 14:40 | | | | | | | | | | |
| 14:45 | 0239 | 21-25 | 7.53 | 0.460 | – | 0.11 | 25.83 | 2.2 | 0.299 | -579.1 | cloudy gray |
| 14:47 | ↓ | ↓ | 7.53 | 0.459 | – | 0.10 | 25.91 | 2.2 | 0.299 | -579.7 | " |
| 14:49 | ↓ | ↓ | 7.53 | 0.458 | – | 0.11 | 25.94 | 2.2 | 0.298 | -580.2 | " |
| | Sampled at 14:50 | | | | | | | | | | |
| 14:59 | 0239 | 26-30 | 7.39 | 0.806 | – | 0.17 | 25.42 | 3.9 | 0.519 | -437.1 | cloudy gray |
| 15:01 | ↓ | ↓ | 7.38 | 0.809 | – | 0.14 | 25.22 | 3.9 | 0.527 | -456.4 | " |
| 15:03 | ↓ | ↓ | 7.37 | 0.814 | – | 0.14 | 25.15 | 4.0 | 0.532 | -467.5 | " |
| | Sampled at 15:04 | | | | | | | | | | |
| 15:12 | 0239 | 31-35 | 7.19 | 0.717 | – | 0.10 | 25.04 | 3.5 | 0.463 | -516.4 | cloudy gray |
| 15:14 | ↓ | ↓ | 7.19 | 0.710 | – | 0.10 | 25.04 | 3.4 | 0.460 | -517.4 | " |
| 15:16 | ↓ | ↓ | 7.19 | 0.701 | – | 0.10 | 25.03 | 3.4 | 0.457 | -518.4 | " |
| | Sampled at 15:17 | | | | | | | | | | |
| 15:29 | 0239 | 36-40 | 7.22 | 0.802 | – | 0.12 | 25.63 | 3.3 | 0.522 | -554.3 | cloudy gray |
| 15:31 | ↓ | ↓ | 7.23 | 0.777 | – | 0.08 | 25.88 | 3.8 | 0.525 | -558.0 | " |
| 15:33 | ↓ | ↓ | 7.24 | 0.736 | – | 0.08 | 26.12 | 3.7 | 0.482 | -562.4 | " |
| | Sampled at 15:34 | | | | | | | | | | |
| 15:45 | 0239 | 41-45 | 7.28 | 0.690 | – | 0.07 | 25.96 | 3.3 | 0.448 | -583.0 | cloudy gray |
| 15:47 | ↓ | ↓ | 7.27 | 0.676 | – | 0.08 | 25.98 | 3.3 | 0.442 | -584.2 | " |
| 15:49 | ↓ | ↓ | 7.27 | 0.677 | – | 0.08 | 26.00 | 3.3 | 0.440 | -584.1 | " |
| | Sampled at 15:50 | | | | | | | | | | |
| 16:03 | 0239 | 56-60 | 7.26 | 0.685 | – | 0.08 | 25.00 | 3.3 | 0.445 | -590.8 | cloudy gray |
| 16:05 | ↓ | ↓ | 7.26 | 0.684 | – | 0.08 | 24.88 | 3.3 | 0.445 | -590.8 | " |
| 16:07 | ↓ | ↓ | 7.26 | 0.684 | – | 0.10 | 24.78 | 3.3 | 0.444 | -590.9 | " |
| | Sampled at 16:08 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681 / 226.0

Date: 5/23/13

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 754 | 226 | ~~8-12~~ 46-50 | 7.10 | 1.745 | — | 0.97 | 25.22 | 0.88 | 1151 | -219.5 | grey |
| 756 | ↓ | ↓ | 7.13 | 1.753 | — | 0.66 | 25.23 | 0.89 | 1.152 | -231.2 | ↓ |
| 758 | ↓ | ↓ | 7.16 | 1.760 | — | 0.55 | 25.23 | 0.84 | 1.152 | -242.1 | ↓ |
| | Sampled at 800 | | | | | | | | | | |
| | | 16-20 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 36-40 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 41-45 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 56-60 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM** 228.0 Project/Project Number: CRHE / FR1681 /

Date: 5/22/13

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 904 | 228 | ~~4-8-20~~ 8-12 | 7.34 | 1.808 | – | 1.97 | 25.66 | 0.93 | 1.209 | -200.6 | grey |
| 906 | ↓ | ↓ | 7.28 | 1.895 | – | 0.34 | 25.57 | 0.97 | 1.246 | -212.6 | ↓ |
| 908 | ↓ | ↓ | 7.28 | 1.931 | – | 0.18 | 25.94 | 0.98 | 1.261 | -213.3 | ↓ |
| | Sampled at 910 | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 36-40 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 41-45 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM** 230

Project/Project Number: CRHE / FR1681 /

Date: 5/23/13

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 956 | | 46-50 8-12 | 7.10 | 2.041 | – | 6.09 | 25.31 | 1.04 | 1.326 | -94.0 | grey |
| 958 | ↓ | ↓ | 7.41 | 2.038 | – | 3.10 | 25.29 | 1.04 | 1.324 | -101.4 | 1 |
| 1000 | ↓ | ↓ | 6.94 | 2.037 | – | 2.42 | 25.27 | 1.04 | 1.324 | -106.6 | 1 |
| | Sampled at 1002 | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 36-40 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 41-45 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 231

Date: 5/23/13

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 904 | 231 | ~~10-12~~ | 7.46 | 2.186 | – | 4.98 | 26.57 | 1.12 | 1.422 | -209.4 | grey |
| 906 | ↓ | ↓ | 7.42 | 2.173 | – | 0.80 | 27.06 | 1.10 | 1.405 | -218.0 | " |
| 908 | ↓ | ↓ | 7.41 | 2.155 | – | 0.52 | 27.24 | 1.09 | 1.398 | -224.7 | " |
| | Sampled at 910 | ~~46-50~~ 16-20 | (46-50) | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 36-40 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 41-45 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

CRHE DPT 008-0012 B

# CRHE-DPT 0185-018.0-20130520

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 /

Date: 5/20/13 BL - 240.0

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | ppt DPT Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 930 | 240 | 8-12 | 7.08 | 0.870 | – | 2.05 | 24.49 | 0.39 | 0.533 | -539.5 | grey |
| 932 | ↓ | ↓ | 7.06 | 0.794 | – | 1.04 | 23.85 | 0.39 | 0.513 | -553.4 | cloudy |
| 934 | ↓ | ↓ | 7.05 | 0.783 | – | 1.03 | 23.77 | 0.38 | 0.507 | -556.6 | Clouds |
| | Sampled at 930 | | | | | | | | | | |
| 944 | 240 | 16-20 | 7.13 | 0.958 | – | 3.78 | 25.29 | 0.48 | 0.634 | -557.9 | cloudy |
| 946 | ↓ | ↓ | 7.14 | 0.978 | – | 1.18 | 25.42 | 0.48 | 0.636 | -582.7 | cloudy |
| 948 | ↓ | ↓ | 7.15 | 0.976 | – | 0.78 | 25.38 | 0.48 | 0.633 | -591.5 | cloudy |
| | Sampled at 950 | | | | | | | | | | |
| 955 | 240 | 21-25 | 7.29 | 0.835 | – | 1.05 | 26.08 | 0.41 | 0.547 | -591.2 | Cloudy |
| 957 | ↓ | ↓ | 7.30 | 0.846 | – | 1.17 | 26.10 | 0.41 | 0.553 | -592.9 | cloudy |
| 959 | ↓ | ↓ | 7.31 | 0.855 | – | 0.87 | 26.12 | 0.42 | 0.559 | -594.7 | cloudy |
| | Sampled at 1002 | | | | | | | | | | |
| 1005 | 240 | 26-30 | 7.62 | 1.084 | – | 2.79 | 26.13 | 0.55 | 0.731 | -572.8 | cloudy |
| 1007 | ↓ | ↓ | 7.50 | 1.133 | – | 2.71 | 25.88 | 0.56 | 0.732 | -601.6 | cloudy |
| 1010 | ↓ | ↓ | 7.52 | 1.118 | – | 1.66 | 25.65 | 0.55 | 0.726 | -609.3 | cloudy |
| | Sampled at 1012 | | | | | | | | | | |
| 1020 | 240 | 31-35 | 7.58 | 1.378 | – | 2.32 | 25.94 | 0.70 | 0.910 | -597.9 | cloudy |
| 1022 | ↓ | ↓ | 7.52 | 1.417 | – | 1.71 | 25.96 | 0.71 | 0.921 | -603 | cloudy |
| 1024 | ↓ | ↓ | 7.52 | 1.437 | – | 1.29 | 25.83 | 0.72 | 0.939 | -609.9 | cloudy |
| | Sampled at 1026 | | | | | | | | | | |
| 1030 | 240 | 36-40 | 7.82 | 0.772 | – | 5.49 | 25.79 | 0.73 | 0.959 | -533.7 | cloudy |
| 1032 | ↓ | ↓ | 7.32 | 1.494 | – | 2.04 | 25.99 | 0.75 | 0.983 | -438.7 | ↓ |
| 1034 | ↓ | ↓ | 7.33 | 1.520 | – | 1.37 | 25.90 | 0.76 | 0.991 | -421.9 | ↓ |
| | Sampled at 1036 | | | | | | | | | | |
| 1040 | 240 | add'l 41-45 | 7.41 | 1.615 | – | 4.68 | 25.44 | 0.84 | 1.086 | -473.9 | grey |
| 1042 | ↓ | ↓ | 7.29 | 1.681 | – | 2.04 | 25.63 | 0.85 | 1.095 | -449.3 | grey |
| 1044 | ↓ | ↓ | 7.28 | 1.685 | – | 1.34 | 25.63 | 0.85 | 1.097 | -579.4 | cloudy |
| | Sampled at 1046 | | | | | | | 1.65 | | | |
| 1050 | 240 | 56-60 | 7.48 | 3.111 | – | 4.56 | 26.16 | 1.58 | 2.078 | -568.9 | cloudy |
| 1052 | ↓ | ↓ | 7.49 | 3.192 | – | 2.04 | 26.16 | 1.66 | 2.086 | -581.7 | ↓ |
| 1054 | ↓ | ↓ | 7.49 | 3.247 | – | 1.44 | 26.17 | 1.72 | 2.162 | -586.3 | ↓ |
| | Sampled at 1056 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 /

Date: 5/20/13 BM - 241

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1134 | 241 | 8-12 | 7.03 | 0.830 | – | 5.80 | 28.21 | 0.46 | 0.605 | -259.9 | grey |
| 1136 | ↓ | ↓ | 7.32 | 0.924 | – | 4.01 | 27.45 | 0.45 | 0.598 | -429.3 | cloudy |
| 1138 | ↓ | ↓ | 7.33 | 0.920 | – | 2.77 | 27.50 | 0.45 | 0.598 | -484.2 | grey |
| | Sampled at 1140 | | | | | | | | | | |
| 1144 | 241 | 16-20 | 7.31 | 1.018 | – | 3.91 | 27.23 | 0.50 | 0.657 | -417.9 | cloudy |
| 1146 | ↓ | ↓ | 7.20 | 1.002 | – | 2.06 | 26.53 | 0.49 | 0.654 | -466.9 | cloudy |
| 1148 | ↓ | ↓ | 7.16 | 1.008 | – | 1.46 | 26.25 | 0.50 | 0.655 | -488.7 | cloudy |
| | Sampled at 1150 | | | | | | | | | | |
| | 241 | 21-25 | 7.36 | 0.918 | – | 6.34 | 25.61 | 0.45 | 0.600 | -575.3 | cloudy |
| 1240 1154 | ↓ | ↓ | 7.30 | 0.924 | – | 5.08 | 25.52 | 0.45 | 0.602 | -509.6 | cloudy |
| 1242 1156 | ↓ | ↓ | 7.26 | 0.929 | – | 3.33 | 25.41 | 0.46 | 0.605 | -503.1 | cloudy |
| 1249 1158 | Sampled at 1200 | | | | | | | | | | |
| | 241 | 26-30 | 7.43 | 1.003 | – | 1.26 | 27.13 | 0.49 | 0.651 | -400.9 | cloudy |
| 1250 | ↓ | ↓ | 7.40 | 1.000 | – | 0.80 | 26.32 | 0.49 | 0.649 | -414.8 | cloudy |
| 1252 | ↓ | ↓ | 7.38 | 0.998 | – | 0.61 | 26.22 | 0.49 | 0.648 | -399.1 | cloudy |
| 1254 | Sampled at 1256 | | | | | | | | | | |
| | 241 | 31-35 | 7.51 | 1.212 | – | 2.36 | 27.95 | 0.60 | 0.792 | -478.8 | cloudy |
| 1300 | ↓ | ↓ | 7.49 | 1.238 | – | 0.54 | 27.57 | 0.61 | 0.808 | -489.2 | cloudy |
| 1302 | ↓ | ↓ | 7.47 | 1.246 | – | 0.38 | 27.44 | 0.62 | 0.811 | -492.3 | cloudy |
| 1304 | Sampled at 1306 | | | | | | | | | | |
| 1310 | 241 | 36-40 | 7.41 | 1.110 | – | 3.06 | 28.60 | 0.56 | 0.736 | -486.9 | cloudy |
| 1312 1310 | ↓ | ↓ | 7.36 | 1.143 | – | 0.43 | 28.45 | 0.57 | 0.751 | -512.4 | cloudy |
| 1314 1312 | ↓ | ↓ | 7.37 | 1.164 | – | 0.20 | 28.58 | 0.58 | 0.761 | -520.0 | cloudy |
| 1314 | Sampled at 1316 | | | | | | | | | | |
| 1320 | 241 | 41-45 | 7.32 | 1.498 | – | 1.46 | 28.50 | 0.75 | 0.984 | -487.0 | cloudy |
| 1322 | ↓ | ↓ | 7.31 | 1.534 | – | 0.20 | 27.40 | 0.79 | 1.033 | -439.3 | cloudy |
| 1324 | ↓ | ↓ | 7.31 | 1.596 | – | 0.17 | 27.13 | 0.80 | 1.039 | -441.7 | cloudy |
| | Sampled at 1326 | | | | | | | | | | |
| | 241 | 56-60 | | | – | | | | | | |
| 1340 | ↓ | ↓ | 7.42 | 2.237 | – | 1.76 | 29.01 | 1.21 | 1.549 | -540.0 | cloudy |
| 1342 | ↓ | ↓ | 7.47 | 2.433 | – | 0.34 | 28.37 | 1.29 | 1.639 | -552.0 | cloudy |
| 1344 | Sampled at 1346 | | 7.47 | 2.917 | | 0.16 | 28.13 | 1.60 | 2.070 | -579.8 | cloudy |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 /

Date: 5/20/13 BQ - 242.0

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1434 | 242 | 8-12 | 7.22 | 1.282 | – | 1.82 | 28.41 | 0.63 | 0.826 | -364.1 | cloudy |
| 1436 | ↓ | ↓ | 7.16 | 1.260 | – | 1.01 | 28.44 | 0.62 | 0.813 | -3861 | ↓ |
| 1438 | ↓ | ↓ | 7.16 | 1.245 | – | 0.89 | 28.45 | 0.61 | 0.806 | -3966 | ↓ |
| | Sampled at 1440 | | | | | | | | | | |
| 1444 | 242 | 16-20 | 7.34 | 1.481 | – | 1.95 | 27.97 | 0.74 | 0.969 | -393.7 | grey |
| 1446 | ↓ | ↓ | 7.35 | 1.496 | – | 0.47 | 27.96 | 0.75 | 0.974 | -416.1 | ↓ |
| 1448 | ↓ | ↓ | 7.35 | 1.501 | – | 0.32 | 27.97 | 0.75 | 0.977 | -416.3 | ↓ |
| | Sampled at 1450 | | | | | | | | | | |
| 1454 | 242 | 21-25 | 7.04 | 1.161 | – | 7.02 | 28.57 | 0.57 | 0.756 | -317.5 | grey |
| 1456 | ↓ | ↓ | 6.99 | 1.163 | – | 0.57 | 28.21 | 0.57 | 0.754 | -313.5 | ↓ |
| 1458 | ↓ | ↓ | 6.96 | 1.154 | – | 0.29 | 28.03 | 0.57 | 0.747 | -385.7 | ↓ |
| | Sampled at 1500 | | | | | | | | | | |
| 1504 | 242 | 26-30 | 7.20 | 1.078 | – | 5.08 | 29.32 | 0.54 | 0.715 | -434.4 | grey |
| 1506 | ↓ | ↓ | 7.19 | 1.113 | – | 1.21 | 29.25 | 0.55 | 0.725 | -4763 | ↓ |
| 1508 | ↓ | ↓ | 7.19 | 1.121 | – | 0.47 | 29.33 | 0.55 | 0.726 | -4783.2 | ↓ |
| | Sampled at 1510 | | | | | | | | | | |
| 1535 | 242 | 31-35 | 7.09 | 0.738 | – | 4.77 | 29.97 | 0.29 | 0.353 | -378.0 | clouds |
| 1537 | ↓ | ↓ | 7.07 | 0.400 | – | 1.04 | 29.71 | 0.18 | 0.248 | -4608 | ↓ |
| 1539 | ↓ | ↓ | 7.07 | 0.377 | – | 0.61 | 29.68 | 0.18 | 0.244 | -4788 | ↓ |
| | Sampled at 1542 | | | | | | | | | | |
| 1546 | 242 | 36-40 | 7.20 | 1.383 | – | 4.11 | 28.85 | 0.72 | 0.947 | -419.7 | grey |
| 1548 | ↓ | ↓ | 7.13 | 1.501 | – | 1.47 | 28.86 | 0.75 | 0.975 | -4739 | ↓ |
| 1550 | ↓ | ↓ | 7.07 | 1.505 | – | 0.79 | 28.81 | 0.75 | 0.980 | -4794 | ↓ |
| | Sampled at 1552 | | | | | | | | | | |
| 1556 | 242 | 41-45 | 7.19 | 1.802 | – | 3.03 | 27.09 | 0.93 | 1.210 | -435.9 | grey |
| 1558 | ↓ | ↓ | 7.18 | 1.881 | – | 0.49 | 28.40 | 0.95 | 1.219 | -4809 | ↓ |
| 1600 | ↓ | ↓ | 7.18 | 1.869 | – | 0.23 | 28.68 | 0.94 | 1.211 | -4936 | ↓ |
| | Sampled at 1602 | | | | | | | | | | |
| 1624 | 242 | 56-60 | 7.08 | 3.142 | – | 1.57 | 24.89 | 1.69 | 2.163 | -382.4 | grey |
| 1626 | ↓ | ↓ | 7.18 | 3.599 | – | 0.82 | 27.59 | 1.92 | 2.398 | -433.5 | ↓ |
| 1628 | ↓ | ↓ | 7.20 | 3.755 | – | 0.30 | 27.33 | 2.01 | 2.489 | -433.4 | ↓ |
| | Sampled at 1630 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

# DPT GEOCHEMICAL DATA FORM

Date: 5/21/B242. – BQ

Project/Project Number: CRHE / FR1681 /

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1429 | 242 | 05-10 / 8-12 | 7.49 | 3.487 | – | 0.04 | 25.65 | 1.85 | 2.308 | -496.6 | grey |
| 1431 | ↓ | ↓ | 7.52 | 3.649 | – | 0.04 | 25.99 | 1.94 | 2.409 | -487.7 | cloudy |
| 1433 | ↓ | ↓ | 7.52 | 3.750 | – | 0.04 | 26.09 | 1.98 | 2.459 | -482.0 | ↓ |
| | Sampled at | 1435 | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | | | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | | | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | | | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | | | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 36-40 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | | | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 41-45 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | | | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | | | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM** AF - 243.0 Project/Project Number: CRHE / FR1681 /

Date: 5/21/13

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 809 | 243 | ~~10-20~~ ~~8-12~~ | 7.26 | 1.938 | – | 4.65 | 25.35 | 0.99 | 1.269 | -210.6 | grey |
| 811 | ↓ | ↓ | 7.25 | 1.969 | – | 2.12 | 25.53 | 1.00 | 1.287 | -261.9 | ↓ |
| 813 | ↓ | ↓ | 7.25 | 1.986 | – | 1.38 | 25.53 | 1.01 | 1.294 | -297.0 | ↓ |
| | Sampled at 815 | | | | | | | | | | |
| 820 | 243 | ~~21-35~~ ~~16-20~~ | 7.12 | 1.475 | – | 0.65 | 25.33 | 0.74 | 0.955 | -236.6 | grey |
| 822 | ↓ | ↓ | 7.12 | 1.466 | – | 0.50 | 25.29 | 0.73 | 0.951 | -240.2 | ↓ |
| 824 | ↓ | ↓ | 7.12 | 1.461 | – | 0.39 | 25.27 | 0.73 | 0.948 | -257.6 | ↓ |
| | Sampled at 826 | | | | | | | | | | |
| 830 | 243 | ~~26-30~~ ~~21-25~~ | 7.63 | 1.532 | – | 3.24 | 24.93 | 0.78 | 1.013 | -208.7 | grey |
| 832 | ↓ | ↓ | 7.58 | 1.595 | – | 0.27 | 25.15 | 0.80 | 1.042 | -253.1 | ↓ |
| 834 | ↓ | ↓ | 7.60 | 1.617 | – | 0.21 | 25.16 | 0.82 | 1.062 | -240.0 | ↓ |
| | Sampled at 836 | | | | | | | | | | |
| 840 | 243 | ~~31-35~~ ~~26-30~~ | 7.65 | 1.377 | – | 4.87 | 26.04 | 0.78 | 1.013 | -230.6 | grey |
| 842 | ↓ | ↓ | 7.30 | 1.570 | – | 2.17 | 26.14 | 0.79 | 1.025 | -320.3 | ↓ |
| 844 | ↓ | ↓ | 7.30 | 1.581 | – | 1.35 | 26.16 | 0.79 | 1.029 | -375.1 | ↓ |
| | Sampled at 846 | | | | | | | | | | |
| 850 | 243 | ~~36-40~~ ~~31-35~~ | 7.42 | 1.605 | – | 0.30 | 26.51 | 0.84 | 1.099 | -520.5 | grey |
| 852 | ↓ | ↓ | 7.35 | 1.723 | – | 0.32 | 26.32 | 0.88 | 1.131 | -515.3 | ↓ |
| 854 | ↓ | ↓ | 7.32 | 1.746 | – | 0.33 | 26.03 | 0.88 | 1.138 | -509.8 | ↓ |
| | Sampled at 856 | | | | | | | | | | |
| 900 | 243 | ~~41-45~~ ~~36-40~~ | 7.55 | 1.667 | – | 1.92 | 26.26 | 0.87 | 1.132 | -441.3 | grey |
| 902 | ↓ | ↓ | 7.52 | 1.608 | – | 0.45 | 26.13 | 0.93 | 1.208 | -458.3 | ↓ |
| 904 | ↓ | ↓ | 7.51 | 1.878 | – | 0.23 | 26.50 | 0.95 | 1.229 | -467.3 | ↓ |
| | Sampled at 906 | | | | | | | | | | |
| 910 | 243 | ~~46-50~~ ~~41-45~~ | 7.67 | 2.157 | – | 5.30 | 27.17 | 1.11 | 1.421 | -250.3 | grey |
| 912 | ↓ | ↓ | 7.43 | 2.217 | – | 2.04 | 26.93 | 1.13 | 1.448 | -323.9 | ↓ |
| 914 | ↓ | ↓ | 7.40 | 2.235 | – | 1.18 | 26.92 | 1.14 | 1.458 | -373.5 | ↓ |
| | Sampled at 916 | | | | | | | | | | |
| 920 | 243 | 56-60 | 7.22 | 3.295 | – | 4.74 | 26.21 | 1.80 | 2.263 | -171.2 | grey |
| 922 | ↓ | ↓ | 7.58 | 3.787 | – | 2.19 | 25.76 | 1.92 | 2.394 | -182.9 | ↓ |
| 924 | ↓ | ↓ | 7.51 | 3.721 | – | 1.37 | 25.47 | 1.97 | 2.436 | -184.9 | ↓ |
| | Sampled at 926 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 /

Date: 5/21/13 BU ~ 244.0

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1209 | 244 | ~~11-20~~ | 7.43 | 1.857 | – | 4.95 | 25.95 | 0.95 | 1.229 | -224.6 | grey |
| 1211 | ↓ | ↓ | 7.37 | 1.909 | – | 2.45 | 26.03 | 0.97 | 1.250 | -243.5 | ↓ |
| 1213 | ↓ | ↓ | 7.35 | 1.929 | – | 1.80 | 26.00 | 0.98 | 1.257 | -245.6 | ↓ |
| | Sampled at 1215 | | | | | | | | | | |
| 1220 | 244 | ~~16-20~~ 21-25 | 7.42 | 1.848 | – | 3.71 | 25.35 | 0.94 | 1.207 | -185.5 | grey cloudy |
| 1222 | ↓ | ↓ | 7.37 | 1.877 | – | 1.77 | 25.52 | 0.96 | 1.232 | -226.9 | ↓ |
| 1224 | ↓ | ↓ | 7.37 | 1.908 | – | 1.07 | 25.50 | 0.97 | 1.248 | -256.5 | ↓ |
| | Sampled at 1226 | | | | | | | | | | |
| 1230 | 244 | ~~21-25~~ 26-30 | 7.32 | 1.664 | – | 2.68 | 25.62 | 0.84 | 1.094 | -153.6 | cloudy |
| 1232 | ↓ | ↓ | 7.27 | 1.698 | – | 1.72 | 25.55 | 0.86 | 1.111 | -156.3 | ↓ |
| 1234 | ↓ | ↓ | 7.26 | 1.717 | – | 1.22 | 25.47 | 0.87 | 1.118 | -157.1 | ↓ |
| | Sampled at 1236 | | | | | | | | | | |
| 1244 | 244 | ~~26-30~~ 31-35 | 5.63 | 1.222 | – | 3.87 | 25.78 | 0.61 | 0.804 | -243.9 | cloudy |
| 1246 | ↓ | ↓ | 7.26 | 1.249 | – | 2.03 | 25.88 | 0.62 | 0.819 | -314.6 | ↓ |
| 1248 | ↓ | ↓ | 7.25 | 1.270 | – | 1.43 | 25.92 | 0.63 | 0.830 | -320.4 | ↓ |
| | Sampled at 1250 | | | | | | | | | | |
| 1250 | 244 | ~~31-35~~ 36-40 | 7.55 | 1.440 | – | 4.27 | 26.61 | 0.74 | 0.972 | -333.6 | grey |
| 1258 | ↓ | ↓ | 7.40 | 1.506 | – | 2.00 | 26.54 | 0.75 | 0.983 | -413.6 | ↓ |
| 1300 | ↓ | ↓ | 7.40 | 1.508 | – | 1.30 | 26.63 | 0.75 | 0.975 | -433.2 | ↓ |
| | Sampled at 1306 | | | | | | | | | | |
| 1306 | 244 | ~~36-40~~ 41-45 | 7.45 | 1.775 | – | 4.20 | 25.89 | 0.92 | 1.198 | -293.9 | cloudy |
| 1308 | ↓ | ↓ | 7.41 | 1.879 | – | 2.11 | 26.07 | 0.96 | 1.238 | -357.9 | ↓ |
| 1310 | ↓ | ↓ | 7.41 | 1.921 | – | 1.55 | 26.11 | 0.98 | 1.256 | -384.1 | ↓ |
| | Sampled at 1312 | | | | | | | | | | |
| 1320 | 244 | ~~41-45~~ 46-50 | 7.62 | 1.296 | – | 2.76 | 24.80 | 0.79 | 1.073 | -295.1 | cloudy |
| 1322 | ↓ | ↓ | 7.60 | 1.783 | – | 1.69 | 25.39 | 0.93 | 1.201 | -398.1 | ↓ |
| 1324 | ↓ | ↓ | 7.60 | 1.894 | – | 1.45 | 25.51 | 0.97 | 1.250 | -429.1 | ↓ |
| | Sampled at 1326 | | | | | | | | | | |
| 1330 | 244 | ~~46-50~~ 51-55 | 7.66 | 1.834 | – | 1.03 | 24.90 | 0.81 | 1.039 | -532.9 | grey |
| 1332 | ↓ | ↓ | 7.66 | 1.578 | – | 0.81 | 25.00 | 0.79 | 1.027 | -540.2 | ↓ |
| 1334 | ↓ | ↓ | 7.67 | 1.599 | – | 0.910 | 25.14 | 0.82 | 1.040 | -541.3 | ↓ |
| | Sampled at 1336 | | | | | | | | | | |

Notes:

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 /

Date: 5/23/13 244

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 832 | 244 | ~~6.12~~ 6-20 | 7.58 | 1.101 | – | 9.7 | 26.68 | 0.56 | 0.743 | -154.0 | grey |
| 834 | ↓ | ↓ | 7.50 | 1.164 | – | 3.23 | 26.58 | 1.52 | 1.903 | -236.8 | ↓ |
| 836 | ↓ | ↓ | 7.58 | 2.928 | – | 0.69 | 26.60 | 1.33 | 1.653 | -247.5 | ↓ |
| | Sampled at 840 | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 36-40 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 41-45 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 /

Date: 5/21/13

BS-245.0

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1509 | 245 | ~~16-20~~ ~~8-12~~ | 7.11 | 1.306 | – | 3.53 | 26.69 | 0.65 | 0.845 | -183.1 | grey |
| 1511 | ↓ | ↓ | 7.08 | 1.295 | – | 1.79 | 26.70 | 0.64 | 0.841 | -212.4 | ↓ |
| 1513 | ↓ | ↓ | 7.07 | 1.292 | – | 1.57 | 26.70 | 0.64 | 0.839 | -236.1 | ↓ |
| | Sampled at 1515 | | | | | | | | | | |
| 1920 | 245 | ~~21-25~~ ~~16-20~~ | 7.17 | 1.307 | – | 1.08 | 26.71 | 0.65 | 0.851 | -125.9 | grey |
| 1522 | ↓ | ↓ | 7.06 | 1.308 | – | 0.47 | 26.48 | 0.65 | 0.848 | -137.2 | cloudy |
| 1524 | ↓ | ↓ | 7.02 | 1.303 | – | 0.40 | 26.29 | 0.65 | 0.845 | -144.9 | ↓ |
| 5/22/13 | Sampled at 1526 | | | | | | | | | | |
| 724 | 245 | ~~26-30~~ ~~21-25~~ | 7.68 | 0.891 | – | 3.05 | 23.68 | 0.48 | 0.647 | -87.1 | cloudy |
| 726 | ↓ | ↓ | 7.33 | 1.043 | – | 0.89 | 24.20 | 0.53 | 0.695 | -116.7 | ↓ |
| 728 | ↓ | ↓ | 7.28 | 1.087 | – | 0.63 | 24.43 | 0.54 | 0.718 | -123.1 | ↓ |
| | Sampled at 730 | | | | | | | | | | |
| 734 | 245 | ~~31-35~~ ~~26-30~~ | 7.42 | 1.138 | – | 1.18 | 23.43 | 0.56 | 0.723 | -470.2 | cloudy |
| 736 | ↓ | ↓ | 7.35 | 1.124 | – | 0.83 | 24.50 | 0.56 | 0.723 | -436.1 | ↓ |
| 738 | ↓ | ↓ | 7.25 | 1.126 | – | 0.97 | 24.86 | 0.56 | 0.728 | -400.9 | ↓ |
| | Sampled at 740 | | | | | | | | | | |
| 750 ~~750~~ | 245 | ~~36-40~~ ~~31-35~~ | 7.51 | 1.679 | – | 5.04 | 24.07 | 0.86 | ~~0.723~~ 1.023 | ~~-190.2~~ | cloudy |
| 752 ~~752~~ | ↓ | ↓ | 7.15 | 1.637 | – | 0.64 | 24.43 | 0.86 | ~~0.728~~ 1.041 | ~~-170.2~~ | ↓ |
| 754 ~~754~~ | ↓ | ↓ | 7.13 | 1.595 | – | 0.35 | 24.63 | 0.85 | ~~0.728~~ 1.026 | -178.8 | ↓ |
| | Sampled at 756 | | | | | | | | | | |
| 802 | 245 | ~~41-45~~ ~~36-40~~ | 7.38 | 2.249 | – | 2.81 | 24.16 | 1.07 | 1.440 | -213.5 | cloudy |
| 804 | ↓ | ↓ | 7.19 | 2.265 | – | 0.18 | 24.79 | 1.17 | 1.484 | -222.5 | ↓ |
| 806 | ↓ | ↓ | 7.16 | 2.294 | – | 0.10 | 24.98 | 1.18 | 1.479 | -232.0 | ↓ |
| | Sampled at 810 | | | | | | | | | | |
| 814 | 245 | ~~46-50~~ ~~41-45~~ | 7.21 | 2.125 | – | 2.95 | 24.34 | 1.14 | 1.461 | -179.6 | grey |
| 816 | ↓ | ↓ | 7.15 | 2.309 | – | 0.26 | 24.84 | 1.20 | 1.530 | -183.6 | ↓ |
| 820 | ↓ | ↓ | 7.14 | 2.388 | – | 0.16 | 24.97 | 1.24 | 1.579 | -169.4 | ↓ |
| | Sampled at 824 | | | | | | | | | | |
| 828 | 245 | 56-60 | 7.43 | 3.461 | – | 4.32 | 23.99 | 1.83 | 2.263 | -152.0 | grey |
| 830 | ↓ | ↓ | 7.33 | 3.534 | – | 0.32 | 24.77 | 1.88 | 2.332 | -167.1 | ↓ |
| 832 | ↓ | ↓ | 7.32 | 3.619 | – | 0.16 | 24.88 | 1.91 | 2.369 | -172.5 | ↓ |
| | Sampled at 834 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 /

Date: 5/22/18

BD-246.0

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 930 | 246 | 8-12 | 6.72 | 0.906 | – | 0.66 | 25.32 | 0.44 | 0.582 | -105.7 | brown |
| 932 | ↓ | ↓ | 8.67 | 0.889 | – | 0.17 | 24.99 | 0.43 | 0.575 | -113.3 | ↓ |
| 934 | ↓ | ↓ | 6.65 | 0.881 | – | 0.11 | 24.73 | 0.43 | 0.571 | -115.5 | ↓ |
| | Sampled at 936 | | | | | | | | | | |
| 940 | 246 | 16-20 | 7.13 | 0.967 | – | 2.62 | 26.06 | 0.48 | 0.633 | -114.8 | grey |
| 942 | ↓ | ↓ | 6.96 | 0.979 | – | 0.46 | 25.73 | 0.48 | 0.638 | -134.3 | ↓ |
| 944 | ↓ | ↓ | 6.93 | 0.984 | – | 0.15 | 25.71 | 0.48 | 0.640 | -139.4 | ↓ |
| | Sampled at 946 | | | | | | | | | | |
| 952 | 246 | 21-25 | 7.27 | 0.949 | – | 7.05 | 26.31 | 0.47 | 0.620 | -90.6 | grey |
| 954 | ↓ | ↓ | 7.01 | 0.957 | – | 2.76 | 25.85 | 0.47 | 0.623 | -99.3 | ↓ |
| 956 | ↓ | ↓ | 6.96 | 0.959 | – | 0.60 | 25.57 | 0.47 | 0.623 | -104.0 | ↓ |
| | Sampled at 958 | | | | | | | | | | |
| 1004 | 246 | 26-30 | 7.17 | 1.068 | – | 4.79 | 26.20 | 0.53 | 0.700 | -114.2 | grey |
| 1006 | ↓ | ↓ | 7.09 | 1.080 | – | 0.67 | 25.55 | 0.53 | 0.702 | -95.4 | ↓ |
| 1008 | ↓ | ↓ | 7.04 | 1.014 | – | 0.23 | 25.38 | 0.53 | 0.698 | -95.0 | ↓ |
| | Sampled at 1010 | | | | | | | | | | |
| 1014 | 246 | 31-35 | 7.14 | 1.529 | – | 1.47 | 25.98 | 0.78 | 1.015 | -127.0 | grey |
| 1016 | ↓ | ↓ | 7.04 | 1.584 | – | 0.28 | 25.67 | 0.80 | 1.043 | -117.4 | ↓ |
| 1018 | ↓ | ↓ | 6.96 | 1.608 | – | 0.14 | 25.41 | 0.81 | 1.043 | -109.2 | ↓ |
| | Sampled at 1020 | | | | | | | | | | |
| 1024 | 246 | 36-40 | 7.22 | 1.811 | – | 3.24 | 26.76 | 0.95 | 1.258 | -159.4 | grey |
| 1026 | ↓ | ↓ | 7.11 | 1.968 | – | 0.36 | 26.18 | 1.01 | 1.303 | -146.5 | ↓ |
| 1028 | ↓ | ↓ | 7.04 | 2.018 | – | 0.19 | 25.87 | 1.393 | 1.370 | -138.6 | ↓ |
| | Sampled at 1030 | | | | | | | | | | |
| 1034 | 246 | 41-45 | 7.33 | 1.875 | – | 3.70 | 26.51 | 0.97 | 1.247 | -170.5 | grey |
| 1036 | ↓ | ↓ | 7.33 | 1.935 | – | 0.30 | 26.41 | 0.98 | 1.258 | -188.5 | ↓ |
| 1038 | ↓ | ↓ | 7.23 | 1.934 | – | 0.16 | 26.49 | 0.98 | 1.258 | -198.2 | ↓ |
| | Sampled at 1040 | | | | | | | | | | |
| 1044 | 246 | 56-60 | 8.00 | 4.100 | – | 1.47 | 26.55 | 2.19 | 2.690 | -195.9 | grey |
| 1046 | ↓ | ↓ | 7.41 | 4.124 | – | 0.24 | 26.58 | 2.17 | 2.674 | -204.9 | ↓ |
| 1048 | ↓ | ↓ | 7.42 | 4.110 | – | 0.13 | 26.76 | 2.16 | 2.663 | -210.3 | ↓ |
| | Sampled at 1050 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681 /

Date: 5/22/13 CC-247.0

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1110 | 247 | 8-12 | 7.19 | 0.986 | – | 0.14 | 27.71 | 0.48 | 0.641 | -178.6 | grey |
| 1112 | ↓ | ↓ | 7.16 | 0.985 | – | 0.17 | 27.70 | 0.48 | 0.640 | -184.6 | ↓ |
| 1114 | ↓ | ↓ | 7.16 | 0.983 | – | 0.29 | 27.68 | 0.48 | 0.637 | -189.6 | ↓ |
| | Sampled at 1116 | | | | | | | | | | |
| 1120 | 247 | 16-20 | 7.16 | 1.159 | – | 0.14 | 27.13 | 0.58 | 0.770 | -135.7 | grey |
| 1122 | ↓ | ↓ | 7.10 | 1.200 | – | 0.38 | 26.85 | 0.60 | 0.787 | -150.6 | ↓ |
| 1124 | ↓ | ↓ | 7.11 | 1.215 | – | 0.14 | 26.66 | 0.60 | 0.792 | -162.6 | ↓ |
| | Sampled at 1126 | | | | | | | | | | |
| 1130 | 247 | 21-25 | 6.91 | 1.294 | – | 4.33 | 27.20 | 0.64 | 0.844 | -80.7 | grey |
| 1132 | ↓ | ↓ | 6.76 | 1.302 | – | 0.82 | 26.84 | 0.65 | 0.848 | -79.8 | ↓ |
| 1134 | ↓ | ↓ | 6.71 | 1.306 | – | 0.24 | 26.53 | 0.65 | 0.849 | -77.6 | ↓ |
| | Sampled at 1136 | | | | | | | | | | |
| 1140 | 247 | 26-30 | 6.99 | 1.338 | – | 1.01 | 26.78 | 0.67 | 0.876 | -117.8 | grey |
| 1142 | ↓ | ↓ | 6.99 | 1.352 | – | 1.50 | 26.76 | 0.67 | 0.881 | -118.0 | ↓ |
| 1144 | ↓ | ↓ | 6.99 | 1.356 | – | 1.74 | 26.75 | 0.67 | 0.881 | -119.2 | ↓ |
| | Sampled at 1146 | | | | | | | | | | |
| 1150 | 247 | 31-35 | 7.19 | 1.430 | – | 6.36 | 26.28 | 0.72 | 0.936 | -120.1 | grey |
| 1152 | ↓ | ↓ | 6.99 | 1.444 | – | 1.32 | 26.25 | 0.72 | 0.940 | -123.8 | ↓ |
| 1154 | ↓ | ↓ | 6.95 | 1.449 | – | 0.80 | 26.20 | 0.72 | 0.942 | -125.3 | ↓ |
| | Sampled at 1156 | | | | | | | | | | |
| 1200 | 247 | 36-40 | 7.27 | 1.532 | – | 0.55 | 25.73 | 0.80 | 1.064 | -160.1 | grey |
| 1202 | ↓ | ↓ | 7.00 | 1.707 | – | 0.32 | 25.80 | 0.87 | 1.132 | -150.4 | ↓ |
| 1204 | ↓ | ↓ | 6.93 | 1.762 | – | 0.18 | 25.66 | 0.90 | 1.159 | -139.4 | ↓ |
| | Sampled at 1206 | | | | | | | | | | |
| 1210 | 247 | 41-45 | 7.27 | 1.825 | – | 1.68 | 25.40 | 0.93 | 1.205 | -120.4 | grey |
| 1212 | ↓ | ↓ | 7.07 | 1.917 | – | 0.52 | 25.44 | 0.99 | 1.270 | -120.4 | ↓ |
| 1214 | ↓ | ↓ | 7.02 | 1.971 | – | 0.23 | 25.27 | 1.01 | 1.298 | -111.0 | ↓ |
| | Sampled at 1216 | | | | | | | | | | |
| 1220 | 247 | 56-60 | 7.86 | 0.358 | – | 5.32 | 25.76 | 1.04 | 2.589 | -154.8 | grey |
| 1222 | ↓ | ↓ | 7.37 | 4.078 | – | 1.23 | 25.98 | 2.17 | 2.666 | -188.2 | ↓ |
| 1224 | ↓ | ↓ | 7.38 | 4.125 | – | 0.38 | 25.97 | 2.19 | 2.696 | -194.5 | ↓ |
| | Sampled at 1226 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / CC.-247

Date: 3/23/13

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1312 | 247 | 6~~8~~-10 ~~8-12~~ | 7.20 | 6.063 | – | 0.25 | 25.99 | 3.29 | 3.940 | -147.3 | grey |
| 1314 | ↓ | ↓ | 7.20 | 6.061 | – | 0.25 | 25.94 | 3.29 | 3.940 | -148.7 | " |
| 1316 | ↓ | ↓ | 7.20 | 6.061 | – | 0.26 | 25.88 | 3.29 | 3.939 | -149.2 | " |
| | Sampled at 1318 | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 36-40 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 41-45 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 /

Date: 5/22/13 BK-248

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 210 | 248 | 8-12 | 6.85 | 0.825 | – | 1.25 | 26.95 | 0.40 | 0.528 | -84.6 | grey |
| 212 | ↓ | ↓ | 6.80 | 0.801 | – | 0.90 | 26.73 | 0.39 | 0.519 | -86.1 | ↓ |
| 214 | ↓ | ↓ | 6.77 | 0.777 | – | 0.76 | 26.53 | 0.38 | 0.502 | -86.4 | ↓ |
| | Sampled at 216 | | | | | | | | | | |
| 222 | 248 | 16-20 | 7.05 | 1.138 | – | 1.52 | 27.45 | 0.56 | 0.740 | -149.1 | grey |
| 224 | ↓ | ↓ | 6.92 | 1.144 | – | 0.44 | 26.27 | 0.57 | 0.743 | -143.1 | ↓ |
| 226 | ↓ | ↓ | 6.82 | 1.141 | – | 0.31 | 25.49 | 0.57 | 0.744 | -137.1 | ↓ |
| | Sampled at 228 | | | | | | | | | | |
| 233 | 248 | 21-25 | 6.91 | 1.157 | – | 0.30 | 26.69 | 0.57 | 0.751 | -111.2 | grey |
| 235 | ↓ | ↓ | 6.89 | 1.155 | – | 0.26 | 26.40 | 0.57 | 0.750 | -108.7 | ↓ |
| 237 | ↓ | ↓ | 6.87 | 1.154 | – | 0.25 | 26.20 | 0.57 | 0.752 | -108.1 | ↓ |
| | Sampled at 239 | | | | | | | | | | |
| 244 | 248 | 26-30 | 7.29 | 1.409 | – | 4.14 | 27.93 | 0.70 | 0.917 | -101.1 | grey |
| 246 | ↓ | ↓ | 7.03 | 1.418 | – | 0.62 | 26.75 | 0.71 | 0.928 | -93.5 | ↓ |
| 248 | ↓ | ↓ | 6.96 | 1.431 | – | 0.25 | 26.44 | 0.72 | 0.932 | -89.6 | ↓ |
| | Sampled at 250 | | | | | | | | | | |
| 254 | 248 | 31-35 | 7.16 | 1.808 | – | 4.66 | 28.84 | 0.91 | 1.202 | -152.6 | grey |
| 256 | ↓ | ↓ | 7.10 | 1.881 | – | 0.89 | 28.08 | 0.94 | 1.216 | -159.4 | ↓ |
| 258 | ↓ | ↓ | 7.08 | 1.876 | – | 0.39 | 27.65 | 0.95 | 1.224 | -164.5 | ↓ |
| | Sampled at 300 | | | | | | | | | | |
| 1504 | 248 | 36-40 | 7.25 | 1.752 | – | 2.14 | 28.69 | 0.91 | 1.177 | -181.7 | grey |
| 1506 | ↓ | ↓ | 7.18 | 1.828 | – | 0.40 | 28.68 | 0.92 | 1.194 | -195.2 | ↓ |
| 1508 | ↓ | ↓ | 7.18 | 1.838 | – | 0.23 | 28.70 | 0.93 | 1.196 | -203.5 | ↓ |
| | Sampled at 1510 | | | | | | | | | | |
| 1514 | 248 | 41-45 | 7.40 | 1.670 | – | 2.76 | 28.25 | 0.85 | 1.104 | -198.4 | grey |
| 1516 | ↓ | ↓ | 7.35 | 1.711 | – | 0.44 | 28.25 | 0.86 | 1.120 | -219.4 | grey |
| 1518 | ↓ | ↓ | 7.37 | 1.728 | – | 0.19 | 28.27 | 0.87 | 1.126 | -233.2 | ↓ |
| | Sampled at 1520 | | | | | | | | | | |
| 1526 | 248 | 56-60 | 7.42 | 3.499 | – | 0.25 | 28.30 | 1.87 | 2.352 | -235.7 | grey |
| 1528 | ↓ | ↓ | 7.47 | 3.605 | – | 0.09 | 28.13 | 1.89 | 2.349 | -249.2 | ↓ |
| 1530 | ↓ | ↓ | 7.48 | 3.621 | – | 0.07 | 28.16 | 1.89 | 2.353 | -261.4 | ↓ |
| | Sampled at 1532 | | | | | | | | | | |

Notes:

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Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 249 – BN

Date: 5/23/13

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1032 | 249 | 8-12 | 6.78 | 0.712 | – | 2.60 | 24.80 | 0.35 | 0.463 | -75.2 | grey |
| 1034 | ↓ | ↓ | 6.76 | 0.712 | – | 2.39 | 24.92 | 0.35 | 0.463 | -76.0 | ↓ |
| 1036 | ↓ | ↓ | 6.76 | 0.712 | – | 2.29 | 25.03 | 0.35 | 0.463 | -77.0 | ↓ |
| | Sampled at 1038 | | | | | | | | | | |
| 1042 | 249 | 16-20 | 7.04 | 1.164 | – | 0.93 | 27.30 | 0.57 | 0.756 | -163.5 | grey |
| 1044 | ↓ | ↓ | 7.04 | 1.163 | – | 0.87 | 27.19 | 0.57 | 0.755 | -167.6 | ↓ |
| 1046 | ↓ | ↓ | 7.04 | 1.161 | – | 0.69 | 27.14 | 0.57 | 0.755 | -169.0 | ↓ |
| | Sampled at 1048 | | | | | | | | | | |
| 1054 | 249 | 21-25 | 7.27 | 1.371 | – | 0.43 | 27.05 | 0.68 | 0.890 | -131.3 | grey |
| 1056 | ↓ | ↓ | 7.04 | 1.377 | – | 1.37 | 27.00 | 0.69 | 0.901 | -139.3 | ↓ |
| 1058 | ↓ | ↓ | 6.99 | 1.395 | – | 0.69 | 26.87 | 0.70 | 0912 | -141.2 | ↓ |
| | Sampled at 1100 | | | | | | | | | | |
| 1102 | 249 | 26-30 | 7.53 | 1.312 | – | 2.84 | 29.89 | 0.65 | 0.855 | -198.0 | grey |
| 1104 | ↓ | ↓ | 7.53 | 1.317 | – | 0.86 | 29.94 | 0.65 | 0.856 | -199.7 | ↓ |
| 1106 | ↓ | ↓ | 7.55 | 1.318 | – | 0.55 | 29.95 | 0.65 | 0.858 | -204.1 | ↓ |
| | Sampled at 1108 | | | | | | | | | | |
| 1118 | 249 | 31-35 | 7.16 | 1.028 | – | 9.16 | 29.54 | 0.92 | 1.201 | -194.1 | grey |
| 1120 | ↓ | ↓ | 7.11 | 1.868 | – | 1.76 | 28.66 | 0.95 | 1.223 | -197.0 | ↓ |
| 1122 | ↓ | ↓ | 7.10 | 1.881 | – | 0.47 | 27.79 | 0.94 | 1.213 | -186.9 | ↓ |
| | Sampled at 1124 | | | | | | | | | | |
| 1130 | 249 | 36-40 | 7.13 | 1.889 | – | 0.82 | 28.33 | 0.97 | 1.248 | -179.0 | grey |
| 1132 | ↓ | ↓ | 7.09 | 1.939 | – | 0.24 | 28.19 | 0.99 | 1.271 | -175.2 | ↓ |
| 1134 | ↓ | ↓ | 7.06 | 1.963 | – | 0.18 | 28.09 | 1.00 | 1.285 | -170.3 | ↓ |
| | Sampled at 1136 | | | | | | | | | | |
| 1142 | 249 | 41-45 | 7.11 | 1.894 | – | 0.24 | 27.41 | 0.96 | 1.239 | -161.7 | grey |
| 1144 | ↓ | ↓ | 7.05 | 1.909 | – | 0.17 | 26.41 | 0.97 | 1.242 | -143.4 | ↓ |
| 1146 | ↓ | ↓ | 6.99 | 1.912 | – | 0.16 | 25.99 | 0.97 | 1.243 | -131.7 | ↓ |
| | Sampled at 1148 | | | | | | | | | | |
| 1158 | 249 | 56-60 | 7.34 | 4.401 | – | 1.58 | 28.69 | 2.39 | 2.965 | -193.5 | a. |
| 1200 | ↓ | ↓ | 7.36 | 4.484 | – | 0.23 | 28.55 | 2.50 | 3.071 | -2?? | |
| 1202 | ↓ | ↓ | 7.38 | 4.790 | – | 0.12 | 28.46 | 2.57 | 3.156 | | |
| | Sampled at 1204 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / I-250

Date: 5/23/13

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 250 | 8-12 | 7.30 | 0.958 | – | 9.54 | 33.89 | 0.40 | 0.526 | -134.0 | grey |
| 1346 | ↓ | ↓ | 7.01 | 0.781 | – | 2.78 | 33.01 | 0.37 | 0.504 | -137.5 | ↓ |
| 1348 | ↓ | ↓ | 6.96 | 0.773 | – | 2.05 | 32.42 | 0.37 | 0.501 | -139.2 | ↓ |
| 1350 | Sampled at 1352 | | | | | | | | | | |
| | 250 | 16-20 | 6.82 | 0.989 | – | 0.85 | 31.05 | 0.48 | 0.627 | -157.8 | grey |
| 1354 | ↓ | ↓ | 6.80 | 0.973 | – | 0.76 | 30.57 | 0.47 | 0.617 | -160.0 | ↓ |
| 1356 | ↓ | ↓ | 6.79 | 0.958 | – | 0.72 | 30.16 | 0.46 | 0.607 | -161.9 | ↓ |
| 1358 | Sampled at 200 | | | | | | | | | | |
| 1402 | 250 | 21-25 | 7.05 | 1.033 | – | 0.12 | 31.68 | 0.51 | 0.677 | -169.6 | grey |
| 1404 | ↓ | ↓ | 7.03 | 1.046 | – | 0.12 | 31.78 | 0.51 | 0.682 | -179.6 | ↓ |
| 1406 | ↓ | ↓ | 7.02 | 1.052 | – | 0.13 | 31.80 | 0.51 | 0.684 | -176.2 | ↓ |
| | Sampled at 1408 | | | | | | | | | | |
| 1412 | 250 | 26-30 | 6.98 | 1.016 | – | 0.86 | 32.71 | 0.50 | 0.662 | -185 | grey |
| 1414 | ↓ | ↓ | 6.86 | 1.017 | – | 0.26 | 31.52 | 0.49 | 0.658 | -113.5 | ↓ |
| 1416 | ↓ | ↓ | 6.80 | 1.013 | – | 0.20 | 30.24 | 0.49 | 0.656 | -110.8 | ↓ |
| | Sampled at 1418 | | | | | | | | | | |
| 1424 | 250 | 31-35 | 7.45 | 1.107 | – | 2.55 | 32.33 | 0.55 | 0.735 | -149.6 | grey |
| 1426 | ↓ | ↓ | 7.07 | 1.140 | – | 0.36 | 32.58 | 0.56 | 0.746 | -165.4 | ↓ |
| 1428 | ↓ | ↓ | 7.00 | 1.151 | – | 0.17 | 32.41 | 0.56 | 0.750 | -169.2 | ↓ |
| | Sampled at 1430 | | | | | | | | | | |
| 1436 | 250 | 36-40 | 7.38 | 1.025 | – | 2.08 | 32.38 | 0.51 | 0.682 | -171.0 | grey |
| 1440 | ↓ | ↓ | 7.26 | 1.054 | – | 0.33 | 31.82 | 0.52 | 0.686 | -185.0 | ↓ |
| 1442 | ↓ | ↓ | 7.26 | 1.056 | – | 0.19 | 31.65 | 0.52 | 0.687 | -190.7 | ↓ |
| | Sampled at 1446 | | | | | | | | | | |
| 1450 | 250 | 41-45 | 7.14 | 2.160 | – | 0.24 | 30.53 | 1.11 | 1.421 | -158.6 | grey |
| 1452 | ↓ | ↓ | 7.09 | 2.193 | – | 0.15 | 29.86 | 1.11 | 1.424 | -152.7 | ↓ |
| 1454 | ↓ | ↓ | 7.06 | 2.192 | – | 0.14 | 29.69 | 1.11 | 1.428 | -149.0 | ↓ |
| | Sampled at 1456 | | | | | | | | | | |
| 1506 | 250 | 56-60 | 7.34 | 3.739 | – | 0.39 | 31.84 | 1.95 | 2.435 | -214.4 | grey |
| 1508 | ↓ | ↓ | 7.36 | 3.741 | – | 0.26 | 31.87 | 1.94 | 2.427 | -219.3 | ↓ |
| 1510 | ↓ | ↓ | 7.37 | 3.744 | – | 0.19 | 32.03 | 1.96 | 2.454 | -221.9 | ↓ |
| | Sampled at 1512 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

east of DPT0135

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 /

Date: 5/23/13

CA-251

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 345 | 251 | 8-12 | 2.24 | 0.961 | – | 1.37 | 30.02 | 0.46 | 0.603 | -98.8 | grey |
| 347 | ↓ | ↓ | 6.64 | 0.808 | – | 0.32 | 28.86 | 0.41 | 0.542 | -99.6 | ↓ |
| 349 | ↓ | ↓ | 6.53 | 0.810 | – | 0.20 | 28.23 | 0.38 | 0.507 | -98.6 | ↓ |
| | Sampled at 351 | | | | | | | | | | |
| 1554 | 251 | 16-20 | 6.87 | 1.229 | – | 0.56 | 30.48 | 0.60 | 0.798 | -128.4 | grey |
| 1556 | ↓ | ↓ | 6.81 | 1.227 | – | 0.22 | 29.90 | 0.60 | 0.796 | -125.0 | ↓ |
| 1558 | ↓ | ↓ | 6.79 | 1.225 | – | 0.14 | 29.27 | 0.60 | 0.796 | -121.5 | ↓ |
| | Sampled at 1600 | | | | | | | | | | |
| 1604 | 251 | 21-25 | 6.86 | 1.229 | – | 2.48 | 30.14 | 0.59 | 0.780 | -135.2 | grey |
| 1606 | ↓ | ↓ | 6.86 | 1.177 | – | 0.45 | 29.95 | 0.58 | 0.761 | -133.1 | ↓ |
| 1608 | ↓ | ↓ | 6.85 | 1.165 | – | 0.21 | 29.50 | 0.57 | 0.752 | -133.8 | ↓ |
| | Sampled at 1610 | | | | | | | | | | |
| 1614 | 251 | 26-30 | 7.26 | 1.254 | – | 1.09 | 31.08 | 0.62 | 0.826 | -131.3 | grey |
| 1616 | ↓ | ↓ | 7.09 | 1.282 | – | 0.23 | 28.93 | 0.64 | 0.835 | -117.7 | ↓ |
| 1618 | ↓ | ↓ | 6.96 | 1.283 | – | 0.16 | 28.10 | 0.63 | 0.832 | -109.2 | ↓ |
| | Sampled at 1620 | | | | | | | | | | |
| 1622 | 251 | 31-35 | 7.38 | 1.140 | – | 1.35 | 30.22 | 0.57 | 0.754 | -166.2 | grey |
| 1624 | ↓ | ↓ | 7.29 | 1.171 | – | 0.34 | 30.12 | 0.58 | 0.774 | -174.9 | ↓ |
| 1626 | ↓ | ↓ | 7.26 | 1.193 | – | 0.18 | 29.99 | 0.59 | 0.778 | -180.2 | ↓ |
| | Sampled at 1628 | | | | | | | | | | |
| 1630 | 251 | 36-40 | 7.30 | 1.324 | – | 1.47 | 30.50 | 0.66 | 0.874 | -161.1 | grey |
| 1632 | ↓ | ↓ | 7.22 | 1.377 | – | 0.28 | 30.22 | 0.69 | 0.913 | -176.0 | ↓ |
| 1634 | ↓ | ↓ | 7.27 | 1.426 | – | 0.17 | 29.95 | 0.72 | 0.941 | -181.4 | ↓ |
| | Sampled at 1635 | | | | | | | | | | |
| 1646 | 251 | 41-45 | 7.42 | 1.364 | – | 1.36 | 30.28 | 0.68 | 0.890 | -162.5 | grey |
| 1648 | ↓ | ↓ | 7.35 | 1.375 | – | 0.34 | 30.10 | 0.68 | 0.899 | -172.7 | ↓ |
| 1650 | ↓ | ↓ | 7.33 | 1.390 | – | 0.22 | 29.98 | 0.69 | 0.909 | -178.3 | ↓ |
| | Sampled at 1652 | | | | | | | | | | |
| 1658 | 251 | 56-60 | 7.37 | 2.910 | – | 6.66 | 29.01 | 0.151 | 1.909 | -168.1 | grey |
| 1700 | ↓ | ↓ | 7.24 | ~~0.972~~ 2.944 | – | 0.66 | 29.04 | 1.55 | 1.979 | -184.9 | ↓ |
| 1702 | ↓ | ↓ | 7.25 | 3.136 | – | 0.24 | 28.92 | 1.69 | 2.134 | -198.5 | ↓ |
| | Sampled at 1704 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 /

Date: 5/24/13

DN - 252

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 743 | 252 | 8-12 | 7.02 | 0.480 | – | 10.10 | 24.55 | 0.40 | 0.528 | 57.7 | grey |
| 745 | ↓ | ↓ | 6.56 | 0.796 | – | 3.36 | 25.54 | 0.39 | 0.515 | -83.9 | ↓ |
| 747 | ↓ | ↓ | 6.84 | 0.792 | – | 1.48 | 25.52 | 0.39 | 0.515 | -101.7 | ↓ |
| | Sampled at 749 | | | | | | | | | | |
| 753 | 252 | 16-20 | 7.30 | 0.837 | – | 1.30 | 25.43 | 0.41 | 0.546 | -156.4 | grey |
| 755 | ↓ | ↓ | 7.28 | 0.841 | – | 0.46 | 25.50 | 0.41 | 0.548 | -165.1 | ↓ |
| 757 | ↓ | ↓ | 7.28 | 0.844 | – | 0.38 | 25.56 | 0.41 | 0.550 | -170.5 | ↓ |
| | Sampled at 759 | | | | | | | | | | |
| 802 | 252 | 21-25 | 6.53 | 0.819 | – | 3.43 | 25.98 | 2.20 | 0.535 | -210.5 | grey |
| 804 | ↓ | ↓ | 7.30 | 0.825 | – | 0.72 | 26.17 | 0.60 | 0.538 | -212.7 | ↓ |
| 806 | ↓ | ↓ | 7.36 | 0.829 | – | 0.42 | 26.29 | 0.40 | 0.540 | -214.3 | ↓ |
| | Sampled at 808 | | | | | | | | | | |
| 812 | 252 | 26-30 | 7.18 | 0.917 | – | 0.97 | 26.23 | 0.45 | 0.601 | -126.7 | grey |
| 814 | ↓ | ↓ | 7.12 | 0.930 | – | 0.40 | 26.33 | 0.46 | 0.607 | -120.3 | ↓ |
| 816 | ↓ | ↓ | 7.06 | 0.934 | – | 0.31 | 26.40 | 0.46 | 0.606 | -117.9 | ↓ |
| | Sampled at 818 | | | | | | | | | | |
| 825 | 252 | 31-35 | 7.50 | 0.911 | – | 2.35 | 26.92 | 0.45 | 0.597 | -150.6 | grey |
| 827 | ↓ | ↓ | 7.19 | 0.920 | – | 0.54 | 27.03 | 0.45 | 0.597 | -152.5 | ↓ |
| 829 | ↓ | ↓ | 7.17 | 0.914 | – | 0.45 | 27.09 | 0.45 | 0.592 | -153.2 | ↓ |
| | Sampled at 831 | | | | | | | | | | |
| 838 | 252 | 36-40 | 7.33 | 0.865 | – | 0.31 | 26.95 | 0.42 | 0.565 | -190.9 | grey |
| 840 | ↓ | ↓ | 7.34 | 0.871 | – | 0.22 | 26.98 | 0.43 | 0.566 | -194.9 | ↓ |
| 842 | ↓ | ↓ | 7.33 | 0.869 | – | 0.20 | 26.96 | 0.42 | 0.562 | -197.3 | ↓ |
| | Sampled at 844 | | | | | | | | | | |
| 851 | 252 | 41-45 | 7.45 | 1.204 | – | 1.88 | 27.08 | 0.60 | 0.793 | -193.2 | grey |
| 853 | ↓ | ↓ | 7.43 | 1.225 | – | 0.55 | 27.10 | 0.61 | 0.803 | -206.1 | ↓ |
| 855 | ↓ | ↓ | 7.43 | 1.241 | – | 0.28 | 27.11 | 0.62 | 0.809 | -213.4 | ↓ |
| | Sampled at 857 | | | | | | | | | | |
| 906 | 252 | 56-60 | 7.44 | 3.527 | – | 2.42 | 27.68 | 1.85 | 2.306 | -184.2 | grey |
| 908 | ↓ | ↓ | 7.42 | 3.582 | – | 0.34 | 27.72 | 0.30 | 2.394 | -199.6 | ↓ |
| 910 | ↓ | ↓ | 7.43 | 3.721 | – | 0.20 | 27.76 | 0.18 | 2.459 | -207.2 | ↓ |
| | Sampled at 912 | | | | | | | | | | |

Notes:

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Temp (°C) = Temperature (degrees Celsius)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 25*2

Date: 6/3/13

Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0229 | 8-12 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 36-40 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 41-45 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1148 | 0229 | 46-50 | 7.86 | 2.101 | — | 5.73 | 30.07 | 1.08 | 1.386 | -76.6 | grey |
| 1150 | ↓ | ↓ | 7.36 | 2.108 | — | 2.32 | 29.08 | 1.07 | 1.386 | -127.6 | ↓ |
| 1152 | ↓ | ↓ | 7.30 | 2.186 | — | 1.62 | 28.63 | 1.13 | 1.453 | -139.5 | ↓ |
| | Sampled at 1153 | | | | | | | | | | |
| | | 56-60 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

other depth intervals previously sampled. only 46-50' interval Sampled on 6/3/13

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 25*2

Date: 6/3/13

Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0236 | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 36-40 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 41-45 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1213 | 0236 | 46-50 | 7.16 | 1.021 | – | 4.17 | 33.72 | 0.95 | 1.240 | -106.0 | grey |
| 1215 | ↓ | ↓ | 7.09 | 1.901 | – | 1.66 | 32.91 | 0.94 | 1.224 | -129.5 | ↓ |
| 1217 | ↓ | ↓ | 7.10 | 1.873 | – | 0.83 | 32.78 | 0.93 | 1.214 | -144.3 | ↓ |
| | Sampled at 1218 | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

BLS = feet below land surface

µS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

Only 46-50' interval sampled on 6/3/13. other depth intervals previously sampled.

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 25*2

Date: 6/3/13 DJ

Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0900 | 0253 | ~~8-12~~ | 7.32 | 2.098 | – | 5.23 | 29.15 | 1.07 | 1.375 | -59.5 | grey |
| 0902 | ↓ | ↓ | 7.19 | 2.134 | – | 1.92 | 28.76 | 1.09 | 1.395 | -82.1 | ↓ |
| 0904 | ↓ | ↓ | 7.16 | 2.151 | – | 1.46 | 28.49 | 1.09 | 1.401 | -92.4 | ↓ |
| | Sampled at 0905 | | | | | | | | | | |
| ~~0912~~ | ~~0253~~ | ~~16-20~~ | | | – | | | | | | ② |
| * ~~0914~~ | ↓ | ↓ | | | – | | | | | | ③ |
| — | ↓ | ↓ | | | – | | | | | | ④ |
| | Sampled at | | | | | | | | | | |
| 0912 | 0253 | 21-25 | 7.25 | 1.962 | – | 4.80 | 28.35 | 1.00 | 1.285 | -56.4 | grey |
| 0914 | ↓ | ↓ | 7.09 | 1.983 | – | 1.39 | 27.79 | 1.00 | 1.290 | -75.9 | ↓ |
| 0916 | ↓ | ↓ | 7.05 | 1.986 | – | 0.65 | 27.33 | 1.01 | 1.292 | -86.2 | ↓ |
| | Sampled at 0917 | | | | | | | | | | |
| 0924 | 0253 | 26-30 | 7.06 | 1.921 | – | 3.23 | 28.32 | 0.97 | 1.256 | -34.7 | grey |
| 0926 | ↓ | ↓ | 6.94 | 1.943 | – | 0.94 | 27.64 | 0.99 | 1.272 | -58.6 | ↓ |
| 0928 | ↓ | ↓ | 6.95 | 1.961 | – | 0.58 | 27.36 | 0.99 | 1.278 | -69.4 | ↓ |
| | Sampled at 0929 | | | | | | | | | | |
| 0935 | 0253 | 31-35 | 7.84 | 0.889 | – | 4.05 | 29.39 | 0.82 | 1.070 | -64.0 | grey |
| 0937 | ↓ | ↓ | 7.10 | 1.646 | – | 1.07 | 28.98 | 0.82 | 1.071 | -111.5 | ↓ |
| 0939 | ↓ | ↓ | 7.06 | 1.650 | – | 0.55 | 28.74 | 0.83 | 1.076 | -129.8 | ↓ |
| | Sampled at 0940 | | | | | | | | | | |
| 0949 | 0253 | 36-40 | 7.72 | 0.982 | – | 3.94 | 30.56 | 0.95 | 1.227 | -23.5 | grey |
| 0951 | ↓ | ↓ | 7.12 | 1.898 | – | 1.35 | 30.37 | 0.96 | 1.239 | -59.5 | ↓ |
| 0953 | ↓ | ↓ | 7.08 | 1.908 | – | 0.57 | 30.29 | 0.96 | 1.241 | -77.6 | ↓ |
| | Sampled at 0954 | | | | | | | | | | |
| 1006 | 0253 | 41-45 | 7.45 | 1.127 | – | 4.14 | 31.01 | 0.55 | 1.373 | -65.6 | grey |
| 1008 | ↓ | ↓ | 7.23 | 2.150 | – | 2.97 | 31.09 | 1.09 | ~~1.413~~ | -117.1 | ↓ |
| 1010 | ↓ | ↓ | 7.17 | 2.189 | – | 0.60 | 30.94 | 1.11 | 1.432 | -132.9 | ↓ |
| | Sampled at 1011 | | | | | | | | | | |
| 1024 | 0253 | 46-50 | 7.56 | 1.172 | – | 4.44 | 30.75 | 1.12 | 1.448 | -65.7 | grey |
| 1026 | ↓ | ↓ | 7.29 | 2.259 | – | 1.36 | 30.37 | 1.16 | 1.488 | -103.8 | ↓ |
| 1028 | ↓ | ↓ | 7.24 | 2.306 | – | 0.58 | 30.24 | 1.18 | 1.507 | -119.8 | ↓ |
| | Sampled at 1029 | | | | | | | | | | |
| 1042 | 0253 | 56-60 | 7.66 | 1.744 | – | 4.09 | 30.79 | 1.42 | 1.998 | -64.7 | grey |
| 1044 | ↓ | ↓ | 7.48 | 3.407 | – | 1.14 | 30.43 | 1.84 | 2.331 | -110.4 | ↓ |
| 1046 | ↓ | ↓ | 7.47 | 3.655 | – | 0.54 | 30.17 | 1.93 | 2.404 | -129.8 | ↓ |
| | Sampled at 1047 | | | | | | | | | | |

Notes:

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ORP (mV) = Oxidation Reduction Potential (milliVolts)

* No 8-12' Sample collected per Jill Johnson

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681 / 25*2

Date: 6/3/13 — Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1313 | BT 0254 | 8-12 | 7.41 | 0.792 | – | 3.65 | 31.72 | 0.38 | 0.502 | -24.4 | dk brown ~~gray~~ |
| 1315 | ↓ | ↓ | 7.09 | 0.757 | – | 1.69 | 30.58 | 0.36 | 0.480 | -34.9 | ↓ |
| 1317 | ↓ | ↓ | 6.96 | 0.725 | – | 1.27 | 29.75 | 0.34 | 0.462 | -37.6 | ↓ |
| | Sampled at 1318 | | | | | | | | | | |
| 1350 | 0254 | 16-20 | 7.90 | 1.580 | – | 4.35 | 31.50 | 0.79 | 1.030 | -44.9 | dk brown |
| 1352 | ↓ | ↓ | 7.46 | 1.593 | – | 1.38 | 31.24 | 0.80 | 1.043 | -70.0 | ↓ |
| 1354 | ↓ | ↓ | 7.34 | 1.608 | – | 0.58 | 30.67 | 0.80 | 1.046 | -83.7 | ↓ |
| | Sampled at 1355 | | | | | | | | | | |
| 1401 | 0254 | 21-25 | 7.57 | 1.058 | – | 4.11 | 31.62 | 1.02 | 1.317 | -11.8 | brown |
| 1403 | ↓ | ↓ | 7.05 | 2.043 | – | 1.91 | 32.00 | 1.04 | 1.350 | -39.7 | ↓ |
| 1405 | ↓ | ↓ | 6.96 | 2.093 | – | 0.61 | 31.47 | 1.07 | 1.379 | -61.8 | ↓ |
| | Sampled at 1406 | | | | | | | | | | |
| 1412 | 0254 | 26-30 | 7.59 | 0.997 | – | 4.41 | 31.10 | 0.92 | 1.188 | -6.5 | brown |
| 1414 | ↓ | ↓ | 7.07 | 1.805 | – | 1.58 | 30.91 | 0.88 | 1.139 | -32.7 | ↓ |
| 1416 | ↓ | ↓ | 6.93 | 1.734 | – | 0.59 | 29.83 | 0.86 | 1.111 | -42.5 | ↓ |
| | Sampled at 1417 | | | | | | | | | | |
| 1424 | 0254 | 31-35 | 7.80 | 0.784 | – | 3.38 | 32.00 | 0.72 | 0.941 | -46.4 | brown |
| 1426 | ↓ | ↓ | 6.91 | 1.440 | – | 1.56 | 32.47 | 0.71 | 0.932 | -62.5 | ↓ |
| 1428 | ↓ | ↓ | 6.76 | 1.431 | – | 0.49 | 32.24 | 0.71 | 0.930 | -87.5 | ↓ |
| | Sampled at 1429 | | | | | | | | | | |
| 1439 | 0254 | 36-40 | 7.82 | 0.893 | – | 3.79 | 32.29 | 0.84 | 1.104 | -72.8 | brown |
| 1441 | ↓ | ↓ | 7.19 | 1.714 | – | 2.70 | 32.65 | 0.86 | 1.131 | -91.0 | ↓ |
| 1443 | ↓ | ↓ | 7.04 | 1.748 | – | 0.68 | 32.42 | 0.87 | 1.138 | -109.0 | ↓ |
| | Sampled at 1444 | | | | | | | | | | |
| 1454 | 0254 | 41-45 | 7.66 | 1.180 | – | 3.78 | 31.43 | 1.11 | 1.424 | -78.8 | brown |
| 1456 | ↓ | ↓ | 7.20 | 2.219 | – | 1.58 | 31.89 | 1.13 | 1.464 | -104.8 | ↓ |
| 1458 | ↓ | ↓ | 7.10 | 2.272 | – | 0.51 | 31.66 | 1.16 | 1.489 | -116.9 | ↓ |
| | Sampled at 1459 | | | | | | | | | | |
| 1509 | 0254 | 46-50 | 7.58 | 0.995 | – | 4.51 | 31.89 | 0.99 | 1.282 | -63.1 | brown |
| 1511 | ↓ | ↓ | 7.21 | 2.028 | – | 1.08 | 31.65 | 1.03 | 1.339 | -111.0 | ↓ |
| 1513 | ↓ | ↓ | 7.14 | 2.095 | – | 0.45 | 31.51 | 1.06 | 1.363 | -129.9 | ↓ |
| | Sampled at 1514 | | | | | | | | | | |
| | 0254 | 56-60 | | | – | | | | | | |
| 1529 | ↓ | ↓ | 7.44 | 3.363 | – | 0.92 | 31.25 | 1.81 | 2.277 | -61.9 | brown |
| 1531 | ↓ | ↓ | 7.33 | 3.582 | – | 0.42 | 30.65 | 1.91 | 2.392 | -85.5 | ↓ |
| 1533 | Sampled at 1534 | | 7.29 | 3.729 | | 0.39 | 30.03 | 1.97 | 2.455 | -93.0 | ↓ |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681 / 25*2

Date: 6/3/13 - 6/4/13 CD

Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0255 | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1604 | 0255 | 16-20 | 7.94 | 1.309 | – | 12.72 | 32.03 | 0.63 | 0.831 | -53.8 | grey |
| 1606 | ↓ | ↓ | 7.08 | 1.257 | – | 12.30 | 30.92 | 0.61 | 0.801 | -68.5 | ↓ |
| 1608 | ↓ | ↓ | 6.98 | 1.225 | – | 10.84 | 30.04 | 0.60 | 0.791 | -69.2 | ↓ |
| | Sampled at 1609 | | | | | | | | | | |
| 1614 | 0255 | 21-25 | 7.40 | 0.800 | – | 4.07 | 31.25 | 0.75 | 0.981 | -42.2 | grey |
| 1616 | ↓ | ↓ | 7.02 | 1.515 | – | 1.97 | 31.61 | 0.75 | 0.990 | -60.0 | ↓ |
| 1618 | ↓ | ↓ | 6.96 | 1.527 | – | 0.66 | 31.23 | 0.76 | 0.991 | -67.5 | ↓ |
| | Sampled at 1619 | | | | | | | | | | |
| 1624 | 0255 | 26-30 | 7.51 | 1.744 | – | 3.75 | 31.43 | 0.86 | 1.119 | -37.3 | grey |
| 1626 | ↓ | ↓ | 6.87 | 1.727 | – | 1.03 | 30.78 | 0.86 | 1.125 | -52.4 | ↓ |
| 1628 | ↓ | ↓ | 6.79 | 1.736 | – | 0.47 | 30.02 | 0.87 | 1.132 | -63.1 | ↓ |
| | Sampled at 1629 | | | | | | | | | | |
| 1650 | 0255 | 31-35 | 7.59 | 0.962 | – | 4.12 | 29.79 | 0.92 | 1.185 | -53.9 | grey |
| 1652 | ↓ | ↓ | 6.86 | 1.825 | – | 1.88 | 30.42 | 0.92 | 1.196 | -65.4 | ↓ |
| 1654 | ↓ | ↓ | 6.72 | 1.849 | – | 0.62 | 30.30 | 0.93 | 1.209 | -83.8 | ↓ |
| | Sampled at 1655 | | | | | | | | | | |
| 1704 | 0255 | 36-40 | 7.49 | 0.833 | – | 3.47 | 30.53 | 0.78 | 1.017 | -53.7 | grey |
| 1706 | ↓ | ↓ | 7.03 | 1.562 | – | 2.22 | 31.15 | 0.78 | 1.020 | -72.3 | ↓ |
| 1708 | ↓ | ↓ | 6.86 | 1.578 | – | 0.61 | 31.05 | 0.79 | 1.033 | -88.7 | ↓ |
| | Sampled at 1709 | | | | | | | | | | |
| 1719 | 0255 | 41-45 | 7.54 | 0.856 | – | 3.94 | 30.04 | 0.81 | 1.060 | -33.3 | grey |
| 1721 | ↓ | ↓ | 7.00 | 1.644 | – | 2.02 | 30.47 | 0.83 | 1.083 | -82.0 | ↓ |
| 1723 | ↓ | ↓ | 6.86 | 1.677 | – | 0.58 | 30.01 | 0.84 | 1.096 | -101.8 | ↓ |
| | Sampled at 1724 | | | | | | | | | | |
| 0728 | 0255 | 46-50 | 7.61 | 0.857 | – | 16.34 | 24.88 | 0.86 | 1.109 | +19.8 | grey |
| 0730 | ↓ | ↓ | 7.40 | 1.733 | – | 12.80 | 25.35 | 0.89 | 1.144 | 234.0 | ↓ |
| 0732 | ↓ | ↓ | 7.32 | 1.777 | – | 12.05 | 25.48 | 0.91 | 1.173 | 233.1 | ↓ |
| | Sampled at 0733 | | | | | | | | | | |
| 0746 | 0255 | 56-60 | 7.57 | 1.619 | – | 4.44 | 25.60 | 1.69 | 2.125 | -19.2 | grey |
| 0748 | ↓ | ↓ | 7.32 | 3.333 | – | 1.76 | 25.67 | 1.78 | 2.230 | -77.2 | ↓ |
| 0750 | ↓ | ↓ | 7.25 | 3.520 | – | 0.84 | 25.65 | 1.89 | 2.355 | -90.4 | ↓ |
| | Sampled at 0751 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

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mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

8-12' interval not sampled per Jill Johnson

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 25*2

Date: 6/4/13 Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | CH | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | | | | | | | |
| | ↓ | ↓ | | | | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0836 | 0256 | 16-20 | 6.73 | 0.800 | – | 8.25 | 27.42 | 0.38 | 0.508 | -4.2 | grey |
| 0838 | ↓ | ↓ | 6.82 | 0.772 | – | 4.30 | 27.48 | 0.37 | 0.497 | -26.7 | ↓ |
| 0840 | ↓ | ↓ | 6.91 | 0.757 | – | 2.59 | 27.46 | 0.37 | 0.488 | -39.6 | ↓ |
| | Sampled at 0841 | | | | | | | | | | |
| 0851 | 0256 | 21-25 | 7.63 | 0.832 | – | 7.29 | 27.41 | 0.41 | 0.546 | -56.8 | brown |
| 0853 | ↓ | ↓ | 7.20 | 0.846 | – | 1.92 | 27.50 | 0.41 | 0.552 | -79.5 | ↓ |
| 0855 | ↓ | ↓ | 7.10 | 0.851 | – | 0.90 | 27.51 | 0.41 | 0.553 | -85.5 | ↓ |
| | Sampled at 0856 | | | | | | | | | | |
| 0902 | 0256 | 26-30 | 7.53 | 0.967 | – | 7.84 | 27.10 | 0.48 | 0.642 | -26.6 | grey |
| 0904 | ↓ | ↓ | 7.32 | 0.987 | – | 2.15 | 27.26 | 0.49 | 0.644 | -90.6 | ↓ |
| 0906 | ↓ | ↓ | 7.15 | 0.994 | – | 0.90 | 27.13 | 0.49 | 0.647 | -95.8 | ↓ |
| | Sampled at 0907 | | | | | | | | | | |
| 0916 | 0256 | 31-35 | 7.68 | 0.505 | – | 7.28 | 28.06 | 0.46 | 0.620 | -69.8 | grey |
| 0918 | ↓ | ↓ | 7.37 | 0.968 | – | 4.28 | 28.44 | 0.48 | 0.638 | -110.7 | ↓ |
| 0920 | ↓ | ↓ | 7.27 | 0.985 | – | 1.07 | 28.36 | 0.48 | 0.644 | -121.6 | ↓ |
| | Sampled at 0921 | | | | | | | | | | |
| 0931 | 0256 | 36-40 | 7.76 | 0.557 | – | 7.41 | 27.88 | 0.51 | 0.610 | -76.1 | grey |
| 0933 | ↓ | ↓ | 7.31 | 1012 | – | 2.31 | 28.16 | 0.49 | 0.653 | -107.6 | ↓ |
| 0935 | ↓ | ↓ | 7.16 | 1.000 | – | 0.81 | 28.19 | 0.49 | 0.649 | -118.1 | ↓ |
| | Sampled at 0936 | | | | | | | | | | |
| 0947 | 0256 | 41-45 | 7.72 | 1.014 | – | 6.80 | 28.50 | 0.49 | 0.656 | -62.0 | grey |
| 0949 | ↓ | ↓ | 7.33 | 1.000 | – | 1.77 | 28.60 | 0.49 | 0.644 | -94.9 | ↓ |
| 0951 | ↓ | ↓ | 7.17 | 0.989 | – | 0.76 | 28.65 | 0.48 | 0.645 | -100.2 | ↓ |
| | Sampled at 0952 | | | | | | | | | | |
| 1034 | 0256 | 46-50 | 7.84 | 0.582 | – | 7.51 | 29.03 | 0.28 | 0.688 | -59.1 | grey |
| 1036 | ↓ | ↓ | 7.53 | 1.115 | – | 6.84 | 29.24 | 0.55 | 0.732 | -114.8 | ↓ |
| 1038 | ↓ | ↓ | 7.38 | 1.135 | – | 1.66 | 29.34 | 0.56 | 0.741 | -125.5 | ↓ |
| | Sampled at 1039 | | | | | | | | | | |
| 1055 | 0256 | 56-60 | 7.67 | 1.600 | – | 7.46 | 29.68 | 1.60 | 2.028 | -38.9 | grey |
| 1057 | ↓ | ↓ | 7.38 | 3.191 | – | 2.09 | 29.60 | 1.67 | 2.106 | -107.7 | ↓ |
| 1059 | ↓ | ↓ | 7.31 | 3.279 | – | 0.76 | 29.40 | 1.74 | 2.193 | -122.4 | ↓ |
| | Sampled at 1100 | | | | | | | | | | |

Notes:

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

No 8-12' Sample collected

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 25*2

Date: 6/4/13 CE

Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0257 | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1123 | 0257 | 16-20 | 7.82 | 0.639 | – | 19.22 | 31.16 | 0.59 | 0.778 | -55.5 | grey |
| 1125 | ↓ | ↓ | 7.21 | 1.193 | – | 17.15 | 31.17 | 0.58 | 0.772 | -75.6 | ↓ |
| 1127 | ↓ | ↓ | 7.01 | 1.182 | – | 16.66 | 30.96 | 0.58 | 0.765 | -78.8 | ↓ |
| | Sampled at 1128 | | | | | | | | | | |
| 1134 | 0257 | 21-25 | 7.53 | 1.529 | – | 6.36 | 30.74 | 0.77 | 1.014 | -63.4 | grey |
| 1136 | ↓ | ↓ | 7.03 | 1.575 | – | 1.54 | 30.49 | 0.79 | 1.030 | -71.2 | ↓ |
| 1138 | ↓ | ↓ | 6.91 | 1.589 | – | 0.73 | 30.06 | 0.79 | 1.033 | -72.4 | ↓ |
| | Sampled at 1139 | | | | | | | | | | |
| 1146 | 0257 | 26-30 | 7.72 | 1.498 | – | 6.97 | 31.21 | 0.94 | 1.226 | -31.7 | grey |
| 1148 | ↓ | ↓ | 7.10 | 1.915 | – | 1.92 | 30.71 | 0.98 | 1.266 | -61.7 | ↓ |
| 1150 | ↓ | ↓ | 6.95 | 1.965 | – | 0.81 | 30.01 | 1.00 | 1.287 | -64.8 | ↓ |
| | Sampled at 1151 | | | | | 8.42 | | | | | |
| 1158 | 0257 | 31-35 | 7.14 | 0.838 | – | ~~@0.42~~ | 31.67 | 0.41 | 0.557 | -60.7 | grey |
| 1200 | ↓ | ↓ | 7.19 | 1.582 | – | @5.37 | 31.93 | 0.82 | 1.042 | -92.5 | ↓ |
| 1202 | ↓ | ↓ | 7.08 | 1.608 | – | 1.37 | 31.88 | 0.81 | 1.054 | -97.3 | ↓ |
| | Sampled at 1203 | | | | | | | | | | |
| 1212 | 0257 | 36-40 | 7.55 | 0.729 | – | 6.92 | 30.83 | 0.68 | 0.899 | -47.8 | grey |
| 1214 | ↓ | ↓ | 7.06 | 1.389 | – | 1.99 | 30.96 | 0.69 | 0.905 | -75.9 | ↓ |
| 1216 | ↓ | ↓ | 6.88 | 1.394 | – | 0.77 | 30.97 | 0.69 | 0.906 | -85.1 | ↓ |
| | Sampled at 1217 | | | | | | | | | | |
| 1301 | 0257 | 41-45 | 7.88 | 1.435 | – | 20.69 | 32.39 | 0.74 | 0.975 | -87.8 | grey |
| 1303 | ↓ | ↓ | 7.24 | 1.520 | – | 18.93 | 32.10 | 0.77 | 1.008 | -100.2 | ↓ |
| 1305 | ↓ | ↓ | 7.14 | 1.569 | – | 11.61 | 31.56 | 0.78 | 1.028 | -103.4 | ↓ |
| | Sampled at 1306 | | | | | | | | | | |
| 1322 | 0257 | 46-50 | 7.49 | 0.917 | – | 7.94 | 31.27 | 0.45 | 1.060 | -72.1 | |
| 1324 | ↓ | ↓ | 7.17 | 1.810 | – | 7.04 | 31.78 | 0.92 | 1.195 | -87.9 | |
| 1326 | ↓ | ↓ | 6.95 | 1.859 | – | 2.63 | 31.87 | 0.94 | 1.222 | -101.0 | |
| | Sampled at 1327 | | | | | | | | | | |
| | 0257 | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

* No 8-12' interval Sample collected. No 56-60' sample collected.

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 25*2

Date: 6-4-13 Crystal Tavns

| Time | DF DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0258 | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1353 | 0258 | 31-35 | 6.82 | 1.176 | – | 19.12 | 25.00 | 0.58 | 0.762 | -83.2 | grey |
| 1355 | ↓ | ↓ | 6.66 | 1.172 | – | 22.15 | 25.03 | 0.58 | 0.761 | -90.0 | ↓ |
| 1357 | ↓ | ↓ | 6.70 | 1.171 | – | 23.09 | 25.06 | 0.58 | 0.761 | -95.9 | ↓ |
| | Sampled at 1358 | | | | | | | | | | |
| 1524 | 0258 | 36-40 | 7.40 | 1.252 | – | 9.03 | 26.67 | 0.65 | 0.851 | -65.0 | grey |
| 1526 | ↓ | ↓ | 6.83 | 1.317 | – | 3.17 | 26.73 | 0.66 | 0.862 | -68.8 | ↓ |
| 1528 | ↓ | ↓ | 6.74 | 1.332 | – | 2.12 | 26.79 | 0.66 | 0.868 | -68.9 | ↓ |
| | Sampled at 1529 | | | | | | | | | | |
| 1554 | 0258 | 41-45 | 7.39 | 0.762 | – | 8.75 | 27.49 | 0.74 | 0.966 | -68.7 | grey |
| 1556 | ↓ | ↓ | 6.93 | 1.495 | – | 2.99 | 27.57 | 0.75 | 0.980 | -117.6 | ↓ |
| 1558 | ↓ | ↓ | 6.85 | 1.514 | – | 1.75 | 27.58 | 0.76 | 0.988 | -126.1 | ↓ |
| | Sampled at 1559 | | | | | | | | | | |
| 1609 | 0258 | 46-50 | 7.37 | 1.074 | – | 8.04 | 27.78 | 1.09 | 1.399 | -22.0 | grey |
| 1611 | ↓ | ↓ | 7.11 | 2.177 | – | 3.24 | 27.93 | 1.12 | 1.438 | -76.7 | ↓ |
| 1613 | ↓ | ↓ | 7.03 | 2.236 | – | 1.52 | 27.89 | 1.15 | 1.471 | -84.9 | ↓ |
| | Sampled at 1614 | | | | | | | | | | |
| 1626 | 0258 | 56-60 | 7.37 | 1.817 | – | 7.41 | 27.21 | 1.49 | 1.999 | 42.0 | grey |
| 1628 | ↓ | ↓ | 7.04 | 3.454 | – | 2.11 | 27.28 | 1.88 | 2.370 | -50.6 | ↓ |
| 1630 | ↓ | ↓ | 6.95 | 3.706 | – | 0.84 | 27.11 | 1.98 | 2.457 | -60.3 | ↓ |
| | Sampled at 1631 | | | | | | | | | | |

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TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

*Note: First interval sampled = 31-35'

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 25*2

Date: 6-4-13 / 6-5-13

Crystal Towns

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0259 | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1657 | 0259 | 31-35 | 7.59 | 1.353 | – | 22.19 | 27.89 | 0.66 | 1.323 | -39.2 | grey |
| 1659 | ↓ | ↓ | 7.03 | 1.303 | – | 17.45 | 27.72 | 0.64 | 0.834 | -65.9 | ↓ |
| 1701 | ↓ | ↓ | 6.87 | 1.271 | – | 16.20 | 27.37 | 0.62 | 0.816 | -64.8 | ↓ |
| | Sampled at 1702 | | | | | | | | | | |
| 0711 | 0259 | 36-40 | 7.63 | 1.754 | – | 25.22 | 24.35 | 0.88 | 1.130 | -87.1 | grey |
| 0713 | ↓ | ↓ | 7.24 | 1.726 | – | 20.08 | 24.44 | 0.87 | 1.113 | -103.7 | ↓ |
| 0715 | ↓ | ↓ | 7.13 | 1.708 | – | 20.66 | 24.45 | 0.86 | 1.106 | -106.6 | ↓ |
| | Sampled at 0716 | | | | | | | | | | |
| 0724 | 0259 | 41-45 | 7.55 | 2.182 | – | 8.00 | 24.35 | 1.12 | 1.432 | 2.3 | grey |
| 0726 | ↓ | ↓ | 7.31 | 2.270 | – | 3.85 | 24.65 | 1.17 | 1.490 | -43.5 | ↓ |
| 0728 | ↓ | ↓ | 7.14 | 2.315 | – | 2.13 | 24.89 | 1.19 | 1.514 | -53.7 | ↓ |
| | Sampled at 0729 | | | | | | | (5) | | | |
| 0738 | 0259 | 46-50 | 7.42 | 1.309 | – | 7.98 | 0.62 | 24.88 | 1.574 | 22.1 | grey |
| 0740 | ↓ | ↓ | 7.22 | 2.411 | – | 5.24 | 25.06 | 1.23 | 1.563 | -52.3 | ↓ |
| 0742 | ↓ | ↓ | 7.12 | 2.416 | – | 1.60 | 25.17 | 1.25 | 1.586 | -64.6 | ↓ |
| | Sampled at 0743 | | | | | | | | | | |
| 0753 | 0259 | 56-60 | 7.51 | 2.998 | – | 7.22 | 25.04 | 1.86 | 2.311 | 153.1 | grey |
| 0755 | ↓ | ↓ | 7.30 | 3.617 | – | 2.76 | 25.17 | 1.94 | 2.404 | 30.5 | ↓ |
| 0759 | ↓ | ↓ | 7.16 | 3.746 | – | 1.57 | 25.20 | 1.99 | 2.465 | -29.1 | ↓ |
| | Sampled at 0758 | | | | | | | | | | |

Notes:

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

* Began collecting samples at 31-35' interval.

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 25*2

Date: 6-5-13 (4 CT)

Crystal Towns

BV

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0260 | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0833 | 0260 | 16-20 | 7.54 | 1.304 | – | 7.51 | 27.01 | 0.64 | 0.840 | -29.1 | grey |
| 0835 | ↓ | ↓ | 6.92 | 1.288 | – | 2.39 | 27.60 | 0.64 | 0.835 | -62.2 | ↓ |
| 0837 | ↓ | ↓ | 6.78 | 1.280 | – | 1.25 | 27.73 | 0.63 | 0.828 | -62.0 | ↓ |
| | Sampled at 0838 | | | | | | | | | | |
| 0843 | 0260 | 21-25 | 7.34 | 0.661 | – | 7.12 | 27.46 | 0.62 | 0.813 | -28.7 | grey |
| 0845 | ↓ | ↓ | 7.01 | 1.243 | – | 2.62 | 27.66 | 0.61 | 0.804 | -55.8 | ↓ |
| 0847 | ↓ | ↓ | 6.82 | 1.235 | – | 0.77 | 27.66 | 0.61 | 0.801 | -58.2 | ↓ |
| | Sampled at 0848 | | | | | | | | | | |
| 0853 | 0260 | 26-30 | 7.48 | 0.668 | – | 5.48 | 21.73 | 0.32 | 0.433 | +100.3 | grey |
| 0855 | ↓ | ↓ | 7.23 | 0.669 | – | 5.41 | 27.85 | 0.33 | 0.439 | -17.0 | ↓ |
| 0857 | ↓ | ↓ | 7.13 | 0.678 | – | 5.44 | 27.84 | 0.33 | 0.442 | -53.8 | ↓ |
| | Sampled at 0858 | | | | | | | | | | |
| 0955 | 0260 | 31-35 | 7.20 | 1.235 | – | 5.52 | 28.85 | 0.62 | 0.862 | -60.1 | grey |
| 0957 | ↓ | ↓ | 7.09 | 1.300 | – | 2.08 | 28.95 | 0.65 | 0.860 | -73.2 | ↓ |
| 0959 | ↓ | ↓ | 7.02 | 1.333 | – | 0.66 | 28.88 | 0.66 | 0.872 | -78.8 | ↓ |
| | Sampled at 1000 | | | | | (2) | | | | | |
| 1008 | 0260 | 36-40 | 7.53 | 1.822 | – | ~~4.70~~ | 29.54 | 0.93 | 1.205 | -64.9 | grey |
| 1010 | ↓ | ↓ | 7.11 | 1.866 | – | 0.99 | 29.63 | 0.94 | 1.221 | -89.0 | ↓ |
| 1012 | ↓ | ↓ | 7.03 | 1.882 | – | 0.44 | 29.68 | 0.95 | 1.226 | -96.3 | ↓ |
| | Sampled at 1013 | | | | | | | | | | |
| 1024 | 0260 | 41-45 | 7.12 | 2.302 | – | 1.55 | 29.55 | 1.19 | 1.523 | -75.5 | grey |
| 1026 | ↓ | ↓ | 7.04 | 2.361 | – | 0.43 | 29.48 | 1.21 | 1.548 | -99.9 | ↓ |
| 1028 | ↓ | ↓ | 7.02 | 2.391 | – | 0.32 | 29.42 | 1.22 | 1.562 | -106.2 | ↓ |
| | Sampled at 1029 | | | | | | | | | | |
| | | 46-50 | | | * | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1044 | 0260 | 56-60 | (2) ~~5~~ 7.54 | 3.567 | – | 3.78 | 29.98 | 2.08 | 2.622 | -1.3 | grey |
| 1046 | ↓ | ↓ | 7.34 | 4.196 | – | 0.62 | 28.60 | 2.29 | 2.858 | -73.2 | ↓ |
| 1048 | ↓ | ↓ | 7.26 | 4.514 | – | 0.34 | 28.24 | 2.42 | 2.970 | -81.7 | ↓ |
| | Sampled at 1049 | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

* 8-12' and 46-50' intervals not Sampled.

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 05/28/14 DPT0268 (S)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0856 | 0268 | 31-35 | 6.83 | 1.560 | – | 0.31 | 28.01 | 0.074 | 0.962 | -117.1 | cloudy |
| 0858 | ↓ | ↓ | 6.79 | 1.539 | – | 0.20 | 27.40 | 0.074 | 0.960 | -116.0 | ↓ |
| 0900 | ↓ | ↓ | 6.79 | 1.532 | – | 0.17 | 27.27 | 0.073 | 0.955 | -116.9 | ↓ |
| | Sampled at 0901 | | | | | | | | | | |
| 0916 | 0268 | 36-40 | 7.02 | 1.664 | – | 0.31 | 30.03 | 0.075 | 0.984 | -149.8 | cloudy gray |
| 0918 | ↓ | ↓ | 7.06 | 1.642 | – | 0.06 | 30.46 | 0.074 | 0.969 | -168.9 | ↓ |
| 0920 | ↓ | ↓ | 7.05 | 1.655 | – | 0.07 | 30.04 | 0.075 | 0.982 | -171.9 | ↓ |
| | Sampled at 0921 | | | | | | | | | | |
| 0934 | 0268 | 41-45 | 7.04 (2) | 1.680 | – | 0.05 | 29.44 | 0.077 | 1.005 | -248.6 | cloudy tan |
| 0936 | ↓ | ↓ | 7.06 | 1.684 | – | 0.06 | 29.10 | 0.078 | 1.016 | -220.8 | ↓ |
| 0938 | ↓ | ↓ | 7.06 | 1.667 | – | 0.07 | 28.71 | 0.078 | 1.019 | -203.4 | ↓ |
| | Sampled at 0939 | | | | | | | | | | |
| 0951 | 0268 | 46-50 | 7.13 | 1.792 | – | 0.07 | 29.29 | 0.083 | 1.074 | -219.7 | ~~cloudy tan~~ (S) milky |
| 0953 | ↓ | ↓ | 7.15 | 1787 | – | 0.05 | 29.36 | 0.082 | 1.061 | -289.9 | ↓ |
| 0955 (2) | ↓ | ↓ | 7.18 | 1.762 | – | 0.04 | 29.34 | 0.081 | 1.049 | -340.4 | ↓ |
| | Sampled at 0956 | | | | | | | | | | |
| 1012 | 0268 | 56-60 | 7.23 | 3.517 | – | 0.01 | 28.93 | 0.164 | 2.097 | -600.4 | cloudy tan |
| 1014 | ↓ | ↓ | 7.23 | 3.609 | – | 0.01 | 28.83 | 0.175 | 2.192 | -603.4 | ↓ |
| 1016 | ↓ | ↓ | 7.23 | 3.595 | – | 0.03 | 28.47 | 0.175 | 2.192 | -604.0 | ↓ |
| | Sampled at 1017 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

tes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

**Geosyntec Consultants**
**Water Quality Instrument Calibration Form**

Project/Site: CRHE  Project #: FR1681  Field Personnel: Christel Schultz

Water Quality Meter - Model/Serial #: YSI 556 MPS #13D101776  Turbidimeter - Model/Serial #:

| Dissolved Oxygen | DEP SOP FT 1500 | Date | Time | Temp (°C) | Saturation (mg/L)[1] | Reading (mg/L) | Reading (%) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Acceptance Criteria: +/-0.3mg/L | | |
| CAL ICV CCV | | 05/28/14 | 07:21 | 24.9 | 8.279 | 8.82/8.27 | 107.4/100.4 | P F |
| CAL ICV CCV | | 05/28/14 | 18:08 | 29.1 | 7.678 | 7.84 | 102.1 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| Specific Conductance | DEP SOP FT 1200 | Date | Time | Standard (mS/cm) | Standard Lot # | Standard Exp. Date | Reading (mS/cm) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | 05/28/14 | 07:16 | 1.413 | 10601 | 09/20/14 | 1.411/1.413 | P F |
| CAL ICV CCV | | 05/28/14 | 18:01 | 1.413 | 10601 | 09/20/14 | 1.391 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

| pH | DEP SOP FT 1100 | Date | Time | Standard (SU) | Standard Lot # | Standard Exp. Date | Reading (SU) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acceptance Criteria: +/-0.2 SU | |
| CAL ICV CCV | | 05/28/14 | 06:59 | 7.00 | 2312885 | 12/15 | 7.11/7.00 | P F |
| CAL ICV CCV | | 05/28/14 | 07:03 | 4.00 | 2310A78 | 10/15 | 4.05/4.00 | P F |
| CAL ICV CCV | | 05/28/14 | 07:14 | 10.00 | 2312574 | 05/15 | 9.92/10.00 | P F |
| CAL ICV CCV | | 05/28/14 | 17:55 | 7.00 | 2312885 | 12/15 | 6.94 | P F |
| CAL ICV CCV | | 05/28/14 | 17:57 | 4.00 | 2310A78 | 10/15 | 4.08 | P F |
| CAL ICV CCV | | 05/28/14 | 17:59 | 10.00 | 2312574 | 05/15 | 9.97 | P F |

| ORP | SOP N/A | Date | Time | Std. mV @ Temp °C | Standard Lot # | Standard Exp. Date | Reading (mV) | Pass or Fail |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Geosyntec Acceptance Criteria: +/- 5% | | |
| CAL ICV CCV | | 05/28/14 | 07:19 | 240.0 | 6448 | 07/16 | 234.7/240.0 | P F |
| CAL ICV CCV | | 05/28/14 | 18:04 | 240.0 | 6448 | 07/16 | 232.8 | P F |
| CAL ICV CCV | | | | | | | | P F |
| CAL ICV CCV | | | | | | | | P F |

Specific Conductance Probe Cleaned? Yes (No)  Disolved Oxygen membrane Changed? Yes (No)

| 0.1 - 10 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 10% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 11 - 40 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 8% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| 41 - 100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 6.5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

| >100 NTU Std ___NTU | Date | Reading (NTU) | Pass or Fail |
|---|---|---|---|
| | | Acceptance Criteria: +/- 5% | |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |
| CAL ICV CCV | | | P F |

1. See Table FS 2200-2 on the back of this form
CAL - Initial Calibration
ICV - Initial Calibration Verification
CCV - Continuing Calibration Verification
Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration
Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings < 0.1 mS/cm then one standard of 0.1 mS/cm is acceptable)
Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings always start with pH 7 add a third calibration point if needed (i.e. pH > 7)
If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Comments: _____

Geosyntec consultants

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 6/13/14 CN/ DPT0313

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1609 | 0313 | 31-35 | 7.14 | 1.734 | – | 1.25 | 26.41 | .087 | 1.125 | -162.2 | cloudy grey |
| 1611 | ↓ | ↓ | 7.17 | 1.757 | – | 0.52 | 26.28 | .089 | 1.143 | -201.0 | cloudy |
| 1613 | ↓ | ↓ | 7.16 | 1.769 | – | 0.37 | 26.22 | .089 | 1.151 | -204.1 | " |
| | Sampled at 1614 | | | | | | | | | | |
| 1626 | 0313 | 36-40 | 7.27 | 1.731 | – | 0.96 | 27.07 | .087 | 1.128 | -202.3 | cloudy grey |
| 1628 | ↓ | ↓ | 7.25 | 1.762 | – | 0.28 | 27.10 | .089 | 1.149 | -210.6 | " |
| 1630 | ↓ | ↓ | 7.22 | 1.785 | – | 0.15 | 26.91 | .090 | 1.162 | -206.3 | cloudy/grey |
| | Sampled at 1631 | | | | | | | | | | |
| 1643 | 0313 | 41-45 | 7.21 | 1.924 | – | 0.25 | 27.17 | .098 | 1.258 | -201.6 | cloudy grey |
| 1645 | ↓ | ↓ | 7.18 | 1.961 | – | 0.08 | 26.64 | .099 | 1.275 | -196.1 | cloudy |
| 1647 | ↓ | ↓ | 7.17 | 1.962 | – | 0.07 | 26.52 | .099 | 1.276 | -192.6 | cloudy |
| | Sampled at 1648 | | | | | | | | | | |
| 1700 | 0313 | 46-50 | 7.28 | 1.969 | – | 0.63 | 28.16 | .099 | 1.275 | -218.8 | cloudy grey |
| 1702 | ↓ | ↓ | 7.28 | 1.930 | – | 0.10 | 28.10 | .097 | 1.244 | -224.8 | " |
| 1704 | ↓ | ↓ | 7.31 | 1.874 | – | 0.06 | 27.99 | .094 | 1.216 | -230.3 | " " |
| | Sampled at 1705 | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

es:

DPT = Direct Push Technology

ft BLS = feet below land surface

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/13/14 CM / DPT0312

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0806 | 0312 | 31-35 | 7.21 | 1.468 | – | 0.30 | 25.84 | .073 | 0.956 | -165.0 | cloudy grey |
| 0808 | ↓ | ↓ | 7.19 | 1.477 | – | 0.26 | 25.67 | .074 | 0.961 | -164.1 | cloudy |
| 0810 | ↓ | ↓ | 7.16 | 1.477 | – | 0.22 | 25.46 | .074 | 0.960 | -158.7 | " " |
| | Sampled at 0811 | | | | | | | | | | |
| 0823 | 0312 | 36-40 | 7.27 | 1.500 | – | 0.28 | 25.58 | .076 | 0.982 | -204.4 | cloudy grey |
| 0825 | ↓ | ↓ | 7.28 | 1.538 | – | 0.17 | 25.66 | .077 | 1.002 | -198.2 | cloudy |
| 0827 | ↓ | ↓ | 7.21 | 1.540 | – | 0.15 | 25.29 | .077 | 1.001 | -184.7 | " " |
| | Sampled at 0828 | | | | | | | | | | |
| 0843 | 0312 | 41-45 | 7.31 | 1.675 | – | 0.31 | 25.23 | .085 | 1.103 | -207.2 | cloudy grey |
| 0845 | ↓ | ↓ | 7.38 | 1.724 | – | 0.14 | 25.30 | .087 | 1.125 | -218.8 | " " |
| 0847 | ↓ | ↓ | 7.38 | 1.749 | – | 0.12 | 25.33 | .088 | 1.139 | -223.2 | |
| | Sampled at 0848 | | | | | | | | | | |
| 0906 | 0312 | 46-50 | 7.41 | 1.768 | – | 0.23 | 25.35 | .089 | 1.153 | -230.5 | cloudy grey |
| 0908 | ↓ | ↓ | 7.50 | 1.814 | – | 0.14 | 25.30 | .092 | 1.182 | -234.1 | " " |
| 0910 | ↓ | ↓ | 7.46 | 1.810 | – | 0.13 | 25.39 | .092 | 1.183 | -238.9 | " " |
| | Sampled at 0911 | | | | | | | | | | |
| 0926 | 0312 | 56-60 | 7.30 | 3.671 | – | 0.13 | 25.12 | .195 | 2.410 | -202.2 | cloudy grey |
| 0928 | ↓ | ↓ | 7.31 | 3.845 | – | 0.10 | 24.96 | .204 | 2.528 | -207.2 | " " |
| 0930 | ↓ | ↓ | 7.28 | 3.960 | – | 0.09 | 24.75 | .210 | 2.585 | -202.9 | cloudy |
| | Sampled at 0931 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

s

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/12/14 & 06/13/14 CL / DPT ~~08~~ 0311 Mike Burcham

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1356 | 0311 | 31-35 | 7.07 | 2.174 | – | 0.27 | 30.15 | .094 | 1.282 | -159.3 | cloudy grey |
| 1358 | ↓ | ↓ | 6.98 | 2.094 | – | 0.25 | 28.21 | .094 | 1.277 | -143.5 | cloudy |
| 1400 | ↓ | ↓ | 6.94 | 2.043 | – | 0.25 | 27.61 | .098 | 1.261 | -133.2 | cloudy |
| | Sampled at 1401 | | | | | | | | | | |
| 1420 | 0311 | 36-40 | 7.14 | 2.244 | – | 0.21 | 31.63 | .100 | 1.292 | -140.6 | cloudy grey |
| 1422 | ↓ | ↓ | 7.15 | 2.208 | – | 0.16 | 31.14 | .098 | 1.273 | -200.0 | " " |
| M24 | ↓ | ↓ | 7.15 | 2.132 | – | 0.16 | 30.81 | .102 | 1.318 | -202.6 | " " |
| | Sampled at 1425 | | | | | | | | | | |
| 1444 | 0311 | 41-45 | 7.17 | 2.685 | – | 0.15 | 33.24 | .117 | 1.503 | -194.8 | cloudy grey |
| 1446 | ↓ | ↓ | 7.19 | 2.677 | – | 0.11 | 31.97 | .120 | 1.536 | -194.7 | cloudy |
| 1448 | ↓ | ↓ | 7.20 | 2.661 | – | 0.11 | 31.50 | .120 | 1.538 | -184.4 | " " |
| | Sampled at 1449 | | | | | | | | | | |
| 06/13/14 0706 | 0311 | 46-50 | 6.84 | 2.549 | – | 0.47 | 22.82 | .132 | 1.658 | -98.9 | cloudy |
| 0708 | ↓ | ↓ | 6.86 | 2.557 | – | 0.40 | 22.84 | .132 | 1.662 | -104.6 | " " |
| 0710 | ↓ | ↓ | 6.87 | 2.559 | – | 0.37 | 22.85 | .132 | 1.664 | -106.6 | " " |
| | Sampled at 0711 | | | | | | | | | | |
| 0727 | 0311 | 56-60 | 7.32 | ~~2.470~~ mS | – | 0.21 | 23.55 | .206 | 2.557 | -189.0 | cloudy grey |
| 0729 | ↓ | ↓ | 7.31 | 3.993 | – | 0.18 | 23.63 | .212 | 2.600 | -182.0 | cloudy |
| 0731 | ↓ | ↓ | 7.27 | 4.005 | – | 0.16 | 23.61 | .212 | 2.604 | -174.3 | cloudy |
| | Sampled at 0732 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

es.

DPT = Direct Push Technology

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mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/12/14 BX/DPT0310 Mike Burcham

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | 1.570 | | |
| 1103 | 0310 | 31-35 | 7.12 | 2.633 | – | 0.25 | 29.57 | .123 | ~~458.0~~ | -158.0 | cloudy grey |
| 1105 | ↓ | ↓ | 7.14 | 2.600 | – | 0.22 | 28.20 | .125 | 1.596 | -166.0 | cloudy grey |
| 1107 | ↓ | ↓ | 7.12 | 2.586 | – | 0.20 | 27.61 | .126 | 1.598 | -161.5 | cloudy |
| | Sampled at 1108 | | | | | | | | | | |
| 1121 | 0310 | 36-40 | 7.20 | 2.738 | – | 0.25 | 27.54 | .135 | 1.718 | -165.1 | cloudy grey |
| 1123 | ↓ | ↓ | 7.10 | 2.773 | – | 0.24 | 26.58 | .138 | 1.747 | -144.0 | cloudy |
| 1125 | ↓ | ↓ | 7.04 | 2.746 | – | 0.26 | 26.16 | .138 | 1.744 | -136.8 | cloudy |
| | Sampled at ~~0310~~ 1126 | | | | | | | | | | |
| 1141 | 0310 | 41-45 | 7.22 | 2.889 | – | 0.21 | 30.71 | .134 | 1.715 | -183.3 | cloudy grey |
| 1143 | ↓ | ↓ | 7.27 | 3.002 | – | 0.16 | 30.42 | .140 | 1.777 | -191.1 | cloudy |
| 1145 | ↓ | ↓ | 7.23 | 3.017 | – | 0.17 | 28.48 | .146 | 1.842 | -182.0 | cloudy |
| | Sampled at 1146 | | | | | | | | | | |
| 1201 | 0310 | 46-50 | 7.34 | 3.361 | – | 0.28 | 31.17 | .154 | 1.944 | -171.9 | cloudy grey |
| 1203 | ↓ | ↓ | 7.33 | 3.314 | – | 0.23 | 31.45 | .152 | 1.917 | -184.2 | " " |
| 1205 | ↓ | ↓ | 7.32 | 3.293 | – | 0.17 | 31.06 | .152 | 1.918 | -188.1 | " " |
| | Sampled at 1206 | | | | | | | | | | |
| 1220 | 0310 | 56-60 | 7.38 | 4.390 | – | 0.20 | 29.25 | .213 | 2.651 | -189.8 | cloudy grey |
| 1222 | ↓ | ↓ | 7.37 | 4.384 | – | 0.18 | 27.52 | .221 | 2.723 | -185.4 | cloudy |
| 1224 | ↓ | ↓ | 7.32 | 4.355 | – | 0.22 | 26.78 | .222 | 2.734 | -172.6 | cloudy |
| | Sampled at 1225 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

es.

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 6/12/14 BW / DPT0309 Mike Bentley

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0840 | 0309 | 31-35 | 6.83 | 2.178 | – | 0.24 | 26.12 | .109 | 1.391 | -144.6 | cloudy grey |
| 0842 | ↓ | ↓ | 6.99 | 2.221 | – | 0.18 | 25.93 | .111 | 1.420 | -168.0 | cloudy |
| 0844 | ↓ | ↓ | 7.00 | 2.218 | – | 0.17 | 25.67 | .112 | 1.422 | -164.7 | cloudy |
| | Sampled at 0845 | | | | | | | | | | |
| 0857 | 0309 | 36-40 | 7.25 | 2.524 | – | 0.34 | 26.32 | .128 | 1.624 | -161.3 | cloudy grey |
| 0859 | ↓ | ↓ | 7.19 | 2.633 | – | 0.22 | 26.44 | .132 | 1.665 | -167.0 | cloudy |
| 0901 | ↓ | ↓ | 7.16 | 2.631 | – | 0.24 | 26.33 | .132 | 1.668 | -167.9 | cloudy |
| | Sampled at 0902 | | | | | | | | | | |
| 0913 | 0309 | 41-45 | 7.24 | 2.794 | – | 0.43 | 26.32 | .139 ~~.727~~ mS | 1.727 | -163.5 | cloudy grey |
| 0915 | ↓ | ↓ | 7.22 | 2.819 | – | 0.27 | 26.20 | .143 | 1.799 | -165.5 | cloudy |
| 0917 | ↓ | ↓ | 7.18 | 2.834 | – | 0.23 | 25.92 | .144 | 1.810 | -158.5 | cloudy |
| | Sampled at 0918 | | | | | | | | | | |
| 1007 | 0309 | 46-50 | 7.43 | 2.831 | – | 0.22 | 27.38 | .139 | 1.759 | -211.5 | grey |
| 1009 | | | Insufficient Volume. Only enough to collect 1 reading. | | | | | | | | |
| 1011 | ↓ | ↓ | | | | | | | | | |
| | Sampled at 1012 | | | | | | | | | | |
| 1026 | 0309 | 56-60 | 7.38 | 4.294 | – | 0.23 | 28.21 | .214 | 2.641 | -184.8 | grey |
| 1028 | ↓ | ↓ | 7.39 | 4.334 | – | 0.20 | 27.63 | .218 | 2.687 | -191.4 | cloudy |
| 1030 | ↓ | ↓ | 7.38 | 4.345 | – | 0.20 | 27.35 | .220 | 2.706 | -191.5 | cloudy |
| | Sampled at 1031 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

es

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 6/11/14 AM / DPT 0308 Miller Brecher

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1509 | 0308 | 26-30 | 7.32 | 1.013 | – | 0.22 | 24.84 | .050 | 0.660 | -145.5 | grey |
| 1511 | ↓ | ↓ | 7.28 | 1.016 | – | 0.24 | 24.92 | .050 | 0.662 | -154.8 | grey |
| 1513 | ↓ | ↓ | 7.28 | 1.015 | – | 0.26 | 24.90 | 0.050 | 0.661 | -160.4 | MB / cloudy grey |
| 1513 | Sampled at 1514 | | | | | | | | | | |
| 1523 | 0308 | 31-35 | 7.35 | 0.983 | – | 0.25 | 25.19 | .048 | 0.636 | -130.7 | cloudy grey |
| 1525 | ↓ | ↓ | 7.26 | 0.999 | – | 0.22 | 25.20 | .049 | 0.649 | -144.0 | cloudy grey |
| 1527 | ↓ | ↓ | 7.26 | 1.009 | – | 0.21 | 25.09 | .050 | 0.655 | -147.4 | cloudy grey |
| | Sampled at 1528 | | | | | | | | | | |
| 1540 | 0308 | 36-40 | 7.32 | 1.049 | – | 0.25 | 25.80 | 0.51 | 0.676 | -162.3 | cloudy grey |
| 1542 | ↓ | ↓ | 7.33 | 1.063 | – | 0.22 | 25.64 | 0.52 | 0.683 | -160.7 | " " |
| 1544 | ↓ | ↓ | 7.33 | 1.065 | – | 0.21 | 25.62 | .052 | .684 | -160.3 | " " |
| | Sampled at 1545 | | | | | | | | | | |
| 1732 | 0308 | 41-45 | 7.53 | 1.268 | – | 0.33 | 23.83 | .066 | 0.867 | -126.7 | cloudy grey |
| 1734 | ↓ | ↓ | 7.35 | 1.326 | – | 0.21 | 24.05 | .067 | 0.878 | -142.3 | cloudy |
| 1736 | ↓ | ↓ | 7.32 | 1.312 | – | 0.19 | 23.93 | .067 | 0.871 | -143.9 | cloudy |
| | Sampled at 1737 | | | | | | | | | | |
| 1744 | 0308 | 46-50 | 7.40 | 1.635 | – | 0.31 | 24.18 | .084 | 1.081 | -152.8 | cloudy grey |
| 1746 | ↓ | ↓ | 7.37 | 1.637 | – | 0.19 | 24.25 | .084 | 1.080 | -167.0 | " " |
| 1753 | ↓ | ↓ | 7.37 | 2.664 | – | 0.17 | 24.20 | .086 | 1.101 | -173.0 | cloudy grey |
| | Sampled at 1754 | | | | | | | | | | |
| 1804 | 0308 | 56-60 | 7.40 | 3.281 | – | 0.28 | 24.34 | .173 | 2.153 | -180.7 | cloudy grey |
| 1811 | ↓ | ↓ | 7.45 | 3.216 | – | 0.18 | 24.27 | .163 | 2.001 | -198.6 | cloudy grey |
| 1813 | ↓ | ↓ | 7.50 | 3.174 | – | 0.16 | 24.23 | .168 | 2.094 | -205.2 | |
| | Sampled at 1814 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 6/11/14 AL / DPT0307 Mike Burcham

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0917 | 0307 | 26-30 | 7.14 | 1.248 | – | 0.40 | 30.58 | .055 | 0.797 | -133.8 | cloudy grey |
| 0919 | ↓ | ↓ | 7.15 | 1.200 | – | 0.25 | 29.30 | .054 | 0.716 | -141.2 | cloudy |
| 0921 | ↓ | ↓ | 7.16 | 1.170 | – | 0.26 | 28.81 | .054 | 0.708 | -134.5 | cloudy |
| | Sampled at 0922 | | | | | | | | | | |
| 0932 | 0307 | 31-35 | 7.32 | 1.170 | – | 0.23 | 28.84 | .054 | 0.716 | -135.4 | cloudy grey |
| 0934 | ↓ | ↓ | 7.26 | 1.205 | – | 0.16 | 28.21 | .050 | 0.741 | -145.7 | " " |
| 0936 | ↓ | ↓ | 7.25 | 1.225 | – | 0.17 | 27.79 | .058 | 0.758 | -145.6 | " " |
| | Sampled at 0937 | | | | | | | | | | |
| 0950 | 0307 | 36-40 | 7.29 | 1.600 | – | 0.18 | 30.05 | .073 | 1.608 | -148.1 | cloudy grey |
| 0952 | ↓ | ↓ | 7.30 | 1.587 | – | 0.12 | 28.85 | .074 | 1.583 | -150.0 | cloudy |
| 0954 | ↓ | ↓ | 7.29 | 1.584 | – | 0.11 | 28.12 | .074 | 1.583 | -148.0 | cloudy |
| | Sampled at 0955 | | | | | | | | | | |
| 1007 | 0307 | 41-45 | 7.29 | 1.916 | – | 0.16 | 29.74 | .089 | 1.155 | -157.1 | milky brown |
| 1009 | ↓ | ↓ | 7.28 | 1.989 | – | 0.10 | 28.78 | .094 | 1.212 | -167.3 | cloudy |
| 1011 | ↓ | ↓ | 7.28 | 2.015 | – | 0.09 | 27.86 | .097 | 1.246 | -166.3 | cloudy |
| | Sampled at 1012 | | | | | | | | | | |
| 1027 | 0307 | 46-50 | 7.32 | 2.090 | – | 0.21 | 30.42 | .095 | 1.225 | -121.6 | milky grey |
| 1029 | ↓ | ↓ | 7.32 | 2.098 | – | 0.12 | 30.30 | .096 | 1.234 | -184.6 | " " |
| 1031 | ↓ | ↓ | 7.33 | 2.122 | – | 0.10 | 30.03 | .098 | 1.260 | -190.2 | " " |
| | Sampled at 1032 | | | | | | | | | | |
| 1125 | 0307 | 56-60 | 7.33 | 4.037 | – | 0.12 | 30.56 | .195 | 2.436 | -173.5 | milky grey |
| 1127 | ↓ | ↓ | 7.38 | 4.220 | – | 0.09 | 27.64 | .212 | 2.620 | -177.1 | cloudy |
| 1129 | ↓ | ↓ | 7.36 | 4.229 | – | 0.09 | 26.83 | .215 | 2.646 | -167.3 | cloudy |
| | Sampled at 1130 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

s

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 6/11/14 AK/DPT0306 Mike Burcham

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0814 | 0306 | 31-35 | 6.97 | 1.153 | – | 0.18 | 23.62 | .059 | 0.769 | -141.9 | cloudy |
| 0816 | ↓ | ↓ | 7.07 | 1.148 | – | 0.17 | 23.31 | .059 | 0.770 | -135.7 | cloudy |
| 0818 | ↓ | ↓ | 7.07 | 1.143 | – | 0.16 | 23.29 | .059 | 0.767 | -132.2 | cloudy |
| | Sampled at 0819 | | | | | | | | | | |
| 0832 | 0306 | 36-40 | 7.49 | 1.263 | – | 0.18 | 24.86 | .063 | 0.828 | -184.5 | Cloudy grey |
| 0834 | ↓ | ↓ | mB Insufficient | | Volume. Sample collected after 1 measurement | | | | | | |
| 0836 | ↓ | ↓ | | | | | | | | | |
| | Sampled at 0837 | | | | | | | | | | |
| 0848 | 0306 | 41-45 | 7.36 | 1.754 | – | 0.15 | 25.80 | .088 | 1.136 | -178.5 | grey |
| 0850 | ↓ | ↓ | 7.37 | 1.812 | – | 0.13 | 25.74 | .091 | 1.162 | -188.4 | grey |
| 0852 | ↓ | ↓ | 7.36 | 1.838 | – | 0.11 | 25.72 | .092 | 1.181 | -193.9 | grey |
| | Sampled at 0853 | | | | | | | | | | |
| | | 46-50 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/10/14 AJ/DPT0305 M.Burcham

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1705 | 0305 | 36-40 | 7.32 | 1.331 | – | 0.23 | 30.00 | .060 | 0.788 | -164.2 | milky grey |
| 1707 | ↓ | ↓ | 7.29 | 1.318 | – | 0.15 | 29.00 | .060 | 0.741 | -183.8 | " " |
| 1709 | ↓ | ↓ | 7.32 | 1.293 | – | 0.08 | 27.64 | .060 | 0.805 | -192.3 | cloudy |
| | Sampled at 1710 | | | | | | | | | | |
| 1721 | 0305 | 41-45 | 7.36 | 1.788 | – | 0.11 | 28.83 | .084 | 1.087 | -141.3 | grey |
| 1723 | ↓ | ↓ | 7.31 | 1.745 | – | 0.08 | 27.66 | .084 | 1.086 | -159.4 | grey |
| 1725 | ↓ | ↓ | 7.30 | 1.763 | – | 0.07 | 27.52 | .085 | 1.102 | -160.2 | grey |
| | Sampled at 1726 | | | | | | | | | | |
| | | 46-50 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

es:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

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TDS (g/L) = Total Dissolved Solids (grams per liter)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/10/14 AG / DPT 0304 Mike Burton

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1433 | 0304 | 31-35 | 7.36 | 1.210 | – | 0.10 | 32.94 | .057 | 0.682 | -260.8 | milky brown |
| 1435 | ↓ | ↓ | Insufficient volume | | – | Collected samples after 1 reading | | | | | |
| 1437 | ↓ | ↓ | | | – | | | | | | |
| | Sampled at 1438 | | | | | | | | | | |
| 1452 | 0304 | 36-40 | 7.37 | 1.477 | – | 0.10 | 33.32 | .064 | 0.854 | -189.4 | cloudy grey |
| 1454 | ↓ | ↓ | 7.30 | 1.596 | – | 0.04 | 30.00 | .073 .0454 | 0.964 | -206.6 | grey |
| 1456 | ↓ | ↓ | 7.30 | 1.621 | – | 0.09 | 28.43 | mB 0.76 | 0.992 | -205.4 | grey |
| | Sampled at 1457 | | | | | | | | | | |
| 1511 | 0304 | 41-45 | 7.26 | 1.922 | – | 0.12 | 31.81 | .085 | 1.114 | -173.1 | milky grey |
| 1513 | ↓ | ↓ | 7.27 | 1.980 | – | 0.04 | 29.27 | .092 | 1.195 | -182.9 | cloudy |
| 1515 | ↓ | ↓ | 7.26 | 2.000 | – | 0.08 | 28.37 | .095 | 1.224 | -181.1 | cloudy |
| | Sampled at 1516 | | | | | | | | | | |
| 1531 | 0304 | 46-50 | 7.38 | 2.034 | – | 0.04 | 30.62 | .094 | 1.215 | -200.4 | milky gray |
| 1533 | ↓ | ↓ | 7.38 | 2.117 | – | 0.05 | 29.93 | .098 | 1.268 | -209.2 | " " |
| 1535 | ↓ | ↓ | 7.38 | 2.201 | – | 0.07 | 28.83 | .105 | 1.357 | -210.0 | " " |
| | Sampled at 1536 | | | | | | | | | | |
| 1552 | 0304 | 56-60 | 7.33 | 3.540 | – | 0.10 | 29.86 | .173 | 2.222 | -163.3 | milky brown |
| 1554 | ↓ | ↓ | 7.36 | 3.773 | – | 0.08 | 27.22 | .190 | 2.362 | -176.9 | cloudy |
| 1556 | ↓ | ↓ | 7.35 | 3.778 | – | 0.07 | 26.50 | .193 | 2.388 | -175.0 | cloudy |
| | Sampled at 1557 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 6/10/14 AF/DPT 303 Mike Burnham

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1310 | 0303 | 36-40 | 7.28 | 1.760 | – | .18 | 29.24 | .081 | 1.060 | -169.3 | grey |
| 1312 | ↓ | ↓ | 7.20 | 1.697 | – | 0.12 | 27.01 | .082 | 1.058 | -159.1 | cloudy |
| 1314 | ↓ | ↓ | 7.18 | 1.667 | – | 0.10 | 26.62 | .081 | 1.049 | -155.1 | cloudy |
| | Sampled at 1315 | | | | | | | | | | |
| 1331 | 0303 | 41-45 | 7.21 | 2.200 | – | 0.11 | 31.72 | .099 | 1.279 | -172.8 | milky grey |
| 1333 | ↓ | ↓ | 7.22 | 2.217 | – | 0.09 | 30.10 | .102 | 1.316 | -177.1 | ~~cloudy~~ cloudy |
| 1335 | ↓ | ↓ | 7.21 | 2.225 | – | 0.09 | 2952 | .104 | 1.331 | -171.5 | cloudy |
| | Sampled at 1336 | | | | | | | | | | |
| 1351 | 0303 | 46-50 | 7.34 | 2.307 | – | 0.06 | 32.08 | .102 | 1.320 | -234.1 | chalky gray |
| 1353 | ↓ | ↓ | Insufficient volume. Collected samples after one reading. | | – | | | | | | |
| 1355 | ↓ | ↓ | | | – | | | | | | |
| | Sampled at 1356 | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 6/10/14 AD/DPT0302 Miki Burdhan

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 36-40 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0959 | 0302 | 41-45 | 7.22 | 2.431 | – | 0.13 | 28.92 | .115 | 1.469 | -64.4 | grey; cloudy |
| 1000 | ↓ | ↓ | 7.18 | 2.402 | – | 0.12 | 27.57 | .117 | 1.488 | -160.9 | cloudy |
| 1002 | ↓ | ↓ | 7.15 | 2.380 | – | 0.11 | 26.78 | .117 | 1.494 | -156.1 | cloudy |
| | Sampled at 1003 | | | | | | | | | | |
| 1150 | 0302 | 46-50 | 7.14 | 2.875 | – | 0.15 | 30.13 | .128 | 1.634 | -169.4 | cloudy grey |
| 1152 | ↓ | ↓ | 7.14 | 2.806 | – | 0.12 | 30.90 | .128 | 1.637 | -169.2 | ↓ |
| 1154 | ↓ | ↓ | 7.15 | 2.775 | – | 0.10 | 30.39 | .128 | 1634 | -171.2 | ✓ |
| | Sampled at 1155 | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/10/2014 AE/DPT 0301 Mike Burnham

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0815 | 0301 | 36-40 | 7.22 | 1.903 | – | 0.20 | 25.78 | ~~.215~~ .095 | 1.218 | -161.3 | ~~no cloudy~~ grey cloudy |
| 0817 | ↓ | ↓ | 7.18 | 1.892 | – | 0.17 | 25.30 | .095 | 1.222 | -159.6 | cloudy |
| 0819 | ↓ | ↓ | 7.15 | 1.882 | – | 0.15 | 25.06 | .095 | 1.221 | -156.1 | cloudy |
| | Sampled at 0820 | | | | | | | | | | |
| 0836 | 0301 | 41-45 | 7.25 | 2.228 | – | 0.16 | 26.62 | .110 | 1.410 | -181.6 | grey, milky |
| 0838 | ↓ | ↓ | 7.25 | 2.254 | – | 0.14 | 26.36 | .112 | 1.431 | -194.9 | cloudy |
| 0840 | ↓ | ↓ | 7.23 | 2.283 | – | 0.13 | 26.24 | .114 | 1.456 | -194.1 | cloudy |
| | Sampled at 0841 | | | | | | | | | | |
| 0859 | 0301 | 46-50 | 7.41 | 2.331 | – | 0.11 | 27.32 | .114 | 1.455 | -223.4 | grey milky |
| 0901 | ↓ | ↓ | 7.41 | 2.351 | – | 0.09 | 27.28 | .115 | 1.468 | -233.1 | " " |
| 0903 | ↓ | ↓ | 7.40 | 2.393 | – | 0.09 | 27.35 | .117 | 1.486 | -239.3 | " " |
| | Sampled at 0904 | | | | | | | | | | |
| 0921 | 0301 | 56-60 | 7.52 | 3.538 | – | 0.12 | 26.02 | .186 | 2.315 | -242.7 | grey |
| 0923 | ↓ | ↓ | 7.50 | 3.728 | – | 0.10 | 25.45 | .195 | 2.410 | -240.0 | cloudy |
| 0925 | ↓ | ↓ | 7.48 | 3.766 | – | 0.10 | 25.30 | .197 | 2.437 | -234.0 | cloudy |
| | Sampled at 0926 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/09/14 & 6/10/14 AC/DPT0300 Mike Burcham

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1636 | 0300 | 36-40 | 7.23 | 2.564 | – | 0.25 | 30.85 | .117 | 1.496 | -188.4 | grey |
| 1638 | ↓ | ↓ | 7.27 | 2.556 | – | 0.16 | 30.20 | .118 | 1.515 | -202.6 | grey |
| 1640 | ↓ | ↓ | 7.26 | 2.560 | – | 0.14 | 29.59 | .120 | 1.531 | -202.9 | cloudy |
| | Sampled at 1641 | | | | | | | | | | |
| 1654 | 0300 | 41-45 | 7.38 | 2.248 | – | 0.28 | 29.94 | 104 | 1.346 | -225.0 | grey |
| 1656 | ↓ | ↓ | 7.37 | 2.436 | – | 0.11 | 29.14 | .116 | 1.493 | -233.0 | grey |
| 1658 | ↓ | ↓ | 7.32 | 2.571 | – | 0.12 | 28.31 | .124 | 1.582 | -233.6 | grey |
| | Sampled at 1659 | | | | | | | | | | |
| ~~1713~~ 1713 | 0300 | 46-50 | 7.48 | 2.595 | – | 0.22 | 29.03 | .123 | 1.572 | -240.9 | grey |
| 1715 | ↓ | ↓ | 7.48 | 2.635 | – | 0.12 | 28.67 | .127 | 1.611 | -250.4 | grey |
| 1717 | ↓ | ↓ | 7.46 | 2.715 | – | 0.10 | 28.53 | .131 | 1.661 | -253.2 | grey |
| | Sampled at 1718 | | | | | | | | | | |
| 6/10/14 0733 | 0300 | 56-60 | 7.22 | 3.400 | – | 0.50 | 24.55 | .183 | 2.240 | -227.4 | grey |
| 0735 | ↓ | ↓ | 7.35 | 3.655 | – | 0.41 | 24.36 | .195 | 2.417 | -240.3 | cloudy/grey |
| 0737 | ↓ | ↓ | 7.36 | 3.712 | – | 0.34 | 24.16 | .199 | 2.458 | -237.3 | cloudy |
| | Sampled at 0738 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 6/9/14 AB / DPT0299 Mike Burcham

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1436 | 0299 | 31-35 | 7.17 | 2.380 | – | 0.26 | ~~30.08~~ 30.46 | .108 | 1.393 | -180.4 | grey |
| 1438 | ↓ | ↓ | 7.15 | 2.328 | – | 0.21 | 28.86 | .110 | 1.407 | -183.5 | cloudy |
| 1440 | ↓ | ↓ | 7.12 | 2.292 | – | 0.20 | 28.07 | .110 | 1.407 | -181.9 | cloudy |
| | Sampled at 1441 | | | | | | | | | | |
| 1454 | 0299 | 36-40 | 7.22 | 2.533 | – | 0.39 | 31.11 | .115 | 1.472 | -179.8 | grey |
| 1456 | ↓ | ↓ | 7.19 | 2.483 | – | 0.21 | 29.69 | .116 | 1.480 | -179.9 | cloudy |
| 1458 | ↓ | ↓ | 7.16 | 2.459 | – | 0.20 | 29.04 | .116 | 1.483 | -176.3 | cloudy |
| | Sampled at 1459 | | | | | | | | | | |
| 1512 | 0299 | 41-45 | 7.28 | 2.588 | – | 0.25 | 31.66 | .118 | 1.515 | -201.8 | grey |
| 1514 | ↓ | ↓ | 7.25 | 2.721 | – | 0.17 | 29.63 | .128 | 1.639 | -204.5 | cloudy |
| 1516 | ↓ | ↓ | 7.21 | 2.749 | – | 0.17 | 28.59 | .132 | 1.673 | -196.3 | cloudy |
| | Sampled at 1517 | | | | | | | | | | |
| 1605 | 0299 | 46-50 | 7.40 | 2.819 | – | 0.23 | 31.93 | .127 | 1.622 | -220.4 | gray |
| 1607 | ↓ | ↓ | 7.43 | 2.801 | – | 0.16 | 31.32 | .128 | 1.631 | -242.4 | gray |
| 1609 | ↓ | ↓ | 7.43 | 2.882 | – | 0.14 | 30.61 | .134 | 1.716 | -251.2 | gray |
| | Sampled at 1610 | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

es.

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 6/9/14 Z/DPT0298 Mike Burham

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1109 | 0298 | 31-35 | 7.29 | 1.442 | – | 0.34 | 29.60 | .090 | 1.164 | -207.9 | grey |
| 1111 | ↓ | ↓ | 7.20 | 1.907 | – | 0.48 | 27.17 | .092 | 1.189 | -202.5 | cloudy |
| 1113 | ↓ | ↓ | 7.16 | 1.886 | – | 0.42 | 26.59 | .092 | 1.188 | -196.8 | cloudy |
| | Sampled at 1114 | | | | | | | | | | |
| 1128 | 0298 | 36-40 | 7.29 | 2.054 | – | 0.21 | 29.40 | .096 | 1.239 | -233.0 | grey |
| 1130 | ↓ | ↓ | 7.23 | 2.046 | – | 0.17 | 28.46 | .097 | 1.246 | -232.4 | cloudy |
| 1132 | ↓ | ↓ | 7.18 | 2.016 | – | 0.19 | 27.84 | .096 | 1.241 | -225.1 | cloudy |
| | Sampled at 1133 | | | | | | | | | | |
| 1147 | 0298 | 41-45 | 7.30 | 2.479 | – | 0.15 | 32.30 | .110 | 1.422 | -216.3 | grey |
| 1149 | ↓ | ↓ | 7.26 | 2.469 | – | 0.11 | 30.13 | .114 | 1.465 | -221.0 | cloudy |
| 1151 | ↓ | ↓ | 7.26 | 2.459 | – | 0.11 | 28.97 | .116 | 1.485 | -218.6 | cloudy |
| | Sampled at 1152 | | | | | | | | | | |
| 1207 | 0298 | 46-50 | 7.36 | 2.934 | – | 0.20 | 32.24 | .131 | 1.666 | -224.0 | grey |
| 1209 | ↓ | ↓ | 7.36 | 2.881 | – | 0.12 | 31.37 | .131 | 1.668 | -239.8 | grey |
| 1211 | ↓ | ↓ | 7.36 | 2.866 | – | 0.12 | 30.49 | .133 | 1.689 | -260.7 | grey |
| | Sampled at 1212 | | | | | | | | | | |
| 1331 | 0298 | 56-60 | 7.48 | 3.953 | – | 1.79 | 28.15 | .195 | 2.426 | -216.2 | grey |
| 1333 | ↓ | ↓ | 7.49 | 3.938 | – | 1.55 | 27.77 | .196 | 2.430 | -221.5 | grey/cloudy |
| 1335 | ↓ | ↓ | 7.49 | 3.915 | – | 1.34 | 27.46 | .196 | 2.423 | -228.8 | ↓ |
| | Sampled at 1336 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 6/9/14 DPT0297 (Y) M. Beckham

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0831 | 0297 | 31-35 | 7.22 | 2.035 | – | 0.25 | 27.15 | .099 | 1.265 | -164.7 | grey |
| 0833 | ↓ | ↓ | 7.18 | 1.977 | – | 0.20 | 26.48 | .097 | 1.246 | -172.5 | cloudy |
| 0835 | ↓ | ↓ | 7.15 | 1.946 | – | 0.20 | 26.09 | .096 | 1.236 | -176.1 | cloudy |
| | Sampled at 0836 | | | | | | | | | | |
| 0848 | 0297 | 36-40 | 7.28 | 2.226 | – | 0.28 | 27.90 | .107 | 1.372 | -197.0 | grey |
| 0850 | ↓ | ↓ | 7.26 | 2.226 | – | 0.26 | 27.65 | .108 | 1.378 | -212.0 | cloudy |
| 0852 | ↓ | ↓ | 7.24 | 2.219 | – | 0.24 | 27.35 | .108 | 1.380 | -220.6 | cloudy |
| | Sampled at 0853 | | | | | | | | | | |
| 0958 | 0297 | 41-45 | 7.39 | 1.971 | – | 0.19 | 29.86 | .085 | 1.088 | -310.0 | grey |
| 1000 | ↓ | ↓ | 7.38 | 1.634 | – | 0.17 | 29.66 | .073 | 0.955 | -383.8 | grey |
| 1002 | ↓ | ↓ | 7.38 | 1.560 | – | 0.18 | 29.32 | .071 | 0.932 | -422.9 | grey |
| | Sampled at 1003 | | | | | | | | | | |
| 1017 | 0297 | 46-50 | 7.27 | 2.680 | – | 0.26 | 29.85 | .125 | 1.595 | -367.4 | grey |
| 1019 | ↓ | ↓ | 7.28 | 2.678 | – | 0.17 | 29.16 | .127 | 1.616 | -411.2 | cloudy |
| 1021 | ↓ | ↓ | 7.25 | 2.680 | – | 0.16 | 28.68 | .127 | 1.619 | -418.8 | cloudy |
| | Sampled at 1022 | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 6/6/14 & 6/9/14 DPT0296 (X) M. Buscham

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1530 | 0296 | 31-35 | 7.13 | 2.013 | – | 7.19 | 27.90 | .095 | 1.216 | -170.8 | grey |
| 1532 | ↓ | ↓ | 6.97 | 1.898 | – | 3.95 | 27.03 | .092 | 1.186 | -159.2 | cloudy |
| 1534 | ↓ | ↓ | 6.95 | 1.983 | – | 3.05 | 26.57 | .092 | 1.188 | -159.3 | cloudy |
| | Sampled at 1535 | | | | | | | | | | |
| 1550 | 0296 | 36-40 | 7.18 | 2.047 | – | 0.83 | 29.46 | .095 | 1.225 | -235.0 | light grey |
| 1552 | ↓ | ↓ | 7.09 | 2.007 | – | 0.78 | 27.83 | .096 | 1.233 | -224.7 | cloudy |
| 1554 | ↓ | ↓ | 7.03 | 1.973 | – | 0.79 | 27.14 | .096 | 1.231 | -224.4 | cloudy |
| | Sampled at 1555 | | | | | | | | | | |
| 1609 | 0296 | 41-45 | 7.17 | 2.233 | – | 0.55 | 30.04 | .102 | 1.317 | -202.6 | grey |
| 1611 | ↓ | ↓ | 7.14 | 2.178 | – | 0.53 | 28.86 | .101 | 1.304 | -218.8 | cloudy |
| 1613 | ↓ | ↓ | 7.10 | 2.160 | – | 0.53 | 28.47 | .103 | 1.318 | -227.2 | cloudy |
| | Sampled at 1614 | | XMB | | | | | | | | |
| 1632 | 0296 | 46-50 | 7.35 | 2.302 | – | 0.43 | 30.29 | .106 | 1.369 | -411.9 | grey |
| 1634 | ↓ | ↓ | 7.31 | 2.361 | – | 0.42 | 30.14 | .109 | 1.406 | -444.9 | grey |
| 1636 | ↓ | ↓ | 7.30 | 2.411 | – | 0.42 | 29.86 | .112 | 1.441 | -456.8 | grey |
| XMB | Sampled at 1637 | | | | | | | | | | |
| 6/14/14 0758 | 0296 | 56-60 | 7.23 | 3.659 | – | 0.31 | 24.29 | .145 | 2.411 | -165.4 | grey |
| 0757 | ↓ | ↓ | 7.38 | 3.637 | – | 0.27 | 23.56 | .147 | 2.429 | -184.1 | cloudy |
| 0759 | ↓ | ↓ | 7.34 | 3.612 | – | 0.27 | 23.41 | .146 | 2.421 | -179.7 | cloudy |
| | Sampled at 0800 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/06/14 DPT0295 (A2)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0940 | 0295 | 16-20 | 6.64 | 1.232 | – | 3.47 | 29.77 | 0.056 | 0.741 | -96.1 | cloudy |
| 0942 | ↓ | ↓ | 6.62 | 1.212 | – | 2.01 | 29.13 | 0.055 | 0.732 | -110.3 | ↓ |
| 0944 | ↓ | ↓ | 6.62 | 1.198 | – | 1.58 | 28.83 | 0.055 | 0.727 | -117.2 | ↓ |
| | Sampled at 0945 | | | | | | (CS) | | | | |
| 1006 | 0295 | 21-25 | 6.73 | 1.321 | – | 0.46 | 30.59 | 0.059 | 0.785 | -209.0 | milky |
| 1008 | ↓ | ↓ | 6.69 | 1.293 | – | 0.43 | 29.61 | 0.059 | 0.777 | -312.5 | cloudy |
| 1010 | ↓ | ↓ | 6.65 | 1.269 | – | 0.44 | 29.25 | 0.058 | 0.766 | -338.9 | ↓ |
| | Sampled at 1011 | | | | | | | | | | |
| 1035 | 0295 | 26-30 | 6.85 | 1.299 | – | 0.34 | 30.34 | 0.058 | 0.770 | -333.9 | cloudy |
| 1037 | ↓ | ↓ | 6.85 | 1.036 | – | 0.36 | 29.63 | 0.047 | 0.626 | -433.8 | ↓ |
| 1039 | ↓ | ↓ | 6.87 | 0.990 | – | 0.36 | 29.24 | 0.045 | 0.601 | -470.8 | |
| | Sampled at 1040 | | | | | | | | (D1) | | |
| 1146 | 0295 | 31-35 | 7.01 | 1.910 | – | 0.28 | 32.60 | 0.081 | 1.076 | -483.4 | cloudy gray |
| 1148 | ↓ | ↓ | 6.97 | 1.926 | – | 0.29 | 30.63 | 0.087 | 1.134 | -500.0 | cloudy |
| 1150 | ↓ | ↓ | 6.98 | 1.808 | – | 0.29 | 30.11 | 0.085 | 1.100 | -510.4 | ↓ |
| | Sampled at 1151 | | | | | | | | | | |
| 1310 | 0295 | 36-40 | 7.07 | 2.837 | – | 2.81 | 31.65 | 0.123 | 1.593 | -240.0 | milky gray |
| 1312 | ↓ | ↓ | 4.99 | 2.794 | – | 2.26 | 30.82 | 0.129 | 1.641 | -256.7 | cloudy |
| 1314 | ↓ | ↓ | 6.99 | 2.764 | – | 1.51 | 30.47 | 0.128 | 1.628 | -272.5 | ↓ |
| | Sampled at 1315 | | | | | | | | | | |
| 1353 | 0295 | 41-45 | 7.20 | 2.941 | – | 0.39 | 32.18 | 0.132 | 1.681 | -335.2 | milky gray |
| — | ↓ | ↓ | Insufficient water volume to collect addl. readings | | – | | | | | | |
| | Sampled at 1354 | | | | | | | | | | |
| | | 46-50 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/05/14 DPT0294 (B2)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1402 | 0294 | 16-20 | 6.85 | 1.251 | – | 1.76 | 30.85 | 0.056 | 0.741 | -235.4 | cloudy |
| 1404 | ↓ | ↓ | 6.83 | (CA) 1.203 | – | 1.62 | 30.12 | 0.055 | 0.720 | -279.1 | ↓ |
| 1406 | ↓ | ↓ | 6.84 | 1.161 | – | 1.52 | 29.61 | 0.053 | 0.705 | -312.6 | ↓ |
| | Sampled at 1407 | | | | | | | | | | |
| 1424 | 0294 | 21-25 | 6.86 | 1.388 | – | 0.69 | 30.51 | 0.061 | 0.807 | -396.2 | cloudy |
| 1426 | ↓ | ↓ | 6.81 | 1.370 | – | 0.68 | 30.35 | 0.061 | 0.808 | -453.0 | ↓ |
| 1428 | ↓ | ↓ | 6.76 | 1.324 | – | 0.69 | 30.07 | 0.060 | 0.790 | -440.7 | ↓ |
| | Sampled at 1429 | | | | | | | | | | |
| 1452 | 0294 | 26-30 | 6.83 | 1.459 | – | 0.62 | 30.13 | 0.066 | 0.873 | -498.9 | cloudy |
| 1454 | ↓ | ↓ | 6.77 | 1.403 | – | 0.60 | 29.25 | 0.065 | 0.853 | -499.3 | ↓ |
| 1456 | ↓ | ↓ | 6.76 | 1.384 | – | 0.59 | 28.94 | 0.064 | 0.838 | -500.8 | ↓ |
| | Sampled at 1457 | | | | | | | | | | |
| 1548 | 0294 | 31-35 | 6.98 | 2.467 | – | 1.50 | 30.90 | 0.115 | 1.472 | -386.6 | cloudy |
| 1550 | ↓ | ↓ | 6.94 | 2.433 | – | 1.38 | 29.55 | 0.114 | 1.460 | -374.6 | ↓ |
| 1552 | ↓ | ↓ | 6.94 | 2.428 | – | 1.31 | 29.30 | 0.114 | 1.457 | -372.9 | ↓ |
| | Sampled at 1553 | | | | | | | | | | |
| 1622 | 0294 | 36-40 | 7.21 | 3.014 | – | 0.32 | 32.80 | 0.125 | 1.643 | -434.3 | cloudy |
| 1624 | ↓ | ↓ | 7.20 | 3.353 | – | 0.30 | 31.32 | 0.148 | 1.889 | -412.4 | ↓ |
| 1626 | ↓ | ↓ | 7.17 | 3.416 | – | 0.30 | 30.88 | 0.158 | 1.997 | -373.9 | ↓ |
| | Sampled at 1627 | | | (CA) | | | | | (CA) | | |
| 1651 | 0294 | 41-45 | 7.28 | 4.916 | – | 0.37 | 30.91 | 0.217 | 2.838 | -173.1 | milky brown |
| 1653 | ↓ | ↓ | 7.28 | 4.950 | – | 0.33 | 30.22 | 0.238 | 2.930 | -173.4 | cloudy |
| 1655 | ↓ | ↓ | 7.27 | 4.935 | – | 0.33 | (CA) 29.62 | 0.239 | 2.943 | -175.1 | ↓ |
| | Sampled at 1656 | | | | | | | | | | |
| | | 46-50 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/05/14 DPT0293 (N)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0905 | 0293 | 31-35 | 7.45 | 2.131 | – | 2.54 | 23.87 | 0.114 | 1.417 | -564.0 | cloudy |
| 0907 | ↓ | ↓ | 7.65 | 2.025 | – | 1.79 | 24.31 | 0.106 | 1.344 | -577.9 | ↓ |
| 0911 | ↓ | ↓ | 7.65 | 2.006 | – | 1.40 | 24.61 | 0.103 | 1.318 | -583.0 | ↓ |
| | Sampled at 0912 | | | | | | | | | | |
| 0923 | 0293 | 36-40 | 7.30 | 2.573 | – | 0.33 | 26.79 | 0.123 | 1.603 | -368.1 | milky gray |
| 0925 | ↓ | ↓ | 7.23 | 2.566 | – | 0.28 | 26.38 | 0.128 | 1.621 | -450.7 | ↓ |
| 0927 | ↓ | ↓ | 7.20 | 2.555 | – | 0.28 | 26.05 | 0.128 | 1.626 | -452.1 | ↓ |
| | Sampled at 0923 | | | | | | | | | | |
| 0941 | 0293 | 41-45 | 7.37 | 2.684 | – | 0.24 | 27.24 | 0.131 | 1.658 | -318.2 | milky tan |
| 0943 | ↓ | ↓ | 7.29 | 2.728 | – | 0.19 | 26.85 | 0.135 | 1.713 | -461.4 | cloudy |
| 0945 | ↓ | ↓ | 7.25 | 2.722 | – | 0.20 | 26.53 | 0.136 | 1.722 | -451.9 | ↓ |
| | Sampled at 0946 | | | | | | | | | | |
| 1001 | 0293 | 46-50 | 7.74 | 1.864 | – | 0.19 | 26.72 | 0.091 | 1.175 | -508.0 | milky gray |
| — | ↓ | ↓ | Insufficient water volume to collect addtl. readings | | | | | | | | |
| — | ↓ | ↓ | | | – | | | | | | |
| | Sampled at 1002 | | | (AS) | | | | | | | |
| 1057 | 0293 | 56-60 | 7.57 | 4.194 | – | 3.19 | 28.54 | 0.206 | 2.553 | -243.1 | very cloudy gray |
| 1059 | ↓ | ↓ | 7.57 | 4.202 | – | 1.98 | 27.88 | 0.210 | 2.591 | -278.6 | ↓ |
| 1101 | ↓ | ↓ | 7.59 | 4.159 | – | 1.51 | 28.04 | 0.207 | 2.557 | -310.6 | |
| | Sampled at 1102 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/04/14 + 06/05/14 DPT 0292 (V)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1642 | 0292 | 31-35 | 7.29 | 1.744 | – | 0.11 | 28.50 | 0.082 | 1.066 | -149.2 | cloudy |
| 1644 | ↓ | ↓ | 7.21 | 1.725 | – | 0.11 | 28.09 | 0.082 | 1.064 | -146.5 | ↓ |
| 1646 | ↓ | ↓ | 7.16 | 1.705 | – | 0.12 | 27.73 | 0.082 | 1.059 | -141.0 | ↓ |
| | Sampled at 1647 | | – 06/04/14 | | | | | | | | |
| 1700 | 0292 | 36-40 | 7.07 | 1.722 | – | 0.07 | 29.45 | 0.080 | 1.041 | -162.9 | cloudy |
| 1702 | ↓ | ↓ | 7.08 | 1.705 | – | 0.06 | 28.65 | 0.080 | 1.039 | -165.0 | ↓ |
| 1704 | ↓ | ↓ | 7.06 | 1.690 | – | 0.06 | 28.25 | 0.080 | 1.037 | -163.2 | ↓ |
| | Sampled at 1705 | | – 06/04/14 | | | | | | ② | | |
| 1720 | 0292 | 41-45 | 7.10 | 1.607 | – | 0.05 | 28.60 | 0.076 | 0.982 | -191.8 | cloudy |
| 1722 | ↓ | ↓ | 7.12 | 1.676 | – | 0.04 | 27.49 | 0.079 | 1.031 | -193.7 | ↓ |
| 1724 | ↓ | ↓ | 7.09 | 1.696 | – | 0.04 | 27.00 | 0.082 | 1.063 | -189.1 | ↓ |
| | Sampled at 1725 | | – 06/04/14 | | | | | | | | |
| 0801 | 0292 | 46-50 | 7.65 | 1.464 | – | 2.04 | 19.45 | 0.075 | 0.972 | -157.8 | milky gray brown |
| 0803 | ↓ | ↓ | 7.66 | 1.633 | – | 1.56 | 20.30 | 0.091 | 1.166 | -427.1 | ↓ |
| 0805 | ↓ | ↓ | 7.67 | 1.629 | – | 1.23 | 20.67 | 0.090 | 1.154 | -466.7 | ↓ |
| | Sampled at 0806 | | – 06/05/14 | | from | thin | depth | down | | | |
| 0821 | 0292 | 56-60 | 7.62 | 1.567 | – | 0.60 | 22.17 | 0.085 | 1.073 | -573.4 | milky |
| 0823 | ↓ | ↓ | 7.61 | 1.681 | – | 0.33 | 22.24 | 0.087 | 1.120 | -491.4 | cloudy |
| 0825 | ↓ | ↓ | 7.61 | 1.889 | – | 0.34 | 22.38 | 0.098 | 1.264 | -455.3 | ↓ |
| | Sampled at 0826 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes

DPT = Direct Push Technology

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mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/04/14 DPT0291 (W)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1359 | 0291 | 31-35 | 7.29 | 1.946 | – | 0.38 | 28.48 | 0.093 | 1.200 | -146.3 | cloudy |
| 1401 | ↓ | ↓ | 7.04 | 1.873 | – | 0.41 | 27.64 | 0.091 | 1.169 | -129.7 | ↓ |
| 1403 | ↓ | ↓ | 6.97 | 1.856 | – | 0.31 | 27.24 | 0.091 | 1.158 | -125.6 | ↓ |
| | Sampled at 1404 | | | | | | ~~28~~ (2) | | | | |
| 1420 | 0291 | 36-40 | 6.96 | 2.368 | – | 0.08 | 29.71 | 0.111 | 1.422 | -154.8 | cloudy |
| 1422 | ↓ | ↓ | 6.93 | 2.355 | – | 0.08 | 29.96 | 0.111 | 1.426 | -147.9 | ↓ |
| 1424 | ↓ | ↓ | 6.92 | 2.352 | – | 0.07 | 28.74 | 0.112 | 1.427 | -144.6 | ↓ |
| | Sampled at 1425 | | | | | | (2) 30.91 | | | | |
| 1436 | 0291 | 41-45 | 7.04 | 2.588 | – | 0.19 | ~~2.535~~ | 0.113 | 1.461 | -181.7 | cloudy |
| 1438 | ↓ | ↓ | 7.05 | 2.655 | – | 0.08 | ~~2.663~~ | 0.122 | 1.563 | -178.0 | ↓ |
| 1440 | ↓ | ↓ | 7.04 | 2.639 | – | 0.06 (2) | ~~29.85~~ 29.40 | 0.124 | 1.578 | -175.5 | ↓ |
| | Sampled at 1441 | | | | | | | | | | |
| 1501 | 0291 | 46-50 | 7.58 | 2.547 | – | 0.23 | 26.14 | 0.128 | 1.623 | -173.9 | milky brown |
| — | ↓ | ↓ | ~~Insufficient water volume to collect additional readings~~ | | – | | | | | | |
| — | ↓ | ↓ | | | – | | | | | | |
| | Sampled at 1502 | | ~~7.45~~ | ~~2.820~~ (2) | | ~~8.01~~ | ~~27.77~~ | ~~0.129~~ | ~~1.643~~ | ~~-281.2~~ | ~~cloudy~~ (2) |
| 1553 | 0291 | 56-60 | 7.45 | 2.820 | – | 0.07 | 27.71 | 0.129 | 1.643 | -281.2 | cloudy |
| 1555 | ↓ | ↓ | 7.45 | 2.867 | – | 0.07 | 28.51 | 0.184 | 2.322 | -285.1 | ↓ |
| 1557 | ↓ | ↓ | 7.40 | 2.942 | – | 0.07 | 28.72 | 0.192 | 2.390 | -280.1 | ↓ |
| | Sampled at 1558 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/04/14 DPT0290 (T)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1040 | 0290 | 31-35 | 7.12 | 1.763 | – | 0.12 | 26.13 | 0.087 | 1.122 | -115.7 | cloudy |
| 1042 | ↓ | ↓ | 6.99 | 1.757 | – | 0.13 | 26.07 | 0.087 | 1.120 | -115.6 | ↓ |
| 1044 | ↓ | ↓ | 6.92 | 1.744 | – | 0.14 | 25.89 | 0.087 | 1.117 | -115.5 | ↓ |
| | Sampled at 1045 | | | | | | | | | | |
| 1059 | 0290 | 36-40 | 7.02 | 1.963 | – | 0.08 | 28.99 | 0.092 | 1.188 | -165.7 | cloudy |
| 1101 | ↓ | ↓ | 7.00 | 1.931 | – | 0.07 | 27.67 | 0.094 | 1.206 | -157.2 | ↓ |
| 1103 | ↓ | ↓ | 6.94 | 1.904 | – | 0.08 | 26.96 | 0.093 | 1.197 | -137.8 | ↓ |
| | Sampled at 1104 | | | | | | | | | | |
| 1118 | 0290 | 41-45 | 7.11 | 2.210 | – | 0.13 | 31.51 | 0.100 | 1.293 | -186.5 | cloudy |
| 1120 | ↓ | ↓ | 7.10 | 2.194 | – | 0.05 | 30.08 | 0.101 | 1.302 | -189.2 | ↓ |
| 1122 | ↓ | ↓ | 7.06 | 2.163 | – | 0.05 | 29.03 | 0.102 | 1.306 | -190.3 | ↓ |
| | Sampled at 1123 | | | | | | | | | | |
| 1138 | 0290 | 46-50 | 7.13 | 2.637 | – | 0.07 | 31.75 | 0.115 | 1.495 | -158.1 | milky grey |
| 1140 | ↓ | ↓ | 7.14 | 2.509 | – | 0.05 | 31.40 | 0.114 | 1.460 | -183.9 | ↓ |
| 1142 | ↓ | ↓ | 7.13 | 2.493 | – | 0.04 | 31.06 | 0.113 | 1.450 | -189.6 | cloudy |
| | Sampled at 1143 | | | | | | | ~~0.195~~ (S) | | | |
| 1159 | 0290 | 56-60 | 7.39 | 4.165 | – | 0.10 | 29.03 | 0.195 | 2.489 | -163.0 | cloudy |
| 1201 | ↓ | ↓ | 7.31 | 4.147 | – | 0.08 | 28.51 | 0.204 | 2.523 | -170.8 | ↓ |
| 1203 | ↓ | ↓ | 7.25 | 4.144 | – | 0.08 | 28.17 | 0.206 | 2.543 | -172.3 | ↓ |
| | Sampled at 1204 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/03/14 + 06/04/14 DPT0289 (R)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1654 | 0289 | 8-12 | 7.14 | 0.382 | – | 0.58 | 26.94 | 0.042 | 0.563 | -101.8 | cloudy |
| 1656 | ↓ | ↓ | 7.09 | 0.850 | – | 0.52 | 26.09 | 0.041 | 0.547 | -98.5 | ↓ |
| 1658 | ↓ | ↓ | 7.07 | 0.827 | – | | 25.41 | 0.040 | 0.533 | -96.4 | clear |
| | Sampled at 1659 | | – 06/03/14 | | | | | | | | |
| 1707 | 0289 | 16-20 | 7.00 | 2.015 | – | 0.14 | 27.56 | 0.098 | 1.256 | -143.4 | cloudy |
| 1709 | ↓ | ↓ | 7.02 | 2.053 | – | 0.10 | 27.44 | 0.099 | 1.275 | -148.5 | ↓ |
| 1711 | ↓ | ↓ | 7.02 | 2.054 | – | 0.08 | 27.27 | 0.100 | 1.281 | -145.2 | ↓ |
| | Sampled at 1712 | | – 06/03/14 | | | | | | | | |
| 0723 | 0289 | 21-25 | 7.38 | 1.918 | – | 0.32 | 23.78 | 0.079 | 1.372 | -78.7 | cloudy |
| 0725 | ↓ | ↓ | 7.25 | 1.945 | – | 0.24 | 24.07 | 0.101 | 1.288 | -115.7 | ↓ |
| 0727 | ↓ | ↓ | 7.15 | 1.945 | – | 0.22 | 24.08 | 0.101 | 1.287 | -123.9 | ↓ |
| | Sampled at 0728 | | – 06/04/14 | from here through bottom depth | | | | | | | |
| 0738 | 0289 | 26-30 | 6.76 | 1.674 | – | 0.15 | 24.36 | 0.085 | 1.095 | -121.0 | cloudy |
| 0740 | ↓ | ↓ | 6.78 | 1.705 | – | 0.14 | 24.40 | 0.087 | 1.120 | -124.0 | ↓ |
| 0742 | ↓ | ↓ | 6.77 | 1.703 | – | 0.17 | 24.32 | 0.087 | 1.123 | -120.5 | ↓ |
| | Sampled at 0743 | | | | | | | | | | |
| 0755 | 0289 | 31-35 | 6.83 | 1.494 | – | 0.14 | 24.87 | 0.076 | 0.981 | -149.0 | milky |
| 0757 | ↓ | ↓ | 6.82 | 1.492 | – | 0.10 | 25.04 | 0.075 | 0.972 | -146.5 | ↓ |
| 0759 | ↓ | ↓ | 6.80 | 1.478 | – | 0.10 | 24.95 | 0.074 | 0.963 | -139.3 | cloudy |
| | Sampled at 0800 | | | | | | | | | | |
| 0813 | 0289 | 36-40 | 6.80 | 1.713 | – | 0.11 | 25.65 | 0.084 | 1.086 | -142.3 | milky |
| 0815 | ↓ | ↓ | 6.83 | 1.700 | – | 0.09 | 25.68 | 0.085 | 1.095 | -130.8 | cloudy |
| 0817 | ↓ | ↓ | 6.81 | 1.677 | – | 0.10 | 25.48 | 0.084 | 1.083 | -122.6 | ↓ |
| | Sampled at 0818 | | | | | | @ | | @ | | dark milky |
| 08:30 | 0289 | 41-45 | 6.87 | 2.093 | – | 0.14 | 25.35 | 0.096 | 1.235 | -169.4 | milky |
| 08:32 | ↓ | ↓ | 6.89 | 2.155 | – | 0.07 | 25.26 | 0.109 | 1.394 | -153.7 | cloudy |
| 08:34 | ↓ | ↓ | 6.87 | 2.148 | – | 0.08 | 25.00 | 0.110 | 1.397 | -140.3 | ↓ |
| | Sampled at 0835 | | | | | | | | | | |
| 0849 | 0289 | 46-50 | 7.02 | 2.119 | – | 0.07 | 26.62 | 0.099 | 1.335 | -181.0 | milky |
| 0851 | ↓ | ↓ | 7.13 @ | 1.797 | – | 0.06 | 26.48 | 0.094 | 1.188 @ | -198.5 | cloudy |
| 0853 | ↓ | ↓ | 7.15 | 1.648 | – | 0.06 | 26.49 | 0.081 | 1.060 @ | -205.1 | ↓ |
| | Sampled at 0854 | | | | | | | | | | |
| 0938 | 0289 | 56-60 | 7.32 | 2.238 | – | 0.15 | 25.85 | 0.113 | 1.436 | -276.1 | cloudy |
| 0940 | ↓ | ↓ | 7.32 @ | 2.240 | – | 0.11 | 26.09 | 0.112 | 1.425 | -280.3 | ↓ |
| 0942 | ↓ | ↓ | 7.31 | 2.250 | – | 0.10 | 25.96 | 0.113 | 1.437 | -282.9 | ↓ |
| | Sampled at 0943 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | – | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/03/14 DPT0288 (BI)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1438 | 0288 | 26-30 | 7.16 | 0.708 | – | 0.22 | 28.18 | 0.032 | 0.437 | -107.0 | cloudy |
| 1440 | ↓ | ↓ | 7.10 | 0.700 | – | 0.25 | 27.74 | 0.032 | 0.432 | -105.4 | ↓ |
| 1442 | ↓ | ↓ | 7.05 | 0.693 | – | 0.28 | 27.80 | 0.032 | 0.428 | -105.4 | ↓ |
| | Sampled at 1443 | | | | | | | | | | |
| 1456 | 0288 | 31-35 | 7.16 | 0.804 | – | 0.12 | 29.25 | 0.035 | 0.480 | -153.1 | milky tan |
| 1458 | ↓ | ↓ | 7.16 | 0.787 | – | 0.08 | 28.81 | 0.036 | 0.479 | -148.0 | cloudy |
| 1500 | ↓ | ↓ | 7.13 | 0.782 | – | 0.07 | 28.66 | 0.035 | 0.474 | -139.2 | ↓ |
| | Sampled at 1501 | | | | | | | (2A) | | | |
| 1544 | 0288 | 36-40 | 7.40 | 0.985 | – | 0.17 | 29.46 | 0.044 | 0.540 | -159.9 | cloudy tan |
| 1546 | ↓ | ↓ | 7.37 | 0.987 | – | 0.15 | 29.35 | 0.044 | 0.592 | -159.0 | ↓ |
| 1548 | ↓ | ↓ | 7.32 | 0.984 | – | 0.12 | 29.51 | 0.044 | 0.589 | -156.7 | ↓ |
| | Sampled at 1549 | | | | | | | | | | |
| 1602 | 0288 | 41-45 | 7.25 | 0.927 | – | 0.07 | 29.38 | 0.042 | 0.559 | -155.1 | milky tan |
| 1604 | ↓ | ↓ | 7.21 | 0.914 | – | 0.08 | 29.95 | 0.042 | 0.556 | -147.9 | ↓ |
| 1606 | ↓ | ↓ | 7.18 | 0.906 | – | 0.09 | 28.46 | 0.041 | 0.554 | -138.8 | ↓ |
| | Sampled at 1607 | | | | | | | | | | |
| | | 46-50 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/03/14 DPT0287 (BH)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1241 | 0287 | 26-30 | 7.27 | 0.852 | – | 0.53 | 27.80 | 0.039 | 0.524 | -105.4 | milky tan |
| 1243 | ↓ | ↓ | 7.19 | 0.852 | – | 0.36 | 27.70 | 0.039 | 0.523 | -109.1 | cloudy |
| 1245 | ↓ | ↓ | 7.12 | 0.845 | – | 0.28 | 27.44 | 0.039 | 0.526 | -108.7 | ↓ |
| | Sampled at 1246 | | | | | | | | | | |
| 1259 | 0287 | 31-35 | 6.98 | 0.852 | – | 0.12 | 27.72 | 0.040 | 0.528 | -102.5 | very cloudy |
| 1301 | ↓ | ↓ | 6.94 | 0.825 | – | 0.13 | 27.49 | 0.038 | 0.513 | -95.7 | ↓ |
| 1303 | ↓ | ↓ | 6.93 | 0.811 | – | 0.12 | 27.39 | 0.038 | 0.506 | -94.4 | ↓ |
| | Sampled at 1304 | | | | | | | | | | |
| 1320 | 0287 | 36-40 | 7.04 | 0.988 | – | 0.07 | 28.15 | 0.046 | 0.608 | -124.0 | milky gray |
| 1322 | ↓ | ↓ | 7.00 | 0.980 | – | 0.08 | 27.91 | 0.045 | 0.604 | -117.4 | cloudy |
| 1324 | ↓ | ↓ | 6.96 | 0.973 | – | 0.09 | 27.87 | 0.045 | 0.601 | -111.6 | ↓ |
| | Sampled at 1325 | | | | | | | | | | |
| 1340 | 0287 | 41-45 | 7.20 | 1.154 | – | 0.07 | 29.26 | 0.052 | 0.694 | -189.2 | milky tan-brown |
| 1342 | ↓ | ↓ | 7.27 | 1.166 | – | 0.05 | 28.37 | 0.054 | 0.719 | -209.8 | cloudy |
| 1344 | ↓ | ↓ | 7.30 | 0.997 | – | 0.05 | 28.09 | 0.048 | 0.624 | -229.6 | ↓ |
| | Sampled at 1345 | | | | | | | | | | |
| | | 46-50 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

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mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/03/14 DPT0286 (BG)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0927 | 0286 | 26-30 | 7.47 | 1.148 | – | 0.14 | 27.04 | 0.056 | 0.731 | -179.9 | cloudy |
| 0929 | | | 7.38 | 1.103 | – | 0.20 | 26.99 | 0.053 | 0.693 | -205.9 | ↓ |
| 0931 | ↓ | ↓ | 7.37 | 1.089 | – | 0.21 | 26.91 | 0.052 | 0.684 | -209.5 | ↓ |
| | Sampled at 0932 | | | | | | | | | | |
| 0943 | 0286 | 31-35 | 7.23 | 0.943 | – | 0.04 | 27.25 | 0.045 | 0.592 | -236.8 | brown milky |
| (0945) | | | 7.27 | 0.908 | – | 0.04 | 27.31 | 0.043 | 0.571 | -243.3 | ↓ |
| 0947 | ↓ | ↓ | 7.28 | 0.887 | – | 0.04 | 27.30 | 0.042 | 0.555 | -248.9 | ↓ |
| | Sampled at 0948 | | | | | | | | | | |
| 1024 | 0286 | 36-40 | 7.48 | 1.292 | – | 0.38 | 28.16 | 0.060 | 0.795 | -161.8 | cloudy |
| 1026 | | | 7.37 | 1.275 | – | 0.20 | 27.68 | 0.060 | 0.790 | -149.7 | ↓ |
| 1028 | ↓ | ↓ | 7.32 | 1.268 | – | 0.18 | 27.50 | 0.060 | 0.788 | -145.2 | ↓ |
| | Sampled at 1029 | | | | | | | | | | |
| 1042 | 0286 | 41-45 | 7.22 | 1.530 | – | 0.28 | 27.54 | 0.071 | 0.934 | -171.4 | milky gray |
| 1044 | | | 7.21 | 1.593 | – | 0.10 | 28.20 | 0.074 | 0.970 | -179.0 | cloudy / brown |
| 1046 | ↓ | ↓ | 7.22 | 1.616 | – | 0.07 | 27.97 | 0.076 | 0.991 | -180.3 | ↓ |
| | Sampled at 1047 | | | | | | | | | | |
| 1101 | 0286 | 46-50 | 7.24 | 1.508 | – | 0.19 | 26.57 | 0.073 | 0.957 | -191.2 | milky gray |
| 1103 | | | 7.26 | 1.386 | – | 0.13 | 26.94 | 0.068 | 0.875 | -191.9 | ↓ |
| 1105 | ↓ | ↓ | 7.28 | 1.318 | – | 0.11 | 26.98 | 0.064 | 0.833 | -199.9 | ↓ |
| | Sampled at 1106 | | | (CS) | | | | | (CS) | | |
| 1129 | 0286 | 56-60 | 7.37 | 3.596 | – | 0.31 | 27.26 | 0.176 | 2.200 | -167.7 | milky gray |
| 1131 | | | 7.37 | 3.788 | – | 0.17 | 27.15 | 0.187 | 2.340 | -202.8 | ↓ |
| 1133 | ↓ | ↓ | 7.34 | 3.910 | – | 0.14 | 27.02 | 0.197 | 2.438 | -203.6 | ↓ |
| | Sampled at 1134 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/03/14 DPT 0285 (BF)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0728 | 0285 | 31-35 | 7.23 | 0.903 | – | 0.16 | 25.46 | 0.044 | 0.583 | -141.4 | milky tan |
| 0730 | ↓ | ↓ | 7.17 | 0.900 | – | 0.19 | 25.89 | 0.043 | 0.565 | -167.1 | ↓ |
| 0732 | ↓ | ↓ | 7.08 | 0.901 | – | 0.28 | 25.92 | 0.043 | 0.576 | -163.4 | ~~cloudy~~ (24) cloudy |
| | Sampled at 0733 | | | | | | | | | | |
| 0754 | 0285 | 36-40 | 7.09 | 0.955 | – | 0.16 | 26.48 | 0.045 | 0.600 | -178.2 | cloudy |
| 0756 | ↓ | ↓ | 7.21 | 0.965 | – | 0.09 | 26.65 | 0.046 | 0.609 | -180.4 | ↓ |
| 0758 | ↓ | ↓ | 7.19 | 0.959 | – | 0.10 | 26.45 | 0.046 | 0.607 | -172.9 | ↓ |
| | Sampled at 0759 | | | | | | | | | | |
| 0812 | 0285 | 41-45 | 7.16 | 1.089 | – | 0.08 | 27.24 | 0.051 | 0.676 | -161.8 | cloudy |
| 0814 | ↓ | ↓ | 7.21 | 1.084 | – | 0.06 | 27.16 | 0.051 | 0.678 | -167.7 | ↓ |
| 0816 | ↓ | ↓ | 7.19 | 1.084 | – | 0.08 | 26.97 | 0.051 | 0.680 | -159.0 | ↓ |
| | Sampled at 0817 | | | | | | | | | | |
| 0830 | 0285 | 46-50 | 7.10 | 1.338 | – | 0.09 | 27.79 | 0.062 | 0.817 | -162.9 | cloudy |
| 0832 | ↓ | ↓ | 7.15 | 1.344 | – | 0.05 | 27.69 | 0.063 | 0.831 | -166.13 | ↓ |
| 0834 | ↓ | ↓ | 7.15 | 1.344 | – | 0.05 | 27.41 | 0.064 | 0.837 | -162.7 | ↓ |
| | Sampled at 0835 | | | | | | | | (24) | | |
| 0849 | 0285 | 56-60 | 7.11 | 3.780 | – | 0.06 | 27.59 | 0.184 | 2.334 | -189.9 | milky tan |
| 0851 | ↓ | ↓ | 7.17 | 3.896 | – | 0.06 | 27.23 | 0.196 | 2.426 | -182.8 | ↓ |
| 0853 | ↓ | ↓ | 7.15 | 3.896 | – | 0.05 | 26.96 | 0.197 | 2.442 | -174.4 | ↓ |
| | Sampled at 0854 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/24/14 DPT0284 (BJ)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1420 | 0284 | 26-30 | 7.28 | 0.944 | – | 0.35 | 29.64 | 0.043 | 0.574 | -120.6 | cloudy |
| 1422 | ↓ | ↓ | 7.16 | 0.913 | – | 0.26 | 28.46 | 0.042 | 0.560 | -106.1 | ↓ |
| 1424 | ↓ | ↓ | 7.08 | 0.897 | – | 0.27 | 27.93 | 0.041 | 0.554 | -96.1 | ↓ |
| | Sampled at 1425 | | | | | | | | | | |
| 1434 | 0284 | 31-35 | 7.09 | 1.040 | – | 0.15 | 29.60 | 0.047 | 0.623 | -115.1 | milky tan |
| 1436 | ↓ | ↓ | 7.08 | 1.038 | – | 0.09 | 29.30 | 0.047 | 0.625 | -118.5 | ↓ |
| 1438 | ↓ | ↓ | 7.07 | 1.029 | – | 0.09 | 29.06 | 0.047 | 0.622 | -119.1 | cloudy tan-gray |
| | Sampled at 1439 | | | | | | | | | | |
| 1452 | 0284 | 36-40 | 7.14 | 1.133 | – | 0.07 | 29.56 | 0.051 | 0.679 | -150.2 | milky tan |
| 1454 | ↓ | ↓ | 7.12 | 1.119 | – | 0.06 | 28.96 | 0.051 | 0.677 | -138.1 | ↓ |
| 1456 | ↓ | ↓ | 7.09 | 1.113 | – | 0.05 | 28.95 | 0.051 | 0.676 | -130.6 | cloudy tan |
| | Sampled at 1457 | | | | | | | | | | |
| 1541 | 0284 | 41-45 | 7.24 | 1.243 | – | 0.17 | 28.90 | 0.058 | 0.766 | -158.9 | cloudy tan |
| 1543 | ↓ | ↓ | 7.27 | 1.309 | – | 0.14 | 28.91 | 0.060 | 0.789 | -165.8 | ↓ |
| 1545 | ↓ | ↓ | 7.28 | 1.320 | – | 0.11 | 28.73 | 0.061 | 0.801 | -162.8 | ↓ |
| | Sampled at 1546 | | | | | | | | | | |
| 1604 | 0284 | 46-50 | 7.41 | 1.473 | – | 0.12 | 27.77 | 0.069 | 0.900 | -182.1 | cloudy tan |
| 1606 | ↓ | ↓ | 7.53 | 1.509 | – | 0.09 | 27.91 | 0.071 | 0.928 | -165.8 | ↓ |
| 1608 | ↓ | ↓ | 7.49 | 1.513 | – | 0.09 | 27.75 | 0.072 | 0.934 | -162.4 | ↓ |
| | Sampled at 1609 | | | | | | ~~28.84~~ | ~~0.176~~ (DS) | | | |
| 1628 | 0284 | 56-60 | 7.28 (DS) | 2.962 | – | 0.07 | 28.84 | 0.176 | 1.928 | -185.7 | cloudy tan |
| 1630 | ↓ | ↓ | 7.30 | 3.180 | – | 0.04 | 28.57 | 0.146 | 1.860 | -202.7 | ↓ |
| 1632 | ↓ | ↓ | 7.32 | 3.603 | – | 0.04 | 28.44 | 0.173 | 2.174 | -210.5 | ↓ |
| | Sampled at 1633 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/02/14 DPT0283 (BP)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1231 | 0283 | 26-30 | 7.56 | 1.239 | – | 0.10 | 28.65 | 0.062 | 0.801 | -160.9 | cloudy |
| 1233 | ↓ | ↓ | 7.53 | 1.081 | – | 0.13 | 28.14 | 0.052 | 0.681 | -178.8 | ↓ |
| 1235 | ↓ | ↓ | 7.52 | 1.017 | – | 0.16 | 27.65 | 0.048 | 0.634 | -190.1 | ↓ |
| | Sampled at 1236 | | | | | (A) | | | | | |
| 1248 | 0283 | 31-35 | 7.49 | 1.172 | – | 0.04 | 27.25 | 0.055 | 0.728 | -255.1 | milky gray |
| 1250 | ↓ | ↓ | 7.48 | 1.179 | – | 0.04 | 27.42 | 0.055 | 0.732 | -260.4 | cloudy |
| 1252 | ↓ | ↓ | 7.49 | 1.187 | – | 0.03 | 27.62 | 0.056 | 0.734 | -265.9 | ↓ |
| | Sampled at 1253 | | | | | | | | | | |
| 1304 | 0283 | 36-40 | 7.52 | 1.156 | – | 0.09 | 28.82 | 0.053 | 0.704 | -182.8 | cloudy |
| 1306 | ↓ | ↓ | 7.45 | 1.148 | – | 0.05 | 28.44 | 0.053 | 0.702 | -180.4 | ↓ |
| 1308 | ↓ | ↓ | 7.39 | 1.135 | – | 0.05 | 28.09 | 0.053 | 0.699 | -173.0 | ↓ |
| | Sampled at 1309 | | | | | | | | | | |
| 1323 | 0283 | 41-45 | 7.32 | 1.279 | – | 0.04 | 29.17 | 0.058 | 0.770 | -164.4 | cloudy |
| 1325 | ↓ | ↓ | 7.28 | 1.260 | – | 0.04 | 28.98 | 0.058 | 0.769 | -160.2 | ↓ |
| 1327 | ↓ | ↓ | 7.26 | 1.247 | – | 0.06 | 28.90 | 0058 | 0.765 | -157.0 | ↓ |
| | Sampled at 1328 | | | | | | | | | | |
| 1344 | 0283 | 46-50 | 7.39 | 1.308 | – | 0.03 | 29.44 | 0.058 | 0.768 | -192.1 | milky gray |
| 1346 | ↓ | ↓ | 7.36 | 1.366 | – | 0.03 | 29.54 | 0.061 | 0.[illegible] | -203.9 | ↓ |
| 1348 | ↓ | ↓ | 7.34 | 1.399 | – | 0.03 | 29.47 | 0.063 | 0.835 | -210.9 | ↓ |
| | Sampled at 1349 | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/02/14 DPT 0282 (BG)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0934 | 0282 | 21-25 | 7.34 | 1.033 | – | 0.72 | 25.57 | 0.057 | 0.667 | -94.8 | cloudy |
| 0936 | ↓ | ↓ | 7.22 | 1.019 | – | 0.49 | 25.29 | 0.052 | 0.660 | -88.9 | ↓ |
| 0938 | ↓ | ↓ | 7.15 | 1.010 | – | 0.42 | 25.14 | 0.050 | 0.655 | -86.4 | ↓ |
| | Sampled at 0939 | | | | | | | | | | |
| 0949 | 0282 | 26-30 | 7.22 | 1.149 | – | 0.38 | 25.13 | 0.057 | 0.748 | -141.7 | cloudy |
| 0951 | ↓ | ↓ | 7.20 | 1.195 | – | 0.24 | 25.35 | 0.059 | 0.771 | -132.6 | ↓ |
| 0953 | ↓ | ↓ | 7.18 | 1.197 | – | 0.52 | 25.29 | 0.059 | 0.773 | -122.6 | ↓ |
| | Sampled at 0954 | | | | | | | | | | |
| 1004 | 0282 | 31-35 | 7.26 | 1.032 | – | 0.08 | 26.07 | 0.050 | 0.657 | -147.2 | cloudy |
| 1006 | ↓ | ↓ | 7.23 | 1.027 | – | 0.07 | 26.05 | 0.050 | 0.655 | -144.2 | ↓ |
| 1008 | ↓ | ↓ (DS) | 7.19 | 1.017 | – | 0.08 | 25.93 | 0.049 | 0.650 | -134.9 | ↓ |
| | Sampled at 1009 | | | | | | | | | | |
| 1020 | 0282 | 36-40 | 7.29 | 1.159 | – | 0.14 | 27.74 | 0.054 | 0.715 | -166.3 | milky brown gray |
| 1022 | ↓ | ↓ | 7.32 | 1.157 | – | 0.08 | 27.90 | 0.054 | 0.714 | -175.3 | ↓ |
| 1024 | ↓ | ↓ | 7.31 | 1.157 | – | 0.07 | 27.83 | 0.054 | 0.713 | -176.5 | ↓ |
| | Sampled at 1025 | | | | | | | | | | |
| 1036 | 0282 | 41-45 | 7.27 | 1.202 | – | 0.06 | 28.02 | 0.056 | 0.740 | -162.0 | tan cloudy |
| 1038 | ↓ | ↓ | 7.26 | 1.198 | – | 0.06 | 27.76 | 0.056 | 0.741 | -159.0 | ↓ |
| 1040 | ↓ | ↓ | 7.25 | 1.194 | – | 0.06 | 27.51 | 0.056 | 0.741 | -157.3 | ↓ |
| | Sampled at 1041 | | | | | | | | | | (DS) light tan cloudy gray |
| 1112 | 0282 | 46-50 | 7.30 | 1.680 | – | 0.21 | 28.19 | 0.079 | 1.028 | -163.5 | |
| 1114 | ↓ | ↓ | 7.31 | 1.670 | – | 0.13 | 28.04 | 0.079 | 1.031 | -169.9 | |
| 1116 | ↓ | ↓ | 7.30 | 1.674 | – | 0.10 | 27.85 | 0.080 | 1.034 | -166.7 | ↓ |
| | Sampled at 1117 | | | | | | | | (DS) | | |
| 1132 | 0282 | 56-60 | 7.34 | 4.165 | – | 0.08 | 27.50 | 0.205 | 2.564 | -192.4 | cloudy tan |
| 1134 | ↓ | ↓ | 7.36 | 4.206 | – | 0.05 | 27.55 | 0.210 | 2.600 | -196.3 | ↓ |
| 1136 | ↓ | ↓ | 7.36 | 4.238 | – | 0.04 | 27.53 | 0.213 | 2.626 | -194.3 | ↓ |
| | Sampled at 1137 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

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TDS (g/L) = Total Dissolved Solids (grams per liter)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 06/02/14 DPT0281 (BR)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0725 | 0281 | 26-30 | 7.37 | 1.498 | – | 0.30 | 24.70 | 0.075 | 0.976 | -62.9 | cloudy |
| 0727 | ↓ | ↓ | 7.07 | 1.511 | – | 0.32 | 24.63 | 0.076 | 0.990 | -70.1 | ↓ |
| 0729 | ↓ | ↓ | 7.00 | 1.503 | – | 0.39 | 24.56 | 0.076 | 0.986 | -71.4 | ↓ |
| | Sampled at 0730 | | | | | | | | | | |
| 0742 | 0281 | 31-35 | 7.19 | 0.944 | – | 0.14 | 25.68 | 0.048 | 0.617 | -153.7 | cloudy |
| 0744 | ↓ | ↓ | 7.29 | 0.901 | – | 0.09 | 25.68 | 0.044 | 0.580 | -164.9 | ↓ |
| 0746 | ↓ | ↓ | 7.27 | 0.890 | – | 0.09 | 25.58 | 0.043 | 0.573 | -161.0 | ↓ |
| | Sampled at 0747 | | | | | | | | | | |
| 0827 | 0281 | 36-40 | 7.45 | 0.866 | – | 0.16 | 25.77 | 0.042 | 0.554 | -207.4 | cloudy |
| 0829 | ↓ | ↓ | 7.45 | 0.843 | – | 0.13 | 25.46 | 0.041 | 0.545 | -210.3 | ↓ |
| 0831 | ↓ | ↓ | 7.43 | 0.835 | – | 0.12 | 25.36 | 0.041 | 0.539 | -210.2 | ↓ |
| | Sampled at 0832 | | | | | | | | | | |
| 0845 | 0281 | 41-45 | 7.41 | 0.881 | – | 0.05 | 26.05 | 0.042 | 0.556 | -206.9 | milky gray |
| 0847 | ↓ | ↓ | 7.45 | 0.881 | – | 0.06 | 26.32 | 0.042 | 0.560 | -201.5 | ↓ |
| 0849 | ↓ | ↓ | 7.43 | 0.873 | – | 0.07 | 24.03 | 0.042 | 0.557 | -188.8 | ↓ |
| | Sampled at 0850 | | | | | (DO) | | | | | |
| 0904 | 0281 | 46-50 | 7.43 | 1.011 | – | 0.38 | 25.08 | 0.055 | 0.658 | -249.9 | milky gray |
| 0906 | ↓ | ↓ | 7.47 | 0.994 | – | 0.18 | 24.89 | 0.049 | 0.649 | -270.4 | ↓ |
| 0908 | ↓ | ↓ | 7.47 | 0.986 | – | 0.17 | 24.82 | 0.049 | 0.646 | -273.9 | ↓ |
| | Sampled at 0909 | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 05/30/14 DPT0280 (BW)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1417 | 0280 | 21-25 | 6.91 | 0.784 | – | 0.10 | 28.24 | 0.035 | 0.475 | -129.9 | cloudy |
| 1419 | ↓ | ↓ | 6.85 | 0.753 | – | 0.12 | 27.64 | 0.035 | 0.466 | -119.6 | ↓ |
| 1421 | ↓ | ↓ | 6.84 | 0.747 | – | 0.13 | 27.54 | 0.035 | 0.464 | -118.9 | ↓ |
| | Sampled at 1422 | | | | | | | | | | |
| 1434 | 0280 | 26-30 | 6.90 | 0.847 | – | 0.08 | 29.58 | 0.038 | 0.511 | -115.4 | cloudy |
| 1436 | ↓ | ↓ | 6.83 | 0.816 | – | 0.14 | 28.72 | 0.037 | 0.499 | -104.1 | ↓ |
| 1438 | ↓ | ↓ | 6.75 | 0.796 | – | 0.18 | 27.86 | 0.037 | 0.492 | -90.2 | ↓ |
| | Sampled at 1439 | | | | | | | | | | |
| 1532 | 0280 | 31-35 | 7.44 | 1.040 | – | 0.33 | 29.34 | 0.046 | 0.620 | -128.7 | cloudy |
| 1534 | ↓ | ↓ | 7.03 | 0.993 | – | 0.32 | 28.31 | 0.046 | 0.610 | -115.0 | ↓ |
| 1536 | ↓ | ↓ | 6.91 | 0.970 | – | 0.26 | 27.66 | 0.045 | 0.603 | -103.0 | ↓ |
| | Sampled at 1538 | | | | | | | | | | |
| 1553 | 0280 | 36-40 | 6.95 | 1.200 | – | 0.07 | 29.16 | 0.055 | 0.728 | -158.3 | cloudy |
| 1555 | ↓ | ↓ | 6.89 | 1.170 | – | 0.10 | 28.16 | 0.054 | 0.720 | -147.6 | ↓ |
| 1557 | ↓ | ↓ | 6.86 | 1.153 | – | 0.12 | 27.73 | 0.054 | 0.714 | -143.5 | ↓ |
| | Sampled at 1558 | | | | | | | | | | |
| 1611 | 0280 | 41-45 | 7.36 | 1.244 | – | 0.17 | 29.77 | 0.056 | 0.738 | -145.0 | milky gray |
| 1613 | ↓ | ↓ | 7.14 | 1.222 | – | 0.12 | 29.43 | 0.055 | 0.733 | -151.8 | ↓ |
| 1615 | ↓ | ↓ | 7.09 | 1.224 | – | 0.11 | 29.09 | 0.056 | 0.739 | -150.5 | ↓ |
| | Sampled at 1616 | | | | | | | | | | |
| 1630 | 0280 | 46-50 | 7.04 | 0.966 | – | 0.05 | 27.72 | 0.045 | 0.593 | -133.1 | cloudy |
| 1632 | ↓ | ↓ | 6.94 | 0.942 | – | 0.06 | 27.52 | 0.044 | 0.585 | -121.1 | ↓ |
| 1634 | ↓ | ↓ | 6.91 | 0.936 | – | 0.08 | 27.43 | 0.044 | 0.582 | -116.5 | ↓ |
| | Sampled at 1635 | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 05/30/14 DPT0279 (GS)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1033 | 0279 | 26-30 | 7.12 | 0.935 | – | 0.27 | 28.27 | 0.043 | 0.572 | -116.6 | cloudy |
| 1035 | ↓ | ↓ | 7.05 | 0.904 | – | 0.24 | 27.45 | 0.042 | 0.564 | -108.8 | ↓ |
| 1037 | ↓ | ↓ | 7.00 | 0.891 | – | 0.23 | 27.06 | 0.042 | 0.558 | -95.7 | ↓ |
| | Sampled at 1038 | | | | | | | | | | |
| 1116 | 0279 | 31-35 | 7.05 | 0.954 | – | 0.14 | 30.55 | 0.042 | 0.566 | -157.1 | cloudy |
| 1118 | ↓ | ↓ | 7.05 | 0.908 | – | 0.13 | 29.96 | 0.041 | 0.542 | -177.3 | ↓ |
| 1120 | ↓ | ↓ | 7.05 | 0.872 | – | 0.11 | 29.64 | 0.039 | 0.523 | -186.9 | ↓ |
| | Sampled at 1121 | | | | | | | | | | |
| 1133 | 0279 | 36-40 | 6.90 | 1.063 | – | 0.10 | 29.66 | 0.048 | 0.640 | -144.4 | tan cloudy |
| 1135 | ↓ | ↓ | 6.83 | 1.038 | – | 0.13 | 28.29 | 0.048 | 0.638 | -138.6 | ↓ |
| 1137 | ↓ | ↓ | 6.78 | 1.023 | – | 0.24 | 27.70 | 0.048 | 0.633 | -128.1 | ↓ |
| | Sampled at 1138 | | | | | | | | | | |
| 1152 | 0279 | 41-45 | 6.98 | 1.135 | – | 0.11 | 29.32 | 0.051 | 0.680 | -158.6 | grey cloudy |
| 1154 | ↓ | ↓ | 6.96 | 1.132 | – | 0.05 | 29.06 | 0.052 | 0.684 | -155.3 | ↓ |
| 1156 | ↓ | ↓ | 6.92 | 1.121 | – | 0.04 | 28.49 | 0.052 | 0.683 | -156.6 | ↓ |
| | Sampled at 1157 | | | | | | | | | | |
| 1341 | 0279 | 46-50 | 7.35 | 1.137 | – | 0.25 | 31.73 | 0.049 | 0.657 | -147.9 | cloudy tan grey |
| 1343 | ↓ | ↓ | 7.23 | 1.104 | – | 0.15 | 31.04 | 0.048 | 0.645 | -150.3 | ↓ |
| @1345 | ↓ | ↓ | 7.20 | 1.100 | – | 0.14 | 30.69 | 0.048 | 0.644 | ~~-150.3~~ -150.3 | ↓ |
| | Sampled at 1346 | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 05/30/14 DPT0278 (BT)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0854 | 0278 | 26-30 | 7.03 | 0.838 | – | 0.15 | 27.04 | 0.040 | 0.531 | -70.0 | cloudy gray |
| 0856 | ↓ | ↓ | 6.91 | 0.819 | – | 0.18 | 26.39 | 0.039 | 0.521 | -72.5 | ↓ |
| 0858 | ↓ | ↓ | 6.84 | 0.809 | – | 0.19 | 26.02 | 0.039 | 0.517 | -73.2 | ↓ |
| | Sampled at 0859 | | | | | | | | | | |
| 0910 | 0278 | 31-35 | 6.87 | 0.957 | – | 0.07 | 27.89 | 0.043 | 0.580 | -130.8 | cloudy |
| 0912 | ↓ | ↓ | 6.92 | 0.964 | – | 0.06 | 27.53 | 0.045 | 0.598 | -147.6 | ↓ |
| 0914 | ↓ | ↓ | 6.93 | 0.958 | – | 0.07 | 27.20 | 0.045 | 0.598 | -165.8 | ↓ |
| | Sampled at 0915 | | | | | | (D) | | | | |
| 0928 | 0278 | 36-40 | 6.97 | 1099 | – | 0.12 | 28.14 | 0.051 | 0.679 | -157.4 | cloudy |
| 0930 | ↓ | ↓ | 6.96 | 1.080 | – | 0.09 | 27.31 | 0.051 | 0.674 | -161.3 | ↓ |
| 0932 | ↓ | ↓ | 6.94 | 1.073 | – | 0.09 | 27.06 | 0.051 | 0.672 | -162.6 | ↓ |
| | Sampled at 0933 | | | | | | | | | | |
| 0944 | 0278 | 41-45 | 7.00 | 1.106 | – | 0.09 | 28.64 | 0.051 | 0.671 | -166.2 | murky gray |
| 0946 | ↓ | ↓ | 6.98 | 1.105 | – | 0.08 (D) | 28.11 | 0.051 | 0.679 | -170.2 | ↓ |
| 0948 | ↓ | ↓ | 6.95 | 1.099 | – | 0.06 | 27.81 | 0.051 | 0.680 | -167.7 | cloudy gray |
| | Sampled at 0949 | | | | | | | | | | |
| 1002 | ~~0946~~ 0278 (D) | 46-50 | 7.03 | 1.082 | – | 0.06 | 28.33 | 0.050 | 0.662 | -156.5 | cloudy |
| 1004 | 0278 | ↓ | 6.99 | 1.090 | – | 0.06 | 28.49 | 0.050 | 0.663 | -155.3 | ↓ |
| 1006 | ↓ | ↓ | 6.95 | 1.079 | – | 0.08 | 27.95 | 0.050 | 0.666 | -142.5 | ↓ |
| | Sampled at 1007 | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 05/30/14 DPT0277 (BV)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at 0277 | | | | | | | | | | |
| 0724 | ~~0278~~ | 36-40 | 6.87 | 0.764 | – | 0.17 | 24.51 | 0.037 | 0.498 | -161.5 | cloudy gray |
| 0726 | ↓ | ↓ | 6.89 | 0.764 | – | 0.13 | 24.85 | 0.037 | 0.498 | -175.3 | ↓ |
| 0728 | ↓ | ↓ | 6.90 | 0.759 | – | 0.11 | 24.84 | 0.037 | 0.495 | -182.7 | ↓ |
| | Sampled at 0729 | | | | | | | | | | |
| 0741 | ~~0278~~ 0277 | 41-45 | 6.93 | 0.807 | – | 0.17 | 24.58 | 0.039 | 0.520 | -364.5 | cloudy gray |
| 0743 | ↓ | ↓ | 6.92 | 0.819 | – | 0.17 | 24.88 | 0.040 | 0.535 | -394.5 | ↓ |
| 0745 | ↓ | ↓ | 7.01 | 0.805 | – | 0.18 | 24.81 | 0.040 | 0.527 | -378.8 | ↓ |
| | Sampled at 0746 | | | | | | | | | | |
| 0800 | 0277 | 46-50 | 7.08 | 0.953 | – | 0.20 | 25.15 | 0.044 | 0.611 | -149.6 | cloudy tan/gray |
| 0802 | ↓ | ↓ | 7.08 | 0.973 | – | 0.15 | 25.11 | 0.048 | 0.631 | -145.5 | ↓ |
| 0804 | ↓ | ↓ | 7.06 | 0.970 | – | 0.16 | 24.98 | 0.048 | 0.632 | -140.7 | ↓ |
| | Sampled at 0805 | | | | | | | | | | |
| 0820 | 0277 | 56-60 | 6.96 | 3.082 | – | 0.06 | 25.49 | 0.144 | 1.863 | -186.4 | milky gray-brown |
| 0822 | ↓ | ↓ | 7.01 | 3.242 | – | 0.06 | 25.39 | 0.166 | 2.082 | -190.0 | ↓ |
| 0824 | ↓ | ↓ | 7.05 | 3.272 | – | 0.06 | 25.33 | 0.169 | 2.112 | -192.4 | cloudy brown |
| | Sampled at 0825 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

**DPT GEOCHEMICAL DATA FORM** (ES) Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 05/29/14 DPT ~~0280~~ 0276 (J)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1410 | 0276 | 31-35 | 7.29 | 1.324 | – | 0.15 | 33.21 | 0.058 | 0.763 | -226.7 | cloudy |
| 1412 | ↓ | ↓ | 7.20 | 1.216 | – | 0.15 | 32.62 | 0.052 | 0.695 | -370.2 | ↓ |
| 1414 | ↓ | ↓ | 7.16 | 1.197 | – | 0.18 | 32.19 | 0.051 | 0.686 | -433.1 | ↓ |
| | Sampled at 1415 | | | | | | | | | | |
| 1427 | 0276 | 36-40 | 7.10 | 1.353 | – | 0.42 | 32.29 | 0.060 | 0.774 | -564.7 | gray cloudy |
| 1429 | ↓ | ↓ | 7.13 | 1.309 | – | 0.03 | 32.75 | 0.056 | 0.745 | -570.5 | ↓ |
| 1431 | ↓ | ↓ | 7.14 | 1.287 | – | 0.04 | 32.69 | 0.055 | 0.732 | -574.1 | ↓ |
| | Sampled at 1432 | | | | | | | | | | |
| 1448 | 0276 | 41-45 | 7.17 | 1.392 | – | 0.02 | 33.14 | 0.058 | 0.780 | -589.0 | gray cloudy |
| 1450 | ↓ | ↓ | 7.17 | 1.352 | – | 0.02 | 32.89 | 0.058 | 0.766 | -590.0 | ↓ |
| 1452 | ↓ | ↓ | 7.18 | 1.332 | – | 0.04 | 32.32 | 0.057 | 0.761 | -590.9 | ↓ |
| | Sampled at 1453 | | | | | | | | | | |
| 1507 | 0276 | 46-50 | 7.22 | 1.417 | – | 0.03 | 31.84 | 0.062 | 0.818 | -596.2 | gray cloudy |
| 1509 | ↓ | ↓ | 7.22 | 1.399 | – | 0.02 | 31.90 | 0.061 | 0.807 | -596.4 | ↓ |
| 1511 | ↓ | ↓ | 7.23 | 1.380 | – | 0.01 | 31.89 | 0.060 | 0.796 | -596.7 | ↓ |
| | Sampled at 1512 | | | | | | | | | | |
| (ES) 1535 | 0276 | 56-60 | 7.28 | 1.333 | – | 0.05 | 32.26 | 0.057 | 0.760 | -602.2 | cloudy |
| 1537 | ↓ | ↓ | 7.29 | 1.297 | – | 0.07 | 31.88 | 0.057 | 0.750 | -602.7 | ↓ |
| 1539 | ↓ | ↓ | 7.30 | 1.277 | – | 0.08 | 31.34 | 0.056 | 0.742 | -603.3 | ↓ |
| (ES) ~~1541~~ | Sampled at 1540 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** (05) Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 05/29/14 DPT0275 (K)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1234 | 0275 | 36-40 | 7.40 | 1.889 | – | 0.21 | 32.49 | 0.086 | 1.117 | -501.4 | cloudy |
| 1234 | ↓ | ↓ | 7.37 | 1.676 | – | 0.15 | 31.87 | 0.074 | 0.973 | -526.9 | ↓ |
| 1238 | ↓ | ↓ | 7.35 | 1.614 | – | 0.16 | 31.72 | 0.071 | 0.936 | -537.6 | ↓ |
| | Sampled at 1239 | | | | | | | | | | |
| 1257 | 0275 | 41-45 | 7.29 | 1.539 | – | 0.10 | 31.27 | 0.069 | 0.899 | -570.5 | cloudy |
| 1259 | ↓ | ↓ | 7.29 | 1.518 | – | 0.05 | 31.35 | 0.067 | 0.882 | -571.6 | ↓ |
| 1301 | ↓ | ↓ | 7.29 | 1.494 | – | 0.04 | 31.41 | 0.066 | 0.864 | -572.3 | ↓ |
| | Sampled at 1302 | | | | | | | | | | |
| 1315 | 0275 | 46-50 | 7.31 | 1.515 | – | 0.06 | 29.66 | 0.069 | 0.908 | -581.8 | milky gray |
| 1317 | ↓ | ↓ | 7.32 | 1.498 | – | 0.03 | 29.48 | 0.069 | 0.901 | -582.5 | ↓ |
| 1319 | ↓ | ↓ | 7.32 | 1.481 | – | 0.03 | 29.44 | 0.068 | 0.885 | -582.9 | ↓ |
| | Sampled at | | | | | | | | | | |
| 1337 | 0275 | 56-60 | 7.31 | 1.242 | – | 0.01 | 30.45 | 0.055 | 0.731 | -588.9 | cloudy |
| 1339 | ↓ | ↓ | 7.31 | 1.234 | – | 0.01 | 30.46 | 0.055 | 0.728 | -589.3 | ↓ |
| 1341 | ↓ | ↓ | 7.32 | 1.224 | – | 0.01 | 30.33 | 0.055 | 0.723 | -589.5 | ↓ |
| | Sampled at 1342 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 05/29/14 DPT0274 (CL)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| — | 0274 | 31-35 | Could not generate enough water volume | | – | | | | | | |
| — | ↓ | ↓ | to collect readings - would not pump to surface | | – | | | | | | |
| — | ↓ | ↓ | | | – | | | | | | |
| | Sampled at 0944 | | | | | | | | | | (CS) |
| 0957 | 0274 | 36-40 | 7.14 | 1.558 | – | 0.13 | 32.74 | 0.068 | 0.891 | -508.2 | cloudy |
| 0959 | ↓ | ↓ | 7.14 | 1.522 | – | 0.09 | 31.65 | 0.067 | 0.881 | -514.0 | ↓ |
| 1001 | ↓ | ↓ | 7.14 | 1.494 | – | 0.09 | 30.13 | 0.068 | 0.887 | -532.6 | ↓ |
| | Sampled at 1002 | | | | | | | | | | |
| 1017 | 0274 | 41-45 | 7.18 | 2.050 | – | 0.01 | 30.16 | 0.092 | 1.198 | -565.3 | cloudy |
| 1019 | ↓ | ↓ | 7.18 | 1.990 | – | 0.02 | 30.83 | 0.090 | 1.169 | -567.1 | ↓ |
| 1021 | ↓ | ↓ | 7.18 | 1.937 | – | 0.03 | 30.37 | 0.089 | 1.148 | -568.5 | ↓ |
| | Sampled at 1022 | | | | | | | | | | |
| 1037 | 0274 | 46-50 | 7.20 | 1.967 | – | 0.02 | 30.58 | 0.090 | 1.166 | -579.7 | cloudy + oil |
| 1039 | ↓ | ↓ | 7.20 | 1.900 | – | 0.01 | 31.06 | 0.086 | 1.111 | -580.6 | ↓ |
| 1041 | ↓ | ↓ | 7.20 | 1.855 | – | 0.02 | 31.00 | 0083 | 1.085 | -581.1 | ↓ |
| | Sampled at 1042 | | | | | | | | | | |
| 1127 | 0274 | 56-60 | 7.22 | 2.105 | – | 0.04 | 34.39 | 0.089 | 1.162 | -556.7 | cloudy |
| 1129 | ↓ | ↓ | 7.22 | 2.097 | – | 0.05 | 33.94 | 0.090 | 1.169 | -562.9 | ↓ |
| 1131 | ↓ | ↓ | 7.23 | 2.075 | – | 0.06 | 32.95 | 0.090 | 1.175 | -568.1 | ↓ |
| | Sampled at 1132 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 05/29/14 DPT0227

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 36-40 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 41-45 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0901 | 0227 | 46-50 | 7.52 | 2.318 | – | 0.70 | 29.23 | 0.108 | 1.388 | -127.0 | cloudy grey |
| 0903 | ↓ | ↓ | 7.32 | 2.349 | – | 0.09 | 29.07 | 0.110 | 1.415 | -131.1 | ↓ |
| 0905 | ↓ | ↓ | 7.23 | 2.343 | – | 0.08 | 28.82 | 0.111 | 1.421 | -130.8 | ↓ |
| | Sampled at 0906 | | | | | | | | | | |
| | | 56-60 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

tes:

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 05/29/14 DPT0273 (0)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 0724 | 0273 | 36-40 | 7.03 | 1.531 | – | 0.38 | 26.56 | 0.074 | 0.964 | -94.4 | cloudy |
| 0726 | ↓ | ↓ | 6.85 | 1.486 | – | 0.22 | 26.20 | 0.072 | 0.942 | -108.7 | ↓ |
| 0728 | ↓ | ↓ | 6.79 | 1.472 | – | 0.20 | 25.54 | 0.072 | 0.939 | -109.3 | ↓ |
| | Sampled at 0729 | | | 2.009 | | | | | | | |
| 0743 | 0273 | 41-45 | 7.00 | ~~1.256~~ | – | 0.07 | 26.92 | 0.096 | 1.241 | -169.3 | cloudy grey |
| 0745 | ↓ | ↓ | 7.03 | 2.061 | – | 0.05 | 27.21 | 0.100 | 1.285 | -175.9 | ↓ |
| 0747 | ↓ | ↓ | 7.03 | 2.060 | – | 0.05 | 26.98 | 0.101 | 1.291 | -177.5 | ↓ |
| | Sampled at 0748 | | | | | | | | | | |
| 0804 | 0273 | 46-50 | 7.10 | 2.355 | – | 0.04 | 27.50 | 0.114 | 1.459 | -228.4 | milky grey |
| 0806 | ↓ | ↓ | 7.09 | 2.366 | – | 0.04 | 26.88 | 0.117 | 1.486 | -220.4 | ↓ |
| 0808 | ↓ | ↓ | 7.06 | 2.363 | – | 0.03 | 24.66 | 0.117 | 1.490 | -212.2 | ↓ |
| | Sampled at 0809 | | | | | | | | | | |
| 0823 | 0273 | 56-60 | 7.10 | 3.510 | – | 0.35 | 27.26 | 0.168 | 2.140 | -231.9 | milky grey |
| 0825 | ↓ | ↓ | 7.14 | 3.567 | – | 0.04 | 26.73 | 0.180 | 2.242 | -231.2 | ↓ |
| 0827 | ↓ | ↓ | 7.13 | 3.584 | – | 0.03 | 26.50 | 0.182 | 2.245 | -223.8 | ↓ |
| | Sampled at 0828 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 05/28/14 DPT0272 (P)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | | ↓ ↓ | | | – | | | | | | |
| | | | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | | ↓ ↓ | | | – | | | | | | |
| | | | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | | ↓ ↓ | | | – | | | | | | |
| | | | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | | ↓ ↓ | | | – | | | | | | |
| | | | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | | ↓ ↓ | | | – | | | | | | |
| | | | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1618 | 0272 | 36-40 | 7.20 | 2.079 | – | 0.09 | 31.85 | 0.095 | 1.232 | -129.0 | cloudy grey |
| 1620 | | ↓ ↓ | 7.15 | 2.027 | – | 0.08 | 29.94 | 0.094 | 1.213 | -133.0 | silty cloudy ↓ |
| 1622 | | | 7.07 | 1.954 | – | 0.08 | 29.48 | 0.092 | 1.181 | -134.8 | |
| | Sampled at | 1623 | | | | | | | | | |
| 1637 | 0272 | 41-45 | 7.05 | 2.277 | – | 1.68 | 32.22 | 0.103 | 1.345 | -137.2 | cloudy grey brown |
| 1639 | | ↓ ↓ | 7.13 | 2.461 | – | 0.16 | 31.54 | 0.110 | 1.421 | -153.3 | ↓ |
| 1641 | | | 7.13 | 2.446 | – | 0.07 | 31.37 | 0.110 | 1.419 | -160.1 | |
| | Sampled at | 1642 | | | | | | | | | |
| 1656 | 0272 | 46-50 | 7.16 | 2.369 | – | 0.01 | 32.59 | 0.104 | 1.351 | -252.1 | slightly cloudy |
| 1658 | | ↓ ↓ | 7.15 | 2.348 | – | 0.01 | 31.47 | 0.106 | 1.365 | -268.1 | ↓ |
| 1700 | | | 7.15 | 2.348 | – | 0.00 | 30.77 | 0.107 | 1.375 | -285.1 | |
| | Sampled at | 1701 | | | | | | | | | |
| 1740 | 0272 | 56-60 | 7.17 | 3.633 | – | 0.01 | 28.04 | 0.180 | 2.242 | -603.1 | milky grey |
| 1742 | | ↓ ↓ | 7.17 | 3.593 | – | 0.02 | 27.55 | 0.179 | 2.234 | -603.5 | cloudy ↓ |
| 1744 | | | 7.17 | 3.581 | – | 0.03 | 27.29 | 0.179 | 2.234 | -604.5 | ↓ |
| | Sampled at | 1745 | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | | ↓ ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | | ↓ ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 05/28/14 DPT 0271 (N)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1446 | 0271 | 36-40 | 7.21 | 2.161 | – | 0.06 | 29.99 | 0.098 | 1.247 | -543.5 | cloudy |
| 1448 | ↓ | ↓ | 7.21 | 1.921 | – | 0.02 | 29.77 | 0.088 | 1.133 | -548.3 | ↓ |
| 1450 | ↓ | ↓ | 7.21 | 1.818 | – | 0.00 | 29.50 | 0.085 | 1.096 | -551.2 | ↓ |
| | Sampled at 1451 | | | | | | | | 1.130 | | |
| 1504 | 0271 | 41-45 | 7.25 | 1.873 | – | 0.18 | 29.06 | 0.087 | [illegible] | -571.3 | brown cloudy |
| 1506 | ↓ | ↓ | 7.25 | 1.815 | – | 0.00 | 29.39 | 0.085 | 1.063 | -572.8 | ↓ |
| 1508 | ↓ | ↓ | 7.25 | 1.785 | – | 0.00 | 29.95 | 0.081 | 1.051 | -573.1 | ↓ |
| | Sampled at 1509 | | | | | | | | | | |
| 1523 | 0271 | 46-50 | 7.23 | 1.687 | – | 0.01 | 31.55 | 0.075 | 0.973 | -581.5 | milky brown |
| 1525 | ↓ | ↓ | 7.22 | 1.666 | – | 0.00 | 31.41 | 0.072 | 0.936 | -582.0 | ↓ |
| 1527 | ↓ | ↓ | 7.21 | 1.540 | – | 0.01 | 31.27 | 0.068 | 0.896 | -582.7 | ↓ |
| (CS) | Sampled at 1528 | | | | | | | | CS | | |
| 1544 | 0271 | 56-60 | 7.17 | 2.336 | – | 0.00 | 31.66 | 0.105 | 1.348 | -590.5 | gray milky |
| (CS) 1546 | ↓ | ↓ | 7.17 | 2.310 | – | 0.01 | 31.59 | 0.104 | 1.336 | -594.6 | ↓ |
| (CS) 1548 | ↓ | (CS) ↓ | 7.17 | 2.282 | – | 0.03 | 31.48 | 0.103 | 1.323 | -596.2 | ↓ |
| | Sampled at 1549 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

Notes:

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mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 05/28/14 DPT 0270 (m)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| 1251 | 0270 | 36-40 | 7.04 | 1.522 | — | 0.06 | 31.03 | 0.067 | 0.890 | -183.0 | light brown cloudy |
| 1253 | ↓ | ↓ | 6.89 | 1.455 | — | 0.07 | 29.92 | 0.066 | 0.867 | -188.0 | ↓ |
| 1255 | ↓ | ↓ | 6.85 | 1.417 | — | 0.08 | 29.29 | 0.065 | 0.854 | -193.3 | ↓ |
| | Sampled at 1256 | | | | | | | | | | |
| 1340 | 0270 | 41-45 | 6.96 | 1.863 | — | 0.33 | 33.59 | 0.079 | 1.039 | -184.1 | cloudy gray |
| 1342 | ↓ | ↓ | 6.96 | 1.855 | — | 0.10 | 32.41 | 0.080 | 1.053 | -217.5 | ↓ |
| 1344 | ↓ | ↓ | 6.93 | 1.841 | — | 0.08 | 31.72 | 0.082 | 1.064 | -242.5 | cloudy |
| | Sampled at 1345 | | | | | | | | | | |
| 1400 | 0270 | 46-50 | 6.99 | 1.922 | — | 0.03 | 29.68 | 0.088 | 1.145 | -319.3 | cloudy gray |
| 1402 | ↓ | ↓ | 7.02 | 1.916 | — | 0.09 | 28.82 | 0.090 | 1.163 | -445.0 | ↓ |
| 1404 | ↓ | ↓ | 7.02 | 1.910 | — | 0.08 | 28.62 | 0.090 | 1.163 | -464.0 | ↓ |
| | Sampled at 1405 | | | | | | | | | | |
| 1422 | 0270 | 56-60 | 7.16 | 3.280 | — | 0.08 | 29.89 | 0.158 | 2.000 | -549.6 | brown cloudy |
| 1424 | ↓ | ↓ | 7.22 | 3.447 | — | 0.03 | 29.72 | 0.164 | 2.057 | -549.5 | ↓ |
| 1426 | ↓ | ↓ | 7.22 | 3.453 | — | 0.04 | 29.42 | 0.165 | 2.068 | -552.1 | ↓ |
| | Sampled at 1427 | | | | | | | | | | |
| | | 61-65 | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | ↓ | ↓ | | | — | | | | | | |
| | Sampled at | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: CRHE / FR1681 / 31*1 (ULR)

Date: 05/28/14 DPT0269 (9)

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8-12 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 16-20 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 21-25 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 26-30 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | 31-35 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | 1.744 | | | | | | | Slightly cloudy |
| 1046 | 0269 | 36-40 | 7.02 | ~~1.667~~ | – | 0.02 | 29.44 | 0.082 | 1.063 | -349.1 | ↓ |
| 1048 | ↓ | ↓ | 6.99 | 1.726 | – | 0.05 | 28.88 | 0.081 | 1.048 | -382.1 | ↓ |
| 1050 | ↓ | ↓ | 6.95 | 1.692 | – | 0.08 | 28.41 | 0.081 | 1.035 | -353.1 | ↓ |
| | Sampled at 1051 | | | | | | | | | | |
| 1103 | 0269 | 41-45 | 6.99 | 1.998 | – | 0.02 | 30.10 | 0.090 | 1.175 | -379.0 | cloudy brown |
| 1105 | ↓ | ↓ | 7.01 | 2.018 | – | 0.01 | 29.96 | 0.092 | 1.197 | -425.2 | ↓ |
| 1107 | ↓ | ↓ | 7.02 | 2.034 | – | 0.01 | 29.70 | 0.094 | 1.214 | -435.5 | slightly cloudy |
| | Sampled at 1108 | | | | | | | | | | |
| 1117 | 0269 | 46-50 | 7.09 | 2.035 | – | 0.09 | 29.70 | 0.093 | 1.203 | -253.2 | cloudy gray |
| 1119 | ↓ | ↓ | 7.10 | 2.028 | – | 0.02 | 29.94 | 0.093 | 1.208 | -278.9 | ↓ |
| 1121 | ↓ | ↓ | 7.10 | 2.020 | – | 0.01 | 29.59 | 0.093 | 1.208 | -336.9 | ↓ |
| | Sampled at 1122 | | | | | (2) | | | | | |
| 1136 | 0269 | 56-60 | 7.11 | 2.233 | – | 0.37 | 29.26 | 0.104 | 1.337 | -585.1 | cloudy gray |
| (3) ~~1138~~ ~~1140~~ | ↓ | ↓ | Insufficient water volume for additional readings | | – | | | | | | |
| | Sampled at 1141 | | | | | | | | | | |
| | | 61-65 | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |
| | | | | | – | | | | | | |
| | ↓ | ↓ | | | – | | | | | | |
| | Sampled at | | | | | | | | | | |

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mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681

Date: 8/18/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9:45 | 314(AI) | 36-40 | 6.55 | 2.017 | NM | 1.11 | 25.03 | 1.03 | 1.321 | -91.5 | |
| 9:47 | 314(AI) | 36-40 | 6.39 | 2.069 | NM | 1.07 | 24.32 | 1.05 | 1.346 | -103.6 | |
| 9:49 | 314(AI) | 36-40 | 6.36 | 2.074 | NM | .64 | 23.96 | 1.06 | 1.348 | -108.2 | |
| 9:50 | 314(AI) | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 10:12 | 314(AI) | 41-45 | 6.94 | 2.326 | NM | 0.34 | 24.75 | 1.20 | 1.530 | -162.6 | |
| 10:14 | 314(AI) | 41-45 | 6.93 | 2.410 | NM | 1.01 | 24.42 | 1.24 | 1.568 | -136.0 | |
| 10:15 | 314(AI) | 41-45 | 6.65 | 2.409 | NM | 0.37 | 24.18 | 1.24 | 1.565 | -131.3 | |
| 10:16 | 314(AI) | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| | 314(AI) | 46-50 | | | | | | | | | |
| | 314(AI) | 46-50 | No Parameters Run | | | | | | | | |
| | 314(AI) | 46-50 | | | | | | | | | |
| 10:50 | Sampled | | | | | | | | | | |
| | | | | | | | | | | | |
| 11:09 | 314(AI) | 56-60 | 7.34 | 3.545 | NM | 0.27 | 24.67 | 1.66 | 2.306 | -150.8 | |
| 11:10 | 314(AI) | 56-60 | 7.31 | 3.568 | NM | 0.31 | 24.30 | 1.68 | 2.328 | -145.3 | |
| 11:12 | 314(AI) | 56-60 | 7.21 | 3.621 | NM | 0.56 | 24.15 | 1.9 | 2.354 | -134.1 | |
| 11:13 | 314(AI) | 56-60 | | Sampled | | | | | | | |
| | | | | | | | | | | | |
| 11:59 | 315(AO) | 36-40 | 8.00 | 2.097 | NM | 0.73 | 26.43 | 1.08 | 1.379 | -90.2 | |
| 12:00 | 315(AO) | 36-40 | 7.63 | 2.166 | NM | 0.70 | 25.48 | 1.10 | 1.461 | -76.5 | |
| 12:02 | 315(AO) | 36-40 | 7.27 | 2.142 | NM | 0.59 | 25.96 | 1.09 | 1.392 | -82.0 | |
| 12:03 | 315(AO) | | | Sampled | | | | 1.09 | | | |
| | | | | | | | | | | | |
| 12:24 | 315(AO) | 41-45 | 7.34 | 2.136 | NM | 0.32 | 26.21 | 1.08 | 1.382 | -115.1 | |
| 12:25 | 315(AO) | 41-45 | 7.21 | 2.146 | NM | 0.23 | 25.81 | 1.09 | 1.392 | -107.9 | |
| 12:26 | 315(AO) | 41-45 | 7.11 | 2.182 | NM | 0.23 | 25.72 | 1.11 | 1.418 | -106.2 | |
| 12:27 | 315(AO) | 41-45 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

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mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681

Date: 6/25/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1500 | 336(AW) | 56-60 | 6.95 | 2.424 | NM | 0.09 | 31.59 | 1.51 | 1.915 | -178.1 | |
| 1502 | 336(AW) | 56-60 | 7.04 | 2.411 | NM | 0.09 | 31.35 | 1.56 | 1.967 | -175.3 | |
| 1504 | 336(AW) | 56-60 | 7.06 | 3.054 | NM | 0.09 | 31.16 | 1.58 | 2.002 | -176.2 | |
| 1506 | | | | Sampled | | | | | | | |
| 1606 | 337(AX) | 31-35 | 7.66 | 1.388 | NM | 0.23 | 29.66 | 0.69 | 0.899 | -77.1 | |
| 1607 | 337(AX) | 31-35 | 7.52 | 1.380 | NM | 0.21 | 29.38 | 0.68 | 0.895 | -79.2 | |
| 1608 | 337(AX) | 31-35 | 7.08 | 1.375 | NM | 0.20 | 29.21 | 0.68 | 0.893 | -81.6 | |
| 1609 | | | | Sampled | | | | | | | |
| 1625 | 337(AX) | 36-40 | 7.14 | 1.591 | NM | 0.13 | 29.12 | 0.80 | 1.037 | -165.4 | |
| 1626 | 337(AX) | 36-40 | 7.13 | 1.600 | NM | 0.13 | 28.88 | 0.80 | 1.041 | -166.4 | |
| 1627 | 337(AX) | 36-40 | 7.09 | 1.608 | NM | 0.13 | 28.70 | 0.81 | 1.047 | -165.7 | |
| 1628 | | | | ~~1638~~ | | Sampled | | 0.96 | | | |
| 742 | 337(AX) | 41-45 | 8.89 | 1.90 | NM | 0.44 | 26.32 | ~~1.235~~ 0.96 | 1.235 | -72.1 | |
| 743 | 337(AX) | 41-45 | 8.75 | 1.897 | NM | 0.43 | 26.34 | 1.234 | 1.234 | -74.2 | |
| 744 | 337(AX) | 41-45 | 8.58 | 1.898 | NM | 0.40 | 26.38 | 0.96 | 1.233 | -76.3 | |
| 745 | | | | Sampled | | | | | | | |
| 801 | 337(AX) | 46-50 | 6.97 | 2.081 | NM | 0.25 | 26.33 | 1.06 | 1.361 | -113.4 | |
| 805 | 337(AX) | 46-50 | 6.87 | 2.100 | NM | 0.24 | 26.20 | 1.07 | 1.371 | -114.2 | |
| 806 | 337(AX) | 46-50 | 6.85 | 2.125 | NM | 0.24 | 26.05 | 1.04 | 1.384 | -113.9 | |
| 807 | | | | Sampled | | | | | | | |
| 826 | 337(AX) | 56-60 | 6.56 | 3.009 | NM | 0.19 | 26.46 | 1.57 | 1.972 | -136.3 | |
| 829 | 337(AX) | 56-60 | 6.54 | 3.061 | NM | 0.20 | 26.31 | 1.60 | 2.007 | -137.6 | |
| 830 | 337(AX) | 56-60 | 6.45 | 3.104 | NM | 0.19 | 26.26 | 1.62 | 2.028 | -139.8 | |
| 831 | | | | | | | | | | | |
| 903 | 338(BE) | 26-30 | 7.71 | 1.390 | NM | 0.42 | 28.61 | 0.69 | 0.902 | -69.2 | |
| 904 | 338(BE) | 26-30 | 7.62 | 1.386 | NM | 0.38 | 28.56 | 0.69 | 0.899 | -73.4 | |
| 905 | 338(BE) | 26-30 | 7.53 | 1.342 | NM | 0.34 | 28.47 | 0.69 | 0.898 | -76.9 | |
| 906 | | | | Sampled | | | | | | | |
| 922 | 338(BE) | 31-35 | 6.74 | 1.390 | NM | 0.19 | 28.15 | 0.69 | 0.903 | -134.0 | |
| 923 | 338(BE) | 31-35 | 6.75 | 1.388 | NM | 0.19 | 28.01 | 0.69 | 0.902 | -134.7 | |
| 924 | 338(BE) | 31-35 | 6.74 | 1.396 | NM | 0.19 | 27.92 | 0.69 | 0.901 | -135.7 | |
| 925 | | | | Sampled | | | | | | | |

Notes:

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NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681

Date: 8/23/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1129 | 335(AQ) | 41-45 | 7.13 | 1.457 | NM | 0.19 | 29.46 | 0.73 | 0.949 | -168.8 | |
| 1130 | 335(AQ) | 41-45 | 7.12 | 1.463 | NM | 0.19 | 28.29 | 0.73 | 0.951 | -165.4 | |
| 1131 | 335(AQ) | 41-45 | 7.05 | 1.464 | NM | 0.16 | 27.52 | 0.73 | 0.952 | -164.3 | |
| 1132 | | | | Sampled | | | | | | | |
| 1163 | 335(AQ) | 46-50 | 7.19 | 0.964 | NM | 0.23 | 29.42 | 0.46 | 0.565 | -192.1 | |
| 1154 | 335(AQ) | 46-50 | 7.15 | 0.842 | NM | 0.21 | 29.31 | 0.40 | 0.538 | -191.5 | |
| 1165 | 335(AQ) | 46-50 | 7.09 | 0.815 | NM | 0.19 | 29.15 | 0.40 | 0.529 | -190.1 | |
| 1150 | | | | Sampled | | | | | | | |
| 1217 | 335(AQ) | 56-60 | 7.16 | 1.494 | NM | 0.32 | 29.12 | 0.79 | 0.837 | -208.6 | |
| 1218 | 335(AQ) | 56-60 | 7.14 | 1.181 | NM | 0.27 | 29.00 | 0.84 | 1.115 | -208.1 | |
| 1219 | 335(AQ) | 56-60 | 7.17 | 1.689 | NM | 0.24 | 28.71 | 0.70 | 0.914 | -206.8 | |
| 1220 | | | | Sampled | | | | | | | |
| 1211 | 336(AW) | 26-30 | 7.21 | 1.263 | NM | 0.32 | 29.16 | 0.62 | 0.820 | -145.1 | |
| 1212 | 336(AW) | 26-30 | 7.11 | 1.258 | NM | 0.26 | 28.94 | 0.62 | 0.816 | -141.1 | |
| 1213 | 336(AW) | 26-30 | 6.82 | 1.250 | NM | 0.25 | 28.80 | 0.62 | 0.812 | -135.0 | |
| 1214 | | | | Sampled | | | | | | | |
| [illegible] | 336(AW) | [illegible] | [illegible] | [illegible] | NM | 0.15 | 31.69 | 0.67 | 0.878 | -184.8 | |
| [illegible] | 336(AW) | [illegible] | [illegible] | [illegible] | NM | 0.14 | 31.29 | 0.67 | 0.885 | -185.2 | |
| [illegible] | 336(AW) | [illegible] | [illegible] | [illegible] | NM | [illegible] | 31.09 | 0.68 | 0.889 | -183.9 | |
| [illegible] | | | | Sampled | | | | | | | |
| 1249 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 0.77 | [illegible] | -205.0 | |
| 1305 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 0.79 | 1.035 | -202.9 | |
| 1320 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 0.82 | 1.064 | -200.8 | |
| [illegible] | | | | Sampled | | | | | | | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1.486 | -200.4 | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1.87 | -197.0 | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1.86 | -193.3 | |
| [illegible] | | | | Sampled | | | | | | | |
| 1430 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1.235 | -116.1 | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1.244 | -113.2 | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1.256 | -111.7 | |
| [illegible] | | | | Sampled | | | | | | | |

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681

Date: 8/21/14 & 8/22/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1614 | CS314 | 11-45 | 6.93 | 0.930 | NM | 0.48 | 27.30 | 0.44 | 0.589 | -93.5 | |
| 1615 | CS314 | 11-45 | 6.79 | 0.874 | NM | 0.40 | 27.16 | 0.42 | 0.559 | -96.6 | |
| 1616 | CS314 | 11-45 | 6.72 | 0.825 | NM | 0.35 | 27.06 | 0.39 | 0.538 | -98.6 | |
| 1617 | | | | Sampled | | | | | | | |
| 7:58 | 334(AR) | 31-35 | 9.05 | 1.181 | NM | 0.66 | 25.75 | 0.58 | 0.767 | -109.9 | |
| 7:59 | 334(AR) | 31-35 | 8.90 | 1.174 | NM | 0.61 | 25.73 | 0.58 | 0.764 | -110.3 | |
| 8:00 | 334(AR) | 31-35 | 9.62 | 1.170 | NM | 0.55 | 25.64 | 0.58 | 0.759 | -69.5 | |
| 801 | | | | Sampled | | | | | | | |
| 8:21 | 334(AR) | 36-40 | 6.96 | 1.464 | NM | 0.34 | 26.61 | 0.73 | 0.951 | -137.5 | |
| 8:22 | 334(AR) | 36-40 | 7.06 | 1.473 | NM | 0.31 | 26.59 | 0.74 | 0.962 | -139.8 | |
| 8:23 | 334(AR) | 36-40 | 7.11 | 1.504 | NM | 0.30 | 26.46 | 0.75 | 0.981 | -142.7 | |
| 824 | | | | Sampled | | | | | | | |
| 9:14 | 334(AR) | 41-45 | 7.19 | 1.164 | NM | 0.19 | 28.41 | 0.57 | 0.745 | -162.0 | |
| 915 | 334(AR) | 41-45 | 7.14 | 1.120 | NM | 0.18 | 28.52 | 0.55 | 0.724 | -163.0 | |
| 9:16 | 334(AR) | 41-45 | 7.02 | 0.920 | NM | 0.16 | 28.44 | 0.47 | 0623 | -161.5 | |
| 917 | | | | Sampled | | | | | | | |
| [illegible] | [illegible] | 46-50 | 7.16 | [illegible] | 0.74 | 0.41 | 28.69 | 0.52 | 0.695 | -193.9 | |
| 936 | [illegible] | [illegible] | [illegible] | [illegible] | NM | 0.14 | 28.44 | 0.53 | 0.720 | -194.2 | |
| 937 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 0.15 | 28.15 | 0.56 | 0.748 | -191.1 | |
| 938 | | | | | | | | | | | |
| 10:00 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 28.75 | 0.71 | 0.935 | -207.9 | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 28.42 | 0.72 | 0.940 | -208.9 | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | | | | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | | | | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | | | | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | 0.57 | 0.757 | -78.0 | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | 0.754 | -78.4 | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | | 0.753 | -79.1 | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | | | | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | 0.806 | -132.5 | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | 0.809 | -128.9 | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | | 0.809 | -124.9 | |

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Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681

Date: 6/22/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1221 | 332(OK) | 41-45 | 7.13 | 0.619 | NM | 0.16 | 27.17 | 0.23 | 0.321 | -229.8 | |
| 1222 | 332(OK) | 41-45 | 7.02 | 0.454 | NM | 0.16 | 27.14 | 0.21 | 0.291 | -225.6 | |
| 1223 | 332(OK) | 41-45 | 6.85 | 0.440 | NM | 0.14 | 27.44 | 0.21 | 0.284 | -222.0 | |
| 1224 | | | | Sampled | | | | | | | |
| 1247 | 332(OK) | 46-50 | 7.15 | 0.659 | NM | 0.22 | 26.86 | 0.32 | 0.428 | -232.6 | |
| 1246 | 332(OK) | 46-50 | 7.13 | 0.556 | NM | 0.21 | 27.25 | 0.27 | 0.360 | -230.8 | |
| 1249 | 332(OK) | 46-50 | 7.05 | 0.552 | NM | 0.21 | 27.62 | 0.27 | 0.360 | -227.8 | |
| 1250 | | | | Sampled | | | | | | | |
| | 332(OK) | 56-60 | | | | | | | | | |
| | 332(OK) | 56-60 | | No | Parameters | Measured | | | | | |
| | 332(OK) | 56-60 | | | | | | | | | |
| 1319 | | | | Sampled | | | | | | | |
| 1410 | 333(OB) | 26-30 | 6.10 | 0.744 | NM | 0.68 | 25.49 | 0.38 | 0.509 | -42.5 | |
| 1411 | 333(OB) | 26-30 | 5.43 | 0.760 | NM | 0.60 | 25.26 | 0.38 | 0.506 | -42.9 | |
| 1412 | 333(OB) | 26-30 | 5.73 | 0.777 | NM | 0.56 | 25.21 | 0.38 | 0.504 | -40.4 | |
| 1413 | | | | Sampled | | | | | | | |
| 1430 | 333(OB) | 36-40 | 6.33 | 0.893 | NM | 0.24 | 27.40 | 0.44 | 0.540 | -103.9 | |
| 1431 | 333(OB) | 36-40 | 6.61 | 0.893 | NM | 0.22 | 27.16 | 0.44 | 0.579 | -117.9 | |
| 1432 | 333(OB) | 36-40 | 6.65 | 0.889 | NM | 0.23 | 27.10 | 0.43 | 0.576 | -121.8 | |
| 1433 | | | | Sampled | | | | | | | |
| 1451 | 333(OB) | 41-45 | 7.01 | 1.031 | NM | 0.22 | 27.33 | 0.51 | 0.675 | -152.9 | |
| 1452 | 333(OB) | 41-45 | 7.09 | 1.043 | NM | 0.20 | 27.13 | 0.51 | 0.680 | -153.4 | |
| 1453 | 333(OB) | 41-45 | 7.08 | 1.049 | NM | 0.20 | 27.01 | 0.52 | 0.683 | -153.7 | |
| 1454 | | | | Sampled | | | | | | | |
| 1514 | 333(OB) | 46-50 | 6.91 | 1.372 | NM | 0.21 | 26.46 | 0.68 | 0.893 | -172.9 | |
| 1515 | 333(OB) | 46-50 | 6.95 | 1.378 | NM | 0.14 | 26.32 | 0.69 | 0.899 | -173.0 | |
| 1516 | 333(OB) | 46-50 | 6.93 | 1.388 | NM | 0.16 | 26.23 | 0.69 | 0.905 | -172.0 | |
| 1517 | | | | Sampled | | | | | | | |
| 1535 | 333(OB) | 56-60 | 7.01 | 2.303 | NM | 0.14 | 26.95 | 1.19 | 1.520 | -197.6 | |
| 1536 | 333(OB) | 56-60 | 7.04 | 2.378 | NM | 0.14 | 26.40 | 1.22 | 1.526 | -199.2 | |
| 1537 | 333(OB) | 56-60 | 7.12 | 2.425 | NM | 0.14 | 26.63 | 1.21 | 1.508 | -200.0 | |
| 1538 | | | | Sampled | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681

Date: 6/22/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8:56 | 331(DE) | 31-35 | 7.67 | 1.225 | NM | 0.52 | 25.21 | 0.6 0.745 | 0.795 | -94.6 | |
| 8:57 | 331(DE) | 31-35 | 7.37 | 1.202 | NM | 0.57 | 25.06 | 0.58 | 0.755 | -99.8 | |
| 8:58 | 331(DE) | 31-35 | 7.18 | 1.111 | NM | 0.49 | 25.01 | 0.53 | 0.676 | -104.4 | |
| 4:59 | | | | Sampled | | | | | | | |
| 9:21 | 331(DE) | 36-40 | 6.81 | 1.111 | NM | 0.24 | 25.91 | 0.57 | 0.751 | -182.9 | |
| 9:22 | 331(DE) | 36-40 | 6.90 | 1.054 | NM | 0.29 | 25.85 | 0.51 | 0.667 | -146.3 | |
| 923 | 331(DE) | 36-40 | 6.90 | 1.003 | NM | 0.26 | 25.80 | 0.51 | 0.648 | -187.3 | |
| 9:24 | | | | Sampled | | | | | | | |
| 9:53 | 331(DE) | 41-45 | 6.87 | 0.460 | NM | 0.59 | 25.56 | 0.22 | 0.300 | -204.7 | |
| 9:54 | 331(DE) | 41-45 | 6.81 | 0.446 | NM | 0.49 | 25.61 | 0.21 | 0.286 | -208.6 | |
| 9:55 | 331(DE) | 41-45 | 6.75 | 0.430 | NM | 0.39 | 25.14 | 0.20 | 0.279 | -202.4 | |
| 9:56 | | | | Sampled | | | | | | | |
| 10:17 | 331(DE) | 46-50 | 7.03 | 0.392 | NM | 0.20 | 26.57 | 0.19 | 0.254 | -217.9 | |
| 10:18 | 331(DE) | 46-50 | 7.07 | 0.391 | NM | 0.18 | 26.61 | 0.19 | 0.254 | -218.8 | |
| 10:19 | 331(DE) | 46-50 | 7.09 | 0.390 | NM | 0.19 | 26.62 | 0.19 | 0.253 | -219.7 | |
| 10:20 | | | Sampled | | | | | | | | |
| 10:41 | 331(DE) | 56-60 | 7.17 | 0.363 | NM | 0.13 | 28.22 | 0.17 | 0.236 | -227.4 | |
| 10:42 | 331(DE) | 56-60 | 7.16 | 0.363 | NM | 0.13 | 27.94 | 0.17 | 0.236 | -227.7 | |
| 10:43 | 331(DE) | 56-60 | 7.19 | 0.363 | NM | 0.13 | 27.76 | 0.17 | 0.236 | -227.7 | |
| 10:44 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 1127 | 332(ok) | 31-35 | 6.40 | 0.977 | NM | 0.57 | 26.70 | OAK | 0.643 | -90.7 | |
| 1128 | 332(ok) | 31-35 | 6.67 | 0.969 | NM | 0.50 | 26.51 | 0.46 | 0.611 | -93.1 | |
| 1129 | 332(ok) | 31-35 | 6.54 | 1.042 | NM | 0.45 | 26.33 | 0.64 | 0.435 | -95.8 | |
| 1130 | | | | Sampled | | | | | | | |
| 1147 | 332(ok) | 36-40 | 6.95 | 1.337 | NM | 0.23 | 27.04 | 0.67 | 0.674 | -198.4 | |
| 1148 | 332(ok) | 36-40 | 6.96 | 1.334 | NM | 0.23 | 26.95 | 0.66 | 0.864 | -199.8 | |
| 1149 | 332(ok) | 36-40 | 6.94 | 1.327 | NM | 0.23 | 26.82 | 0.65 | 0.854 | -201.2 | |
| 1150 | | | | Sampled | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: FR1681

Date: 8/21/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1504 | 330(cc) | 36-40 | 7.8 | 1.473 | NM | 0.21 | 29.45 | 0.73 | 0.954 | -80.7 | |
| 1509 | 330(cc) | 36-40 | 7.7 | 1.463 | NM | 0.22 | 29.33 | 0.73 | 0.947 | -80.9 | |
| 1510 | 330(cc) | 36-40 | 7.54 | 1.452 | NM | 0.22 | 29.19 | 0.72 | 0.942 | -81.9 | |
| 1511 | | | | Sampled | | | | | | | |
| 1529 | 330(cc) | 41-45 | 7.40 | 1.761 | NM | 0.15 | 30.44 | 0.91 | 1.179 | -145.1 | |
| 1530 | 330(cc) | 41-45 | 7.43 | 1.868 | NM | 0.15 | 29.77 | 0.95 | 1.221 | -147.5 | |
| 1531 | 330(cc) | 41-45 | 7.38 | 1.909 | NM | 0.14 | 29.33 | 0.96 | 1.245 | -147.1 | |
| 1532 | | | | Sampled | | | | | | | |
| 1552 | 330(cc) | 46-50 | 7.62 | 1.919 | NM | 0.14 | 30.12 | 0.97 | 1.247 | -169.9 | |
| 1553 | 330(cc) | 46-50 | 7.60 | 1.923 | NM | 0.14 | 29.88 | 0.97 | 1.251 | -169.7 | |
| 1554 | 330(cc) | 46-50 | 7.57 | 1.928 | NM | 0.14 | 29.60 | 0.97 | 1.254 | -166.6 | |
| 1555 | | | | Sampled | | | | | | | |
| | 330(cc) | 51-55 | | | | | | | | | |
| | 330(cc) | 51-55 | | No parameters Measured | | | | | | | |
| 1627 | 330(cc) | 51-55 | | | | | | | | | |
| 1634 | 330(cc) | 56-60 | 7.64 | 2.538 | NM | 0.10 | 29.33 | 1.31 | 1.678 | -190.5 | |
| 1635 | 330(cc) | 56-60 | 7.54 | 2.650 | NM | 0.09 | 28.61 | 1.37 | 1.737 | -185.5 | |
| 1636 | 330(cc) | 56-60 | 7.46 | 2.686 | NM | 0.09 | 28.37 | 1.39 | 1.754 | -184.8 | |
| 1637 | | | | Sampled | | | | | | | |

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## DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681

Date: 8/21/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11:38 | 326(CA) | 51-55 | 7.65 | 0.475 | NM | 0.15 | 30.15 | 0.22 | 0.307 | -147.5 | |
| 11:39 | 326(CA) | 51-55 | 7.67 | 0.470 | NM | 0.15 | 30.18 | 0.22 | 0.304 | -187.7 | |
| 11:40 | 326(CA) | 51-55 | 7.64 | 0.462 | NM | 0.14 | 30.02 | 0.22 | 0.299 | -186.0 | |
| 11:41 | | | | Sampled | | | | | | | |
| 12:00 | 326(CA) | 56-60 | 7.49 | 0.469 | NM | 0.11 | 30.38 | 0.21 | 0.313 | -145.4 | |
| 12:01 | 326(CA) | 56-60 | 7.59 | 0.485 | NM | 0.12 | 30.54 | 0.21 | 0.339 | -190.6 | |
| 12:02 | 326(CA) | 56-60 | 7.63 | 0.639 | NM | 0.11 | 30.56 | 0.32 | 0.449 | -191.6 | |
| | | | | | | | | | | | |
| 13:01 | 329(BZ) | 36-40 | 7.36 | 1.246 | NM | 0.21 | 30.21 | 0.61 | 0.807 | -141.0 | |
| 1302 | 329(BZ) | 36-40 | 7.01 | 1.176 | NM | 0.19 | 30.54 | 0.57 | 0.747 | -111.3 | |
| 1303 | 329(BZ) | 36-40 | 6.89 | 1.046 | NM | 0.14 | 30.53 | 0.49 | 0.651 | -113.4 | |
| 1304 | | | | Sampled | | | | | | | |
| 1323 | 329(BZ) | 41-45 | 7.44 | 1.238 | NM | 0.16 | 29.44 | 0.61 | 0.806 | -150.1 | |
| 1324 | 329(BZ) | 41-45 | 7.42 | 1.237 | NM | 0.15 | 29.64 | 0.61 | 0.802 | -148.9 | |
| 1325 | 329(BZ) | 41-45 | 7.23 | 1.213 | NM | 0.13 | 29.86 | 0.60 | 0.787 | -143.0 | |
| 1326 | | | | Sampled | | | | | | | |
| 1345 | 329(BZ) | 46-50 | 7.47 | 1.502 | NM | 0.17 | 28.77 | 0.75 | 0.978 | -156.7 | |
| 1346 | 329(BZ) | 46-50 | 7.40 | 1.504 | NM | 0.18 | 28.84 | 0.75 | 0.981 | -151.4 | |
| 1347 | 329(BZ) | 46-50 | 7.31 | 1.511 | NM | 0.16 | 28.88 | 0.75 | 0.982 | -148.1 | |
| 1348 | | | | Sampled | | | | | | | |
| 1404 | 329(BZ) | 51-55 | 7.50 | 1.721 | NM | 0.33 | 28.74 | 0.86 | 1.117 | -140.7 | |
| 1405 | 329(BZ) | 51-55 | 7.42 | 1.715 | NM | 0.30 | 28.47 | 0.86 | 1.114 | -135.5 | |
| 1406 | 329(BZ) | 51-55 | 7.26 | 1.711 | NM | 0.29 | 28.41 | 0.86 | 1.111 | -129.5 | |
| 1407 | | | | Sampled | | | | | | | |
| 1426 | 329(BZ) | 56-60 | 7.38 | 2.697 | NM | 0.14 | 29.25 | 1.42 | 1.805 | -144.4 | |
| 1427 | 329(BZ) | 56-60 | 7.37 | 2.827 | NM | 0.13 | 29.06 | 1.46 | 1.853 | -146.9 | |
| 1428 | 329(BZ) | 56-60 | 7.34 | 2.870 | NM | 0.12 | 28.93 | 1.6 | 1.876 | -146.7 | |
| 1429 | | | | Sampled | | | | | | | |
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Notes:

DPT = Direct Push Technology

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mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

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Temp (°C) = Temperature (degrees Celsius)

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ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM**

Project/Project Number: FR1681

Date: 8/21/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7:55 | 327(CB) | 36-40 | 7.13 | 1.190 | NM | 0.51 | 26.89 | 0.59 | 0.771 | -40.4 | |
| 7:58 | 327(CB) | 36-40 | 7.01 | 1.193 | NM | 0.43 | 26.80 | 0.57 | 0.776 | -63.5 | |
| 7:59 | 327(CB) | 36-40 | 6.97 | 1.195 | NM | 0.37 | 26.76 | 0.59 | 0.778 | -69.7 | |
| 7:58 | | | Sampled | | | | | | | | |
| 8:21 | 327(CB) | 41-45 | 7.13 | 1.788 | NM | 0.24 | 28.14 | 0.91 | 1.174 | -106.8 | |
| 8:22 | 327(CB) | 41-45 | 7.15 | 1.819 | NM | 0.20 | 27.98 | 0.92 | 1.187 | -118.0 | |
| 8:23 | 327(CB) | 41-45 | 7.14 | 1.848 | NM | 0.18 | 27.84 | 0.93 | 1.203 | -129.4 | |
| 8:24 | | | | Sampled | | | | | | | |
| 8:44 | 327(CB) | 46-50 | 7.63 | 1.735 | NM | 0.16 | 27.68 | 0.88 | 1.137 | -89.5 | |
| 8:45 | 327(CB) | 46-50 | 7.66 | 1.759 | NM | 0.15 | 27.81 | 0.89 | 1.144 | -96.8 | |
| 8:46 | 327(CB) | 46-50 | 7.40 | 1.722 | NM | 0.14 | 27.71 | 0.84 | 1.082 | -109.3 | |
| 8:47 | | | Sampled | | | | | | | | |
| | 327(CB) | 51-55 | | | | | | | | | |
| | 327(CB) | 51-55 | No Parameters Measured | | | | | | | | |
| | 327(CB) | 51-55 | | | | | | | | | |
| 9:16 | | | | Sampled | | | | | | | |
| 9:41 | 327(CB) | 56-60 | 7.68 | 2.088 | NM | 0.20 | 31.15 | 1.06 | 1.372 | -187.4 | |
| 9:43 | 327(CB) | 56-60 | 7.66 | 2.163 | NM | 0.18 | 30.25 | 1.10 | 1.418 | -186.1 | |
| 9:44 | 327(CB) | 56-60 | 7.67 | 2.231 | NM | 0.17 | 29.38 | 1.15 | 1.468 | -185.2 | |
| 9:45 | | | | Sampled | | | | | | | |
| 10:25 | 328(CA) | 36-40 | 7.93 | 1.152 | NM | 0.46 | 28.53 | 0.57 | 0.747 | -75.3 | |
| 10:26 | 328(CA) | 36-40 | 7.69 | 1.104 | NM | 0.41 | 28.52 | 0.56 | 0.745 | -75.3 | |
| 10:27 | 328(CA) | 36-40 | 7.46 | 1.144 | NM | 0.37 | 28.46 | 0.56 | 0.748 | -75.8 | |
| 10:28 | | | | Sampled | | | | | | | |
| | 328(CA) | 41-45 | | | | | | | | | |
| | 328(CA) | 41-45 | No Parameters Measured | | | | | | | | |
| | 328(CA) | 41-45 | | | | | | | | | |
| 10:56 | | | | Sampled | | | | | | | |
| 11:13 | 328(CA) | 46-50 | 7.62 | 1.274 | NM | 0.14 | 31.27 | 0.58 | 0.727 | -173.8 | |
| 11:14 | 328(CA) | 46-50 | 7.61 | 0.926 | NM | 0.12 | 30.96 | 0.42 | 0.525 | -176.3 | |
| 11:15 | 328(CA) | 46-50 | 7.56 | 0.514 | NM | 0.12 | 30.57 | 0.22 | 0.303 | -177.3 | |
| 11:16 | | | Sampled | | | | | | | | |

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NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

# DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681

Date: 8/20/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1638 | 326(DE) | 56-60 | 7.40 | 0.983 | NM | 0.07 | 30.16 | 0.47 | 0.625 | -195.5 | |
| 1639 | 326(DE) | 56-60 | 7.52 | 0.942 | NM | 0.07 | 30.21 | 0.46 | 0.607 | -198.7 | |
| 1640 | 326(DE) | 56-60 | 7.50 | 0.929 | NM | 0.07 | 30.22 | 0.45 | 0.601 | -200.2 | |
| 1641 | | | | Sampled | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: FR1681

Date: 8/20/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1347 | 325(cy) | 36-40 | 8.26 | 0.971 | NM | 0.59 | 30.47 | 0.47 | 0.629 | -89.9 | |
| 1348 | 325(cy) | 36-40 | 7.54 | 0.965 | NM | 0.52 | 30.66 | 0.47 | 0.626 | -78.4 | |
| 1349 | 325(cy) | 36-40 | 6.72 | 0.961 | NM | 0.45 | 30.85 | 0.47 | 0.622 | -76.1 | |
| 1350 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 1409 | 325(cy) | 41-45 | 7.41 | 1.145 | NM | 0.13 | 30.76 | 0.57 | 0.755 | -138.1 | |
| 1410 | 325(cy) | 41-45 | 7.33 | 1.171 | NM | 0.12 | 30.36 | 0.58 | 0.77 | -139.6 | |
| 1411 | 325(cy) | 41-45 | 7.15 | 1.194 | NM | 0.12 | 30.28 | 0.59 | 0.781 | -135.3 | |
| 1412 | | | | Sampled | | | | | | | |
| | | | | | | | | | | | |
| 1432 | 325(cy) | 46-50 | 7.50 | 1.947 | NM | 0.11 | 32.60 | 0.99 | 1.286 | -119.1 | |
| 1435 | 325(cy) | 46-50 | 7.57 | 1.996 | NM | 0.09 | 31.91 | 1.01 | 1.305 | -130.5 | |
| 1436 | 325(cy) | 46-50 | 7.50 | 2.023 | NM | 0.09 | 31.67 | 1.02 | 1.323 | -135.8 | |
| 1437 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 1523 | 326(DC) | 36-40 | 7.54 | 0.819 | NM | 0.21 | 32.59 | 0.39 | 0.52 | -169.4 | |
| 1524 | 326(DC) | 36-40 | 7.08 | 0.819 | NM | 0.16 | 32.48 | 0.39 | 0.516 | -167.5 | |
| 1525 | 326(DC) | 36-40 | 6.92 | 0.787 | NM | 0.15 | 32.27 | ~~0.59~~ 0.58 | 0.509 | -161.5 | |
| 1526 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 1545 | 326(DC) | 41-45 | 7.42 | 0.942 | NM | 0.42 | 32.21 | 0.46 | 0.620 | -144.6 | |
| 1546 | 326(DC) | 41-45 | 7.51 | 0.962 | NM | 0.31 | 31.96 | 0.47 | 0.627 | -151.3 | |
| 1547 | 326(DC) | 41-45 | 7.46 | 0.968 | NM | 0.27 | 31.94 | 0.47 | 0.629 | -154.3 | |
| 1548 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 1611 | 326(DC) | 46-50 | 7.24 | 1.530 | NM | 0.10 | 29.43 | 0.77 | 0.946 | | |
| 1612 | 326(DC) | 46-50 | 7.11 | 1.534 | NM | 0.09 | 29.17 | 0.80 | 1.017 | -159.8 | |
| 1613 | 326(DC) | 46-50 | 7.01 | 1.534 | NM | 0.09 | 29.07 | 0.45 | 0.529 | -141.3 | |
| 1614 | | | | Sampled | | | | | | | |
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ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681

Date: 8/20/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:35 | 323(D) | 46-50 | 7.57 | 1.774 | NM | 0.4 | 30.06 | 0.89 | 1.161 | -187.3 | |
| 10:37 | 323(D) | 46-50 | 7.47 | 1.487 | NM | 0.29 | 29.63 | 0.91 | 1.170 | -176.8 | |
| 10:39 | 323(D) | 46-50 | 7.32 | 1.765 | NM | 0.26 | 29.36 | 0.85 | 1.135 | -166.3 | |
| 10:40 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 10:58 | 323(D) | 56-60 | 7.34 | 3.066 | NM | 0.14 | 29.84 | 1.54 | 1.992 | -160.4 | |
| 10:59 | 323(D) | 56-60 | 7.41 | 3.073 | NM | 0.11 | 29.79 | 1.59 | 2.00 | -166.5 | |
| 11:00 | 323(D) | 56-60 | 7.47 | 3.082 | NM | 0.11 | 29.70 | 1.59 | 2004 | -170.7 | |
| 11:01 | | | | Sampled | | | | | | | |
| | | | | | | | | | | | |
| 11:50 | 324(E) | 36-40 | 7.33 | ~~3.178~~ | NM | 0.76 | 31.63 | 0.48 | 0.645 | -92.7 | |
| 11:52 | 324(E) | 36-40 | 6.54 | 0.977 | NM | 0.56 | 30.74 | 0.48 | 0.634 | -82.7 | |
| 11:54 | 324(E) | 36-40 | 6.46 | 0.967 | NM | 0.48 | 29.99 | 0.47 | 0.627 | -83.3 | |
| 11:55 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 12:15 | 324(E) | 41-45 | 7.76 | 1.022 | NM | 0.39 | 31.04 | 0.49 | 0.644 | -152.0 | |
| 12:17 | 324(E) | 41-45 | 7.29 | 1.187 | NM | 0.34 | 30.47 | 0.59 | 0.775 | -143.6 | |
| 12:19 | 324(E) | 41-45 | 6.99 | 1.200 | NM | 0.30 | 30.3 | 0.59 | 0.777 | -137.4 | |
| 12:20 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 12:35 | 324(E) | 46-50 | 7.49 | 1.488 | NM | 0.13 | 32.24 | 0.74 | 0.974 | -195.8 | |
| 12:37 | 324(E) | 46-50 | 7.45 | 1.528 | NM | 0.12 | 32.04 | 0.76 | 0.994 | -193.2 | |
| 12:39 | 324(E) | 46-50 | 7.30 | 1.535 | NM | 0.11 | 31.95 | 0.76 | 0.998 | -189.7 | |
| 12:46 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 1258 | 324(E) | 56-60 | 7.49 | 2.807 | NM | 0.09 | 30.70 | 1.52 | 1.976 | -190.1 | |
| 1300 | 324(E) | 56-60 | 7.57 | 3.062 | NM | 0.09 | 29.46 | 1.58 | 1.990 | -190.5 | |
| 1302 | 324(E) | 56-60 | 7.32 | 3.019 | NM | 0.01 | 29.41 | 1.55 | 1.946 | -176.5 | |
| 1303 | | | | Sampled | | | | | | | |
| | | | | | | | | | | | |
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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: FR1681

Date: 8/20/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7:55 | 322(6) | 36-40 | 8.25 | 0.765 | NM | 0.49 | 27.77 | 0.37 | 0.494 | -73.5 | |
| 7:57 | 322(6) | 36-40 | 7.89 | 0.749 | NM | 0.48 | 27.65 | 0.36 | 0.486 | -72.2 | |
| 7:59 | 322(6) | 36-40 | 7.67 | 0.744 | NM | 0.43 | 27.73 | 0.36 | 0.483 | -77.3 | |
| 7:59 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 8:16 | 322(6) | 41-45 | 7.28 | 1.381 | NM | 0.22 | 29.58 | 0.69 | 0.906 | -143.8 | |
| 8:19 | 322(6) | 41-45 | 7.46 | 1.426 | NM | 0.19 | 29.27 | 0.71 | 0.930 | -151.0 | |
| 8:20 | 322(6) | 41-45 | 7.58 | 1.422 | NM | 0.19 | 29.15 | 0.70 | 0.920 | -151.8 | |
| 8:21 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 8:40 | 322(6) | 46-50 | 7.33 | 2.140 | NM | 0.46 | 27.97 | 1.09 | 1.40 | -169.0 | |
| 8:42 | 322(6) | 46-50 | 7.28 | 2.170 | NM | 0.36 | 27.79 | 1.10 | 1.413 | -155.3 | |
| 8:44 | 322(6) | 46-50 | 7.16 | 2.145 | NM | 0.24 | 27.63 | 1.11 | 1.419 | -146.4 | |
| 8:45 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 9:03 | 322(6) | 56-60 | 7.74 | 3.122 | NM | 0.34 | 28.69 | 1.62 | 2.032 | -67.7 | |
| 9:05 | 322(6) | 56-60 | 7.68 | 3.152 | NM | 0.32 | 28.45 | 1.64 | 2.055 | -78.5 | |
| 9:07 | 322(6) | 56-60 | 7.60 | 3.201 | NM | 0.25 | 28.14 | 1.66 | 2.083 | -90.9 | |
| 9:08 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 9:51 | 323(D) | 36-40 | 6.30 | 1.162 | NM | 0.34 | 31.05 | 0.57 | 0.746 | -83.6 | |
| 9:53 | 323(D) | 36-40 | 7.71 | 1.127 | NM | 0.31 | 30.50 | 0.55 | 0.722 | -80.0 | |
| 9:55 | 323(D) | 36-40 | 7.34 | 1.108 | NM | 0.28 | 30.21 | 0.54 | 0.719 | -80.2 | |
| 9:56 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 10:11 | 325(D) | 41-45 | 7.30 | 1.533 | NM | 0.17 | 31.29 | 0.75 | 0.987 | -159.7 | |
| 10:13 | 323(D) | 41-45 | 7.47 | 1.542 | NM | 0.16 | 30.69 | 0.77 | 1.009 | -163.2 | |
| 10:15 | 323(D) | 41-45 | 7.41 | 1.584 | NM | 0.15 | 30.53 | 0.79 | 1.036 | -163.4 | |
| 10:16 | | | | Sampled | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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**DPT GEOCHEMICAL DATA FORM** Project/Project Number: FR1681

Date: 8/19/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1426 | 320(I) | 45-50 | 6.46 | 1.922 | NM | 0.38 | 31.27 | 1.03 | 1.346 | -108.6 | |
| 1427 | 320(I) | 45-50 | 6.65 | 2.233 | NM | 0.13 | 29.47 | 1.13 | 1.446 | -108.8 | |
| 1428 | 320(I) | 45-50 | 6.74 | 2.262 | NM | 0.33 | 28.62 | 1.15 | 1.469 | -101.8 | |
| 1429 | | Sampled | | | | | | | | | |
| | | | | | | | | | | | |
| 1447 | 320(I) | 56-60 | 7.02 | 2.451 | NM | 0.37 | 34.10 | 1.27 | 1.640 | -95.1 | |
| 1448 | 320(I) | 56-60 | 6.80 | 3.172 | NM | 0.24 | 29.52 | 1.65 | 2.073 | -88.4 | |
| 1449 | 320(I) | 56-60 | 6.69 | 3.104 | NM | 0.16 | 26.97 | 1.60 | 2.026 | -96.8 | |
| 1450 | | | Sampled | | | | | | | | |
| | F | | | | | | | | | | |
| 1556 | 321(6) | 36-40 | 7.20 | 0.964 | NM | 6.51 | 29.67 | 0.47 | 0.621 | -123.6 | |
| 1557 | 321(6) | 36-40 | 6.73 | 0.924 | NM | 0.18 | 30.42 | 0.46 | 0.609 | -119.5 | |
| 1559 | 321(6) | 36-40 | 5.97 | 0.943 | NM | 0.12 | 28.42 | 0.42 | 0.611 | -83.1 | |
| 1600 | | | | Sampled | | | | 0.46 | | | |
| | F | | | | | | | | | | |
| 1620 | 321(6) | 44-45 | 6.37 | 1.683 | NM | 0.09 | 29.06 | 0.79 | 1.029 | -101.1 | |
| 1622 | 321(6) | 44-45 | 6.16 | 1.586 | NM | 0.08 | 28.66 | 0.79 | 1.030 | -95.0 | |
| 1624 | 321(6) | 44-45 | 6.10 | 1.582 | NM | 0.07 | 29.05 | 0.79 | 1.028 | -93.5 | |
| | F | | | | | | | | | | |
| 1641 | 321(6) | 46-50 | 6.83 | 2.241 | NM | 0.10 | 30.35 | 1.13 | 1.446 | -90.1 | |
| 1645 | 321(6) | 46-50 | 6.75 | 2.268 | NM | 0.06 | 29.75 | 1.15 | 1.477 | -108.4 | |
| 1647 | 321(6) | 46-50 | 6.52 | 2.283 | NM | 0.05 | 29.38 | 1.16 | 1.487 | -111.7 | |
| 1648 | | | | | | | | | | | |
| | F | | | | | | | 1.57 | | | |
| 1707 | 321(6) | 56-60 | 6.65 | 2.910 | NM | 0.24 | 29.47 | ~~1.646~~ | 1.903 | -148.1 | |
| 1709 | 321(6) | 56-60 | 6.71 | 2.955 | NM | 0.12 | 29.12 | 1.53 | 1.925 | -152.1 | |
| 1710 | 321(6) | 56-60 | 6.67 | 2.969 | NM | 0.09 | 28.92 | 1.54 | 1.933 | -151.2 | |
| 1711 | | | Sampled | | | | | | | | |

Notes:
DPT = Direct Push Technology
ft BLS = feet below land surface
mS/cm = milliSiemens per centimeter (or millimhos per centimeter)
NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)
Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR1681

Date: 8/19/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11:54 | 319 (H) | 36-40 | 6.50 | 1.013 | NM | 0.41 | 28.88 | 0.5 | 0.676 | -67.4 | |
| 11:52 | 319(H) | 36-40 | 6.10 | 1.044 | NM | 0.75 | 28.29 | 0.5 | 0.678 | -66.7 | |
| 11:56 | 319(H) | 36-40 | 6.01 | 1.033 | NM | 0.94 | 27.96 | 0.5 | 0.671 | -63.6 | |
| 11:57 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 12:16 | 319(H) | 41-45 | 6.38 | 1.205 | NM | 0.31 | 30.06 | 0.61 | 0.801 | -95.3 | |
| 12:19 | 319(H) | 41-45 | 6.51 | 1.269 | NM | 0.28 | 28.48 | 0.63 | 0.823 | -96.1 | |
| 12:20 | 319(H) | 41-45 | 6.85 | 1.271 | NM | 0.51 | 28.81 | 0.63 | 0.826 | -90.2 | |
| 12:21 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 12:47 | 319(H) | 46-50 | 6.72 | 1.448 | NM | 0.32 | 30.06 | 0.74 | 0.979 | -126.1 | |
| 12:46 | 319(H) | 46-50 | 6.64 | 1.584 | NM | 0.24 | 29.01 | 0.79 | 1.03 | -116.9 | |
| 12:49 | 319(H) | 46-50 | 6.50 | 1.578 | NM | 0.29 | 28.78 | 1.04 | 1.02 | -112.1 | |
| 12:50 | | | Sampled | | | | | 0.78 | | | |
| | | | | | | | | | | | |
| 1307 | 319(H) | 56-60 | 6.71 | 3.085 | NM | 29AM | 30.68 | 1.62 | 2.036 | -98.9 | |
| 1308 | 319(H) | 56-60 | 6.70 | 3.146 | NM | 0.71 | 28.86 | 1.64 | 2.060 | -102.9 | |
| 1309 | 319(H) | 56-60 | 6.63 | 3.164 | NM | 0.61 | 28.50 | 1.65 | 2.063 | -105.9 | |
| 1310 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 1345 | 320(I) | 36-40 | 6.92 | 1.345 | NM | .26 | 30.57 | 0.66 | 0.860 | -145.3 | |
| 1347 | 320(I) | 36-40 | 6.76 | 1.297 | NM | 0.13 | 29.48 | 0.61 | 0.842 | -131.9 | |
| 1346 | 320(I) | 36-40 | 6.61 | 1.359 | NM | 0.21 | 28.73 | 0.62 | 0.814 | -119.9 | |
| 1349 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 1405 | 320(I) | 41-45 | 6.78 | 1.689 | NM | 0.29 | 30.82 | 0.86 | 1.125 | -117.8 | |
| 1406 | 320(I) | 41-45 | 6.81 | 1.784 | NM | 0.62 | 29.01 | 0.91 | 1.174 | -127.1 | |
| 1407 | 320(I) | 41-45 | 6.62 | 1.807 | NM | 0.30 | 28.77 | 0.91 | 1.183 | -116.1 | |
| 1408 | | | Sampled | | | | | | | | |
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Notes:

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: FR1681

Date: 8/19/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8:21 | 317(cp) | 41-45 | 5.72 | 1.395 | NM | 1.0 | 23.84 | 0.7 | 0.907 | -123 | |
| 8:22 | 317(cp) | 41-45 | 5.67 | 1.386 | NM | 1.12 | 23.95 | 0.69 | 0.902 | -28.8 | |
| 8:24 | 317(cp) | 41-45 | 5.72 | 1.386 | NM | 0.85 | 23.87 | 0.69 | 0.9 | -47.3 | |
| 8:25 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| | 317(cp) | 46-50 | | | | | | | | | |
| | 317(cp) | 46-50 | WQ parameters | | | | Measured / Low Flow | | | | |
| | 317(cp) | 46-50 | | | | | | | | | |
| 8:45 | | | Sample | | Collected | | | | | | |
| | | | | | | | | | | | |
| 9:06 | 317(cp) | 56-60 | 6.42 | 3.243 | NM | 2.38 | 24.45 | 1.71 | 2.132 | -107.8 | |
| 9:08 | 317(cp) | 56-60 | 6.53 | 3.340 | NM | 1.53 | 24.25 | 1.75 | 2.172 | -107.7 | |
| 9:10 | 317(cp) | 56-60 | 6.55 | 3.362 | NM | 3.03 | 24.14 | 1.76 | 2.185 | -98.6 | |
| 9:11 | | Sample | Collected | | | | | | | | |
| | | | | | | | | | | | |
| 9:52 | 318(cs) | 31-35 | 7.18 | 1.388 | NM | 2.32 | 25.81 | 0.69 | 0.895 | -103.3 | |
| 9:53 | 318(cs) | 31-35 | 7.09 | 1.396 | NM | 1.57 | 25.23 | 0.69 | 0.885 | -82.5 | |
| 9:54 | 318(cs) | 31-35 | 6.64 | 1.352 | NM | 1.26 | 24.81 | 0.67 | 0.877 | -70.9 | |
| 9:55 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 10:16 | 318(cs) | 36-40 | 6.50 | 1.335 | NM | 0.20 | 25.64 | 0.66 | 0.867 | -119.9 | |
| 10:17 | 318(cs) | 36-40 | 6.54 | 1.338 | NM | 0.36 | 25.33 | 0.66 | 0.86 | -115.7 | |
| 10:18 | 318(cs) | 36-40 | 6.54 | 1.338 | NM | 1.70 | 25.22 | 0.66 | 0.867 | -104.9 | |
| 10:19 | | | | | | | | | | | |

Notes:

DPT = Direct Push Technology

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

## DPT GEOCHEMICAL DATA FORM

Project/Project Number: FR16 81

Date: 8/18/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4:10 | 317(CP) | 31-35 | 7.96 | 1.454 | NM | 1.60 | 28.05 | 0.73 | 0.947 | -823 | |
| 4:12 | 317(CP) | 31-35 | 7.19 | 1.454 | NM | 0.79 | 27.27 | 0.72 | 0.945 | -1123 | |
| 4:15 | 317(CP) | 31-35 | 7.27 | 1.464 | NM | 2.69 | 26.69 | 0.73 | 0.950 | -496 | |
| 4:16 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 4:36 | 317(CP) | 36-40 | 7.09 | 1.469 | NM | 1.72 | 25.65 | 0.73 | 0.954 | -842 | |
| 4:37 | 317(CP) | 36-40 | 7.07 | 1.462 | NM | 0.72 | 25.06 | 0.73 | 0.949 | -684 | |
| 4:39 | 317(CP) | 36-40 | 6.69 | 1.452 | NM | 0.42 | 24.94 | 0.73 | 0.942 | -633 | |
| 4:40 | | | Sampled | | | | | | | | |

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DO (mg/L) = Dissolved Oxygen (milligrams per liter)
Temp (°C) = Temperature (degrees Celsius)
TDS (g/L) = Total Dissolved Solids (grams per liter)
ORP (mV) = Oxidation Reduction Potential (milliVolts)

**DPT GEOCHEMICAL DATA FORM** Project/Project Number: FR1681

Date: 8/18/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:15 | 315 (AO) | 46-50 | | | | | | | | | |
| | 315(AO) | 46-50 | | No Parameters Measured | | | | | | | |
| | 315(AO) | 46-50 | | | | | | | | | |
| 12:45 | 315(AO) | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| | 315(AO) | 56-60 | | | | | | | | | |
| | 315(AO) | 56-60 | | No Parameters Measured | | | | | | | |
| | 315(AO) | 56-60 | | | | | | | | | |
| 1:13 | 315(AO) | 56-60 | | Sampled | | | | | | | |
| | | | | | | | | | | | |
| 1:47 | 316(AN) | 36-40 | 7.66 | 1.530 | NM | 1.85 | 28.72 | 0.77 | 1.001 | -100.5 | |
| 1:50 | 316(AN) | 36-40 | 7.17 | 1.525 | NM | 1.11 | 28.80 | 0.76 | 0.99 | -129.1 | |
| 1:52 | 316(AN) | 36-40 | 7.10 | 1.524 | NM | 0.76 | 28.44 | 0.76 | 0.991 | -139.8 | |
| 1:53 | | | sampled | | | | | | | | |
| | | | | | | | | | | | |
| 2:17 | 316(AN) | 41-45 | | | | | | | | | |
| | 316(AN) | 41-45 | | No Parameters Measured | | | | | | | |
| | 316(AN) | 41-45 | | | | | | | | | |
| 2:30 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 2:57 | 316(AN) | 46-50 | 7.45 | 2.270 | NM | 2.31 | 28.77 | 1.16 | 1.463 | -75.2 | |
| 2:59 | 316(AN) | 46-50 | 7.53 | 2.317 | NM | 0.80 | 27.63 | 1.19 | 1.511 | -74.4 | |
| 3:01 | 316(AN) | 46-50 | 7.24 | 2.388 | NM | 0.46 | 27.20 | 1.22 | 1.553 | -77.8 | |
| 3:02 | | | Sampled | | | | | | | | |
| | | | | | | | | | | | |
| 3:22 | 316(AN) | 56-60 | 7.19 | 2.308 | NM | 0.22 | 28.26 | 1.16 | 1.471 | -192.9 | |
| 3:25 | 316(AN) | 56-60 | 7.29 | 3.533 | NM | 0.62 | 26.34 | 1.85 | 1.85 | -143.3 | |
| 3:25 | 316(AN) | 56-60 | 7.19 | 2.250 | NM | 0.33 | 27.18 | 1.13 | 1.439 | -142.4 | |
| 3:26 | 316(AN) | | | Sampled | | | | | | | |
| | | | | | | | | | | | |
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Notes:

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TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1

Date: 9/22/14 Sampler: M. Burcham

AA / DPT0340

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0950 | 0340 | 31-35 | 7.43 | 1.759 | --- | 1.19 | 25.27 | 0.89 | 1.144 | -374.9 | grey |
| N/A | ↓ | ↓ | INSUFFICIENT VOLUME | | | | | | | | |
| N/A | ↓ | ↓ | | | | | | | | | |
| 0952 | SAMPLED | | CRHE - DPT0340 - 0.33 mB 35.0 - 20140922 @ | | | | | | | 0952 | |
| 1012 | 0340 | 36-40 | 7.45 | 2.241 | --- | 0.92 | 26.11 | 1.15 | 1.458 | -435.5 | grey |
| 1014 | ↓ | ↓ | 7.47 | 2.271 | --- | 0.55 | 26.02 | 1.17 | 1.490 | -499.7 | " " |
| 1016 | ↓ | ↓ | 7.36 | 2.324 | --- | 0.54 | 25.78 | 1.19 | 1.514 | -459.8 | cloudy |
| 1018 | SAMPLED | | CRHE - DPT0340 - 0.38 mB 40.0 - 20140922 @ | | | | | | | 1018 | |
| 1037 | 0340 | 41-45 | 7.45 | 2.186 | --- | 0.20 | 26.03 | 1.12 | 1.430 | -346.1 | grey |
| 1039 | ↓ | ↓ | 7.41 | 2.257 | --- | 0.09 | 25.82 | 1.16 | 1.478 | -454.2 | grey |
| 1041 | ↓ | ↓ | 7.36 | 2.294 | --- | 0.08 | 25.73 | 1.18 | 1.494 | -479.2 | grey |
| | SAMPLED | | CRHE - DPT0340 - 0.43 mB 45.0 - 20140922 @ | | | | | | | 1042 | |
| 1106 | 0340 | 46-50 | 7.54 | 2.709 | --- | 0.25 | 26.43 | 1.40 | 1.767 | -297.2 | grey |
| 1108 | ↓ | ↓ | 7.50 | 2.778 | --- | 0.07 | 26.20 | 1.44 | 1.817 | -431.5 | grey |
| 1110 | ↓ | ↓ | 7.47 | 2.839 | --- | 0.06 | 25.97 | 1.47 | 1.853 | -457.2 | grey |
| | SAMPLED | | CRHE - DPT0340 - 0.48 mB 50.0 - 20140922 @ | | | | | | | 1111 | |
| 1131 | 0340 | 56-60 | 7.65 | 3.928 | --- | 0.06 | 27.19 | 2.08 | 2.576 | -302.4 | grey |
| 1133 | ↓ | ↓ | 7.67 | 4.031 | --- | 0.04 | 26.74 | 2.13 | 2.633 | -343.4 | grey |
| 1135 | ↓ | ↓ | 7.65 | 4.094 | --- | 0.05 | 26.54 | 2.17 | 2.670 | -373.6 | grey |
| | SAMPLED | | CRHE - DPT0340 - 0.58 mB 60.0 - 20140922 @ | | | | | | | 1136 | |
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Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1

Date: 9/30/14 Sampler: M. Burcham

EC/DPT0357

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1249 | 0357 | 31-35 | 7.06 | 1.467 | --- | 0.44 | 31.13 | 0.73 | 0.961 | -200.1 | grey |
| 1251 | ↓ | ↓ | 7.18 | 1.495 | --- | 0.17 | 30.37 | 0.74 | 0.974 | -219.1 | grey |
| 1253 | ↓ | ↓ | 7.18 | 1.505 | --- | 0.12 | 30.07 | 0.75 | 0.979 | -222.0 | grey/cloudy |
| | SAMPLED | | | CRHE-DPT0357-0330-20140930 | | | | | @ | 1254 | |
| | 0357 | 36-40 | 7.44 | 1.305 | --- | 0.08 | 30.44 | 0.66 | 0.866 | -243.1 | grey |
| 1310 | ↓ | ↓ | 7.39 | 1.369 | --- | 0.05 | 30.05 | 0.68 | 0.894 | -245.2 | grey |
| 1312 | ↓ | ↓ | 7.36 | 1.388 | --- | 0.05 | 29.89 | 0.69 | 0.905 | -243.5 | grey/cloudy |
| 1314 | SAMPLED | | | CRHE-DPT0357-0340-20140930 | | | | | @ | 1315 | |
| 1344 | 0357 | 41-45 | 7.43 | 1.650 | --- | 0.07 | 30.10 | 0.83 | 1.082 | -246.5 | grey |
| 1346 | ↓ | ↓ | 7.41 | 1.685 | --- | 0.04 | 29.80 | 0.85 | 1.099 | -249.0 | grey |
| 1348 | ↓ | ↓ | 7.40 | 1.702 | --- | 0.04 | 29.66 | 0.85 | 1.109 | -255.2 | grey/cloudy |
| | SAMPLED | | | CRHE-DPT0357-0430-20140930 | | | | | @ | 1349 | |
| 1405 | 0357 | 46-50 | 7.42 | 1.655 | --- | 0.23 | 30.05 | 0.85 | 1.109 | -215.6 | grey |
| 1407 | ↓ | ↓ | 7.40 | 1.793 | --- | 0.05 | 29.49 | 0.91 | 1.177 | -222.4 | grey |
| 1409 | ↓ | ↓ | 7.38 | 1.857 | --- | 0.04 | 29.30 | 0.94 | 1.213 | -225.2 | grey |
| | SAMPLED | | | CRHE-DPT0357-0480-20140930 | | | | | @ | 1410 | |
| 1516 | 0357 | 51-55 | 7.38 | 2.340 | --- | 0.21 | 30.34 | 1.20 | 1.536 | -226.3 | grey |
| 1518 | ↓ | ↓ | 7.40 | 2.396 | --- | 0.09 | 30.10 | 1.22 | 1.564 | -232.3 | grey |
| 1520 | ↓ | ↓ | 7.39 | 2.432 | --- | 0.09 | 29.86 | 1.25 | 1.589 | -244.5 | grey |
| | SAMPLED | | | CRHE-DPT0357-0530-20140930 | | | | | @ | 1521 | |
| 1540 | 0357 | 56-60 | 7.46 | 3.984 | --- | 0.17 | 29.57 | 2.11 | 2.622 | -198.0 | grey |
| 1542 | ↓ | ↓ | 7.43 | 4.132 | --- | 0.06 | 28.48 | 2.18 | 2.692 | -201.3 | grey/cloudy |
| 1544 | ↓ | ↓ | 7.42 | 4.151 | --- | 0.05 | 28.30 | 2.19 | 2.701 | -201.2 | grey/cloudy |
| | SAMPLED | | | CRHE-DPT0357-0580-20140930 | | | | | @ | 1545 | |
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Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1

Date: 9/30/14 Sampler: M. Burcham

EA/DPT0356

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0843 | 0356 | 31-35 | 6.83 | 1.117 | --- | 0.29 | 25.81 | 0.55 | 0.731 | -279.8 | grey |
| 0845 | ↓ | ↓ | 6.93 | 1.134 | --- | 0.16 | 25.74 | 0.56 | 0.737 | -315.9 | grey/cloudy |
| 0847 | ↓ | ↓ | 7.03 | 1.131 | --- | 0.14 | 25.69 | 0.56 | 0.734 | -327.5 | " " |
| | SAMPLED | | | CRHE-DPT0356-0330-20140930 | | | | | @ | 0848 | |
| 0903 | 0356 | 36-40 | 7.19 | 1.146 | --- | 0.38 | 25.54 | 0.57 | 0.747 | -381.6 | grey |
| 0905 | ↓ | ↓ | 7.19 | 1.163 | --- | 0.13 | 25.55 | 0.58 | 0.759 | -430.5 | grey |
| 0907 | ↓ | ↓ | 7.18 | 1.187 | --- | 0.10 | 25.52 | 0.59 | 0.777 | -448.9 | cloudy grey |
| | SAMPLED | | | CRHE-DPT0356-0380-20140930 | | | | | @ | 0910 | |
| 0936 | 0356 | 41-45 | 7.33 | 2.528 | --- | 0.10 | 26.52 | 0.131 | 1.664 | -332.4 | grey |
| 0938 | ↓ | ↓ | 7.32 | 2.628 | --- | 0.07 | 26.48 | 1.36 | 1.720 | -337.3 | grey |
| 0940 | ↓ | ↓ | 7.33 | 2.693 | --- | 0.06 | 26.39 | 1.40 | 1.762 | -223.8 | grey |
| | SAMPLED | | | | --- | | | | | 0941 | |
| | 0356 | 46-50 | MB | CRHE-DPT0356-0430-20140930 | | | | | @ | | |
| | ↓ | ↓ MB | | | --- | | | | | | |
| | ↓ | ↓ | | | --- | | | | | | |
| | SAMPLED | | | | --- | | | | | | |
| Following sample from leftovers in poly | 0356 | 46-50 | INSUFFICIENT VOLUME | | | | | | | | |
| 1017 | ↓ | ↓ | 7.53 | 3.152 | --- | 0.11 | 22.22 | 1.64 | 2.048 | -258.2 | grey |
| | SAMPLED | | | CRHE-DPT0356-0480-20140930 | | | | | @ | 1016 | |
| 1024 | 0356 | 51-55 | 7.49 | 4.202 | --- | 1.25 | 26.44 | 2.23 | 2.745 | -201.9 | grey |
| 1036 | ↓ | ↓ | 7.49 | 4.296 | --- | 0.10 | 26.35 | 2.28 | 2.794 | -213.9 | grey/cloudy |
| 1038 | ↓ | ↓ | 7.46 | 4.317 | --- | 0.07 | 26.21 | 2.29 | 2.807 | -202.6 | cloudy |
| | SAMPLED | | | CRHE-DPT0356-0530-20140930 | | | | | @ | 1039 | |
| 1059 | 0356 | 56-60 | 7.58 | 4.119 | --- | 0.30 | 27.93 | 2.14 | 2.702 | -174.3 | grey |
| 1101 | ↓ | ↓ | 7.58 | 4.252 | --- | 0.11 | 26.94 | 2.26 | 2.775 | -178.3 | grey/cloudy |
| 1103 | ↓ | ↓ | 7.55 | 4.319 | --- | 0.08 | 26.70 | 2.29 | 2.810 | -182.0 | " " |
| | SAMPLED | | | CRHE-DPT0356-0580-20140930 | | | | | @ | 1104 | |
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Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1 EG/DPT0355

Date: 9/19/14 Sampler: M. Burcham

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1642 | 0355 | 31-35 | 7.38 | 1.260 | --- | 0.23 | 26.81 | 0.82 | 0.802 | -216.4 | grey |
| 1644 | ↓ | ↓ | 7.27 | 1.196 | --- | 0.07 | 26.59 | 0.54 | 0.773 | -223.5 | grey |
| 1646 | ↓ | ↓ | 7.23 | 1.175 | --- | 0.06 | 26.57 | 0.58 | 0.762 | -225.6 | grey |
| | SAMPLED | | | CRHE-DPT-0355-0330-20140929 | | | | | @ | 1647 | |
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Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1

Date: 9/29/14 Sampler: M. Burcham

ED/DPT0354

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1332 | 0354 | 31-35 | 7.54 | 1.655 | --- | 0.09 | 28.52 | 0.84 | 1.082 | -258.8 | grey |
| 1334 | ↓ | ↓ | 7.53 | 1.700 | --- | 0.05 | 28.44 | 0.86 | 1.111 | -269.0 | grey |
| 1336 | ↓ | ↓ | 7.51 | 1.726 | --- | 0.04 | 28.26 | 0.87 | 1.125 | -270.9 | grey |
| | SAMPLED | | | CRHE-DPT0354-033.0-20140929 | | | | | @ | 1337 | |
| | 0354 | 36-40 | INSUFFICIENT VOLUME | | | | | | | | |
| | ↓ | ↓ | | | --- | | | | | | |
| | SAMPLED | | | CRHE-DPT0354-038.0-20140929 | | | | | @ | 1404 | |
| | 0354 | 41-45 | 7.53 | 1.860 | --- | 0.07 | 27.62 | 0.94 | 1.212 | -258.9 | grey |
| | ↓ | ↓ | 7.44 | 1.892 | --- | 0.03 | 27.22 | 0.96 | 1.231 | -261.7 | grey/cloudy |
| | ↓ | ↓ | 7.42 | 1.897 | --- | 0.03 | 27.22 | 0.96 | 1.234 | -261.9 | " " |
| | SAMPLED | | | CRHE-DPT0354-043.0-20140929 | | | | | @ | 1426 | |
| | 0354 | 46-50 | 7.52 | 2,122 | --- | 0.04 | 27.86 | 1.09 | 1.393 | -251.4 | grey |
| | ↓ | ↓ | 7.49 | 1.240 | --- | 0.03 | 27.59 | 1.15 | 1.474 | -267.0 | grey |
| | ↓ | ↓ | 7.47 | 2,319 | --- | 0.03 | 27.48 | 1.19 | 1.515 | -267.6 | grey/cloudy |
| | SAMPLED | | | CRHE-DPT0354-048.0-20140929 | | | | | @ | 1502 | |
| | 0354 | 51-55 | 7.55 | 2.742 | --- | 0.11 | 27.54 | 1.42 | 1.796 | -255.1 | grey |
| | ↓ | ↓ | 7.60 | 2.838 | --- | 0.03 | 27.11 | 1.47 | 1.851 | -283.6 | grey |
| | ↓ | ↓ | 7.58 | 2.894 | --- | 0.03 | 26.94 | 1.50 | 1.885 | -289.0 | grey |
| | SAMPLED | | | CRHE-DPT0354-053.0-20140929 | | | | | @ | 1538 | |
| 1601 | 0354 | 56-60 | 7.51 | 3.298 | --- | 0.04 | 27.30 | 1.75 | 2.497 | -272.5 | grey |
| 1603 | ↓ | ↓ | 7.52 | 3.891 | --- | 0.03 | 26.84 | 2.06 | 2.561 | -297.2 | grey |
| 1605 | ↓ | ↓ | 7.56 | 4.051 | --- | 0.02 | 26.73 | 2.14 | 2.642 | -294.0 | grey |
| | SAMPLED | | | CRHE-DPT0354-058.0-20140929 | | | | | @ | 1606 | |
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Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1

Date: 9/26/14 (24 mB) Sampler: M. Burcham

EH/DPT0353

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0353 | 26-30 | INSUFFICIENT VOL. | | --- | | | | | | |
| | ↓ | ↓ | | | | | | | | | |
| | SAMPLED | | | CRHE-DPT0353-028.0-20140929 | | | | | @ | 0908 | |
| 0933 | 0353 | 31-35 | 7.04 | 1.030 | --- | 0.17 | 27.07 | 0.51 | 0.669 | -107.4 | milky grey |
| | ↓ | ↓ | INSUFFICIENT VOLUME | | --- | | | | | | NOTE: Screen broke |
| | SAMPLED | | | CRHE-DPT0353-033.0-20140929 | | | | | @ | 0937 | |
| 1000 | 0353 | 36-40 | 7.38 | 1.321 | --- | 0.11 | 26.78 | 0.67 | 0.872 | -253.3 | grey |
| 1002 | ↓ | ↓ | 7.36 | 1.374 | --- | 0.08 | 26.77 | 0.69 | 0.895 | -278.7 | grey |
| 1004 | ↓ | ↓ | 7.32 | 1.409 | --- | 0.07 | 26.55 | 0.70 | 0.917 | -301.7 | grey |
| | SAMPLED | | | CRHE-DPT0353-038.0-20140929 | | | | | @ | 1005 | |
| 1030 | 0353 | 41-45 | 7.29 | 1.695 | --- | 0.25 | 26.94 | 0.86 | 1.107 | -193.3 | milky grey |
| 1032 | ↓ | ↓ | 7.27 | 1.733 | --- | 0.15 | 26.52 | 0.87 | 1.129 | -196.7 | grey |
| 1034 | ↓ | ↓ | 7.25 | 1.754 | --- | 0.13 | 26.19 | 0.89 | 1.141 | -193.5 | grey/cl. |
| | SAMPLED | | | CRHE-DPT0353-043.0-20140929 | | | | | @ | 1035 | |
| 1102 | 0353 | 46-50 | 7.33 | 1.755 | --- | 0.61 | 26.35 | 0.89 | 1.155 | -242.9 | grey |
| 1104 | ↓ | ↓ | 7.30 | 1.885 | --- | 0.13 | 25.82 | 0.96 | 1.230 mB | -253.7 | grey |
| 1106 | ↓ | ↓ | 7.28 | 1.914 | --- | 0.07 | 25.78 | 0.97 | 1.242 | -255.6 | grey |
| | SAMPLED | | | CRHE-DPT0353-048.0-20140929 | | | | | @ mB 1107 | | |
| 1126 | 0353 | 56-60 | 7.47 | 2.788 | --- | 0.11 | 26.75 | 1.47 | 1.854 | -287.4 | grey |
| 1128 | ↓ | ↓ | 7.52 | 3.761 | --- | 0.05 | 26.39 | 2.03 | 2.513 | -300.3 | cloudy grey |
| 1130 | ↓ | ↓ | 7.52 | 4.286 | --- | 0.04 | 25.97 | 2.28 | 2.802 | -291.2 | " " |
| | SAMPLED | | | CRHE-DPT0353-053.0-20140929 | | | | | @ | 1131 | |
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Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1

Date: 9/26/14 Sampler: M. Burcham

CE/DPT0352

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1423 | 0352 | 31-35 | 7.27 | 0.988 | --- | 0.05 | 28.92 | 0.49 | 0.646 | -344.4 | grey |
| 1425 | ↓ | ↓ | 7.20 | 1010 | --- | 0.03 | 28.61 | 0.49 | 0.657 | -343.9 | grey |
| 1427 | ↓ | ↓ | 7.14 | 1.013 | --- | 0.03 | 28.66 | 0.50 | 0658 | -330.4 | grey/cloudy |
| | SAMPLED | | | CRHE-DPT0352-033.0-20140926 | | | | | @ | 1428 | |
| 1445 | 0352 | 36-40 | 7.41 | 0.948 | --- | 0.17 | 28.52 | 0.47 | 0.633 | -409.3 | grey |
| 1447 | ↓ | ↓ | 7.43 | 1064 | --- | 0.02 | 27.73 | 0.53 | 0.698 | -431.5 | grey |
| 1449 | ↓ | ↓ | 7.35 | 1.108 | --- | 0.02 | 27.62 | 0.55 | 0.725 | -424.8 | grey/cloudy |
| | SAMPLED | | | CRHE-DPT0352-038.0-20140926 | | | | | @ | 1450 | |
| 1508 | 0352 | 41-45 | 7.41 | 1.041 | --- | 0.10 | 28.71 | 0.53 | 0.700 | -356.8 | grey |
| 1510 | ↓ | ↓ | 7.38 | 1.142 | --- | 0.04 | 28.29 | 0.57 | 0.748 | -378.1 | grey |
| 1512 | ↓ | ↓ | 7.34 | mS 1.175 | --- | 0.03 | 28.01 | 0.58 | 0.764 | -371.5 | grey/cloudy |
| | SAMPLED | | | CRHE-DPT0352-043.0-20140926 | | | | | @ | 1513 | |
| 1527 | 0352 | 46-50 | 7.38 | 1.049 | --- | 0.06 | 28.74 | 0.52 | 0.693 | -361.5 | grey |
| 1529 | ↓ | ↓ | 7.33 | 1.137 | --- | 0.02 | 28.40 | 0.56 | 0.744 | -351.5 | grey |
| 1531 | ↓ | ↓ | 7.27 | 1.175 | --- | 0.02 | mS 28.28 | 0.58 | 0.765 | -329.7 | cloudy |
| | SAMPLED | | | CRHE-DPT0352-048.0-20140926 | | | | | @ | 1532 | |
| 1553 | 0352 | 51-55 | 7.40 | 0.942 | --- | 0.06 | 28.29 | 0.47 | 0.620 | -348.7 | grey |
| 1555 | ↓ | ↓ | 7.32 | 0.969 | --- | 0.03 | 27.61 | 0.47 | 0.630 | -332.4 | grey/cloudy |
| 1557 | ↓ | ↓ | 7.24 | 0.966 | --- | 0.03 | 27.29 | 0.47 | 0.638 | -317.7 | cloudy grey |
| | SAMPLED | | | CRHE-DPT0352-053.0-20140926 | | | | | @ | 1558 | |
| 1617 | 0352 | 56-60 | 7.25 | 2.408 | --- | 0.22 | 28.01 | 1.25 | 1.599 | -207.8 | grey |
| 1619 | ↓ | ↓ | 7.28 | 2.581 | --- | 0.08 | 27.52 | 1.33 | 1.685 | -222.0 | grey |
| 1621 | ↓ | ↓ | 7.26 | 2.639 | --- | 0.06 | 27.46 | 1.36 | 1.717 | -229.1 | cloudy grey |
| | SAMPLED | | | CRHE-DPT0352-058.0-20140926 | | | | | @ | 1622 mS 1625 | |
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Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1

Date: 9/26/14 Sampler: M. Burcham

BN/0351

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1143 | 0351 | 31-35 | 7.12 | 1.054 | --- | 0.19 | 27.90 | 0.52 | NR | -343.6 | grey |
| 1145 | ↓ | ↓ | 7.07 | 1.060 | --- | 0.14 | 27.18 | 0.52 | 0.688 | -356.4 | grey/cloudy |
| 1147 | ↓ | ↓ | 7.03 | 1.056 | --- | 0.16 | 27.48 | 0.52 | 0.683 | -355.7 | " " |
| | SAMPLED | | | CRHE-DPT0351-033.0-20140926 | | | | | @ | 1148 | |
| 1215 | 0351 | 36-40 | 7.26 | 1.048 | --- | 0.12 | 28.18 | 0.52 | 0.689 | -382.0 | grey |
| 1217 | ↓ | ↓ | 7.16 | 1.142 | --- | 0.05 | 27.83 | 0.56 | 0.745 | -404.6 | grey |
| 1219 | ↓ | ↓ | 7.05 | 1.161 | --- | 0.04 | 27.71 | 0.57 | 0.757 | -401.9 | grey |
| | SAMPLED | | | CRHE-DPT0351-038.0-20140926 | | | | | @ | 1220 | |
| 1239 | 0351 | 41-45 | 7.37 | 1.096 | --- | 0.17 | 28.62 | 0.56 | 0.750 | -381.8 | grey |
| 1241 | ↓ | ↓ | 7.33 | 1.313 | --- | 0.11 | 28.54 | 0.67 | 0.875 | -406.8 | grey |
| 1243 | ↓ | ↓ | 7.26 | 1.385 | --- | 0.12 | 28.38 | 0.69 | 0.904 | -408.8 | grey |
| | SAMPLED | | | CRHE-DPT0351-043.0-20140926 | | | | | @ | 1244 | |
| 1304 | 0351 | 46-50 | 7.34 | 1.281 | --- | 0.08 | 28.19 | 0.65 | 0.857 | -388.8 | no grey |
| 1306 | ↓ | ↓ | 7.20 | 1.410 | --- | 0.04 | 27.83 | 0.70 | 0.919 | -385.2 | grey |
| 1308 | ↓ | ↓ | 7.14 | 1.421 | --- | 0.04 | 27.71 | 0.71 | 0.924 | -374.2 | grey |
| | SAMPLED | | | CRHE-DPT0351-048.0-20140926 | | | | | @ | 1309 | |
| 1331 | 0351 | 51-55 | 7.55 | 1.046 | --- | 0.03 | 28.67 | 0.53 | 0.701 | -413.7 | grey |
| 1333 | ↓ | ↓ | 7.48 | 1.216 | --- | 0.02 | 28.70 | 0.61 | 0.801 | -418.6 | grey |
| 1335 | ↓ | ↓ | 7.43 | 1.302 | --- | 0.02 | 28.76 | 0.65 | 0.853 | -423.5 | grey |
| | SAMPLED | | | CRHE-DPT0351-053.0-20140926 | | | | | @ | 1336 | |
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Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1

Date: 9/26/14 Sampler: M. Burcham

CG/DPT0350

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0822 | 0350 | 31-35 | 7.00 | 0.818 | --- | 0.19 | 26.33 | 0.41 | 0.551 | -173.1 | grey |
| 0824 | ↓ | ↓ | 7.02 | 0.842 | --- | 0.16 | 26.90 | 0.41 | 0.549 | -152.5 | cloudy grey |
| 0826 | ↓ | ↓ | 7.02 | 0.837 | --- | 0.16 | 26.91 | 0.41 | 0.545 | -158.3 | cloudy |
| | SAMPLED | | | CRHE-DPT0350-033.0-20140926 | | | | | @ | 0827 | |
| 0846 | 0350 | 36-40 | 7.35 | 0.902 | --- | 0.15 | 27.85 | 0.45 | 0.595 | -249.6 | grey |
| 0849 | ↓ | ↓ | 7.37 | 0.949 | --- | 0.08 | 27.70 | 0.47 | 0.621 | -276.3 | grey |
| 0850 | ↓ | ↓ | 7.35 | 0.977 | --- | 0.07 | 27.64 | 0.48 | 0.638 | -285.9 | grey |
| | SAMPLED | | | CRHE-DPT0350-038.0-20140926 | | | | | @ | 0851 | |
| 0912 | 0350 | 41-45 | 7.56 | 0.944 | --- | 0.06 | 28.01 | 0.47 | 0.624 | -457.1 | grey |
| 0914 | ↓ | ↓ | 7.45 | 1.006 | --- | 0.05 | 27.63 | 0.49 | 0.656 | -455.0 | grey |
| 0916 | ↓ | ↓ | 7.39 | 1.016 | --- | 0.04 | 27.41 | 0.50 | 0.661 | -444.9 | grey |
| | SAMPLED | | | CRHE-DPT0350-043.0-20140926 | | | | | @ | 0917 | ~~grey~~ MB |
| 0936 | 0350 | 46-50 | 7.52 | 0.851 | --- | 0.17 | 28.82 | 0.42 | 0.571 | -426.3 | grey |
| 0938 | ↓ | ↓ | 7.45 | 0.996 | --- | 0.05 | 28.13 | 0.49 | 0.654 | -449.0 | grey |
| 0940 | ↓ | ↓ | 7.40 | 1.022 | --- | 0.05 | 27.89 | 0.50 | 0.666 | -448.3 | |
| | SAMPLED | | | CRHE-DPT0350-048.0-20140926 | | | | | @ | 0941 | |
| 1007 | 0350 | 51-55 | 7.58 | 0.967 | --- | 0.05 | 28.31 | 0.51 | 0.689 | -454.9 | grey |
| 1009 | ↓ | ↓ | 7.52 | 1.278 | --- | 0.03 | 28.71 | 0.64 | 0.847 | -462.1 | grey |
| 1011 | ↓ | ↓ | 7.47 | 1.340 | --- | 0.03 | 28.38 | 0.67 | 0.874 | -453.2 | grey |
| | SAMPLED | | | CRHE-DPT0350-053.0-20140926 | | | | | @ | 1012 | |
| 1044 | 0350 | 56-60 | 7.51 | 2.815 | --- | 0.83 MB | 28.13 | 1.51 | 1.936 | -444.7 | grey |
| 1046 | ↓ | ↓ | 7.53 | 3.152 | --- | 0.04 | 27.54 | 1.72 | 2.157 | -444.7 | grey |
| 1048 | ↓ | ↓ | 7.53 | 3.412 | --- | 0.04 | 27.43 | 1.81 | 2.266 | -450.6 | grey |
| | SAMPLED | | | CRHE-DPT0350-058.0-20141026 | | | | | @ | 1049 | |
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Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1

Date: 9/25/14 Sampler: M. Burcham

BM/DPT0349

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1523 | 0349 | 31-35 | 7.38 | 1.681 | --- | 0.10 | 30.14 | 0.83 | 1.076 | -296.7 | grey |
| 1525 | ↓ | ↓ | 7.26 | 1.608 | --- | 0.10 | 29.20 | 0.80 | 1.043 | -287.1 | grey |
| 1527 | ↓ | ↓ | 7.19 | 1.595 | --- | 0.13 | 28.35 | 0.80 | 1.034 | -270.7 | grey/clear |
| | SAMPLED | | | CRHE-DPT0349-0330-20140925 | | | | | @ | 1528 | |
| 1546 | 0349 | 36-40 | 7.52 | 0.992 | --- | 0.17 | 30.10 | 0.48 | 0.629 | -325.3 | grey |
| 1548 | ↓ | ↓ | 7.44 | 0.959 | --- | 0.04 | 29.66 | 0.47 | 0.624 | -334.1 | grey |
| 1550 | ↓ | ↓ | 7.39 | 0.952 | --- | 0.04 | 29.25 | 0.46 | 0.618 | -329.5 | milky grey |
| | SAMPLED | | | CRHE-DPT0349-0380-20140925 | | | | | @ | 1551 | |
| 1606 | 0349 | 41-45 | 7.52 | 1.016 | --- | 0.15 | 30.03 | 0.50 | 0.672 | -382.8 | grey |
| 1608 | ↓ | ↓ | 7.35 | 1.108 | --- | 0.04 | 29.32 | 0.54 | 0.721 | -374.2 | grey |
| 1610 | ↓ | ↓ | 7.24 | 1.100 | --- | 0.04 | 28.79 | 0.54 | 0.709 | -342.8 | grey |
| | SAMPLED | | | CRHE-DPT0349-0430-20140925 | | | | | @ | 1611 | |
| 1630 | 0349 | 46-50 | 7.54 | 1.096 | --- | 0.17 | 29.72 | 0.55 | 0.745 | -351.6 | grey |
| 1632 | ↓ | ↓ | 7.37 | 1.335 | --- | 0.04 | 28.87 | 0.66 | 0.871 | -334.1 | grey |
| 1634 | ↓ | ↓ | 7.31 | 1.350 | --- | 0.03 | 28.67 | 0.67 | 0877 | -325.5 | grey |
| | SAMPLED | | | CRHE-DPT0349-0480-20140925 | | | | | @ | 1635 | |
| 1700 | 0349 | 51-55 | 7.52 | 2.119 | --- | 0.15 | 29.09 | 1.12 | 1.436 | -354.4 | grey |
| 1702 | ↓ | ↓ | 7.46 | 2.618 | --- | 0.04 | 28.54 | 1.35 | 1.714 | -337.9 | grey |
| 1704 | ↓ | ↓ | 7.43 | 2.664 | --- | 0.03 | 28.56 | 1.37 | 1.734 | -329.8 | grey |
| | SAMPLED | | | CRHE-DPT0349-0530-20140925 | | | | | @ | 1705 | |
| 1727 | 0349 | 56-60 mbg | 7.41 | 3.016 | --- | 0.04 | 28.53 | 1.64 | 2.099 | -254.4 | greyish green |
| 1729 | ↓ | ↓ | 7.39 | 3.842 | --- | 0.03 | 27.69 | 2.02 | 2.506 | -267.8 | grey |
| 1731 | ↓ | ↓ | 7.37 | 3.914 | --- | 0.03 | 27.53 | 2.06 | 2.548 | -268.7 | grey |
| | SAMPLED | | | CRHE-DPT0349-0580-20140925 | | | | | @ | 1732 | |
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Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1 Date: 9/25/14 Sampler: M. Burcham

BE/DPT0348

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0348 | 31-35 | 7.28 | ~~2.060~~ mB 1.558 | --- | 0.09 | 27.37 | 0.78 | 1.007 | -208.6 | grey |
| | ↓ | ↓ | 7.21 | 1.534 | --- | 0.05 | 27.15 | 0.76 | 0.987 | mB -194.1 | grey |
| | ↓ | ↓ | 7.15 | 1.509 | --- | 0.06 | 26.95 | 0.75 | 0.977 | -178.1 | cloudy |
| | SAMPLED | | | CRHE-DPT0348-031.0-20140925 | | | | | @ | 1120 | |
| | 0348 | 36-40 | 7.39 | 1.965 | --- | 0.19 | 27.11 | 1.01 | 1.307 | -246.3 | grey |
| | ↓ | ↓ | 7.38 | 2.093 | --- | 0.05 | 27.11 | 1.09 | 1.403 | -254.1 | grey |
| | ↓ | ↓ | 7.35 | 2.239 | --- | 0.04 | 27.08 | 1.15 | 1.474 | -256.3 | grey/cloudy |
| | SAMPLED | | | CRHE-DPT0348-038.0-20140925 | | | | | @ | 1152 | |
| mB | 0348 | 41-45 | 7.43 | 1.920 | --- | 0.16 | 27.30 | 0.97 | 1.246 | -235.6 | grey |
| | ↓ | ↓ | 7.42 | 1.948 | --- | 0.09 | 27.34 | 0.99 | 1.266 | -249.0 | grey |
| | ↓ | ↓ | 7.44 | 1.981 | --- | 0.09 | 27.38 | 1.01 | 1.299 | -272.9 | grey/cloudy |
| | SAMPLED | | | CRHE-DPT0348-043.0-20140925 | | | | | @ | 1221 | |
| 1242 | 0348 | 46-50 | 7.50 | 2.738 | --- | 0.14 | 27.72 | 1.46 | 1.861 | -308.4 | grey |
| mB 1244 | ↓ | ↓ | 7.43 | 3.657 | --- | 0.08 | 26.84 | 1.94 | 2.411 | -314.9 | grey |
| 1246 | ↓ | ↓ | 7.37 | 3.841 | --- | 0.08 | 26.67 | 2.03 | 2.508 | -392.6 | grey/cloudy |
| | SAMPLED | | | CRHE-DPT0348-048.0-20140925 | | | | | | @ 1247 | |
| 1305 | 0348 | 51-55 | 7.55 | 3.895 | --- | 0.22 | 28.03 | 2.10 | 2.613 | -263.7 | grey |
| 1307 | ↓ | ↓ | 7.56 | ~~4.230~~ mB 4.230 | --- | 0.10 | 27.10 | 2.25 | 2.769 | -243.6 | grey |
| 1309 | ↓ | ↓ | 7.55 | 4.2780 | --- | 0.08 | 26.89 | 2.26 | 2.781 | -244.3 | cloudy grey |
| | SAMPLED | | | CRHE-DPT0348-053.0-20140925 | | | | | @ | 1310 | |
| 1329 | 0348 | 56-60 | 7.60 | 4.157 | --- | 0.04 | 27.30 | mB 2.21 | 2.722 | -268.2 | grey |
| 1331 | ↓ | ↓ | 7.59 | 4.230 | --- | 0.04 | 26.99 | 2.24 | 2.753 | -262.7 | grey |
| 1333 | ↓ | ↓ | 7.58 | 4.253 | --- | 0.04 | 26.41 | 2.25 | 2.769 | -266.6 | grey |
| | SAMPLED | | | CRHE-DPT0348-058.0-20140925 | | | | | @ | 1334 | |
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Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1 AY/DPT0347

Date: 9/25/14 Sampler: M. Burcham

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0843 | ~~26-30~~ mb | 0347 | 7.03 | 1.420 | --- | 0.22 | 26.72 | 0.71 | 0.923 | -180.4 | grey |
| 0845 | 0347 | 26-30 | 7.09 | 1.416 | --- | 0.15 | 26.28 | 0.70 | 0.917 | -162.0 | cloudy |
| 0847 | ↓ | ↓ | 7.09 | 1.398 | --- | 0.15 | 26.14 | 0.70 | 0.912 | -118.2 | cloudy |
| | SAMPLED | | | CRHE-DPT0347-0280-20140925 mb | | | | | @ | 0848 | |
| 0903 | 0347 | 31-35 | 7.39 | 1.665 | --- | 0.19 | 27.40 | 0.84 | 1.099 | -226.8 | grey |
| 0905 | ↓ | ↓ | 7.35 | 1.751 | --- | 0.10 | 26.84 | 0.88 | 1.140 | NR | grey/cloudy |
| 0907 | ↓ | ↓ | 7.31 | 1.751 | --- | 0.09 | 26.70 | 0.88 | 1.140 | -194.0 | ~~grey/cloudy~~ mb grey/cloudy |
| | SAMPLED | | | CRHE-DPT0347-033.0-20140925 | | | | | @ | 0908 | |
| 0919 | 0347 | 36-40 | 7.38 | 1.891 | --- | 0.16 | 27.26 | 0.99 | 1.278 | -219.1 | grey |
| 0921 | ↓ | ↓ | 7.32 | 2.115 | --- | 0.06 | 26.55 | 1.06 | 1.361 | -195.1 | grey/cloudy |
| 0923 | ↓ | ↓ | 7.22 | 2.083 | --- | 0.07 | 26.34 | 1.06 | 1.349 | -177.5 | " " |
| | SAMPLED | | | CRHE-DPT0347-038.0-20140925 | | | | | @ | 0924 | |
| 0938 | 0347 | 41-45 | 7.36 | 2.248 | --- | 0.30 | 27.21 | 1.20 | 1.542 | -216.0 | grey |
| 0940 | ↓ | ↓ | 7.32 | 2.830 | --- | 0.06 | 26.58 | 1.47 | 1.853 | -196.2 | grey |
| 0942 | ↓ | ↓ | 7.26 | 2.889 | --- | 0.05 | 26.29 | 1.49 | 1.879 | -182.1 | grey/cloudy |
| | SAMPLED | | | CRHE-DPT0347-~~038.0~~ 043 mb -20140925 | | | | | @ | 0943 | |
| 1008 | 0347 | 46-50 | 7.53 | 2.921 | --- | 0.06 | 26.75 | 1.53 | 1.929 | -235.0 | grey |
| ~~100~~ mb 1010 | ↓ | ↓ | 7.47 | 3.221 | --- | 0.04 | 26.52 | 1.68 | 2.104 | -233.9 | grey |
| 1012 | ↓ | ↓ | 7.46 | 3.301 | --- | 0.04 | 26.51 | 1.73 | 2.154 | -233.4 | grey |
| | SAMPLED | | | CRHE-DPT0347-048.0-20140925 | | | | | @ | 1013 | |
| 1034 | 0347 | 56-60 | 7.51 | 3.630 | --- | 0.12 | 26.42 | 1.92 | 2.415 | -234.7 | grey |
| 1036 | ↓ | ↓ | 7.53 | 4.033 | --- | 0.04 | 26.03 | 2.14 | 2.637 | -219.5 | grey |
| 1038 | ↓ | ↓ | 7.51 | 4.125 | --- | 0.04 | 25.92 | 2.19 | 2.689 | -175.2 | gray |
| | SAMPLED | | | CRHE-DPT0347-058.0-20140925 | | | | | @ | 1039 | |
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NR = not recorded

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# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1

Date: 9/24/14 Sampler: M. Burcham

AU/DPT0346

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1514 | 0346 | 31-35 | 7.42 | 1.021 | --- | 0.10 | 27.20 | 0.50 | 0.662 | -394.1 | grey |
| 1521 | 0346 | ↓ | 7.24 | 0.992 | --- | 0.06 | 26.41 | 0.48 | 0.637 | -305.2 | grey |
| 1523 | ↓ | ↓ | 7.14 | 0.969 | --- | 0.06 | 26.17 | 0.47 | 0.630 | -294.6 | ~~grey~~ cloudy mb |
| | SAMPLED | | | CRHE-DPT0346-033.0-20140924 | | | | | @ | 1524 | |
| 1539 | 0346 | 36-40 | 7.36 | 2.115 | --- | 0.06 | 27.41 | 1.10 | 1.416 | -400.4 | grey |
| 1541 | ↓ | ↓ | 7.29 | 2.241 | --- | 0.04 | 26.94 | 1.17 | 1.495 | -388.5 | grey |
| 1543 | ↓ | ↓ | 7.23 | 2.325 | --- | 0.04 | 26.80 | 1.19 | 1.512 | -378.8 | cloudy grey |
| | SAMPLED | | | CRHE-DPT0346-038.0-20140924 | | | | | @ | 1544 | |
| 1600 | 0346 | 41-45 | 7.52 | 1.828 | --- | 0.11 | 27.75 | 0.95 | 1.237 | -435.8 | grey |
| 1602 | ↓ | ↓ | 7.50 | 2.095 | --- | 0.07 | 27.42 | 1.08 | 1.390 | -450.3 | grey |
| 1604 | ↓ | ↓ | 7.45 | 2.311 | --- | 0.06 | 27.24 | 1.89 mb | 1.519 | -455.8 | grey |
| | SAMPLED | | | CRHE-DPT0346-043.0-20140924 | | | | | @ | 1605 | |
| 1624 | 0346 | 46-50 | 7.61 | 2.163 | --- | 0.16 | 1.10 mb | 27.44 | 1.479 | -454.6 | grey |
| 1626 | ↓ | ↓ | 7.64 | 2.666 | --- | 0.04 | 26.92 | 1.41 | 1.788 | -481.4 | grey |
| 1628 | ↓ | ↓ | 7.50 | 2.062 | --- | 0.04 | 26.58 | 1.61 | 2.018 | -474.2 | grey |
| | SAMPLED | | | CRHE-DPT0346-048.0-20140924 | | | | | @ | 1629 | |
| 1652 | 0346 | 51-55 | 7.54 | 3.952 | --- | 0.03 | 26.36 | 2.11 | 2.637 | -371.2 | grey |
| 1654 | ↓ | ↓ | 7.42 | 4.150 | --- | 0.04 | 26.01 | 2.20 | 2.701 | -352.3 | grey |
| 1656 | ↓ | ↓ | 7.37 | 4.161 | --- | 0.04 | 25.85 | 2.20 | 2.704 | -356.0 | grey |
| | SAMPLED | | | CRHE-DPT0346-053.0-20140924 | | | | | @ | 1652 | |
| 1719 | 0346 | 56-60 | 7.61 | 3.676 | --- | 0.03 | 26.80 | 1.95 | 2.419 | -386.9 | grey |
| 1721 | ↓ | ↓ | 7.59 | 3.883 | --- | 0.03 | 26.72 | 2.05 | 2.540 | -384.2 | grey |
| 1723 | ↓ | ↓ | 7.59 | 4.035 | --- | 0.02 | 26.22 | 2.13 | 2.630 | -386.9 | grey |
| | SAMPLED | | | CRHE-DPT0346-058.0-20140924 | | | | | @ | 1724 | |
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Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1 Date: 9/24/14 Sampler: M. Burcham

AV/DPT0345

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0345 | 31-35 | INSUFFICIENT VOL. | | --- | | | | | | |
| | ↓ | ↓ | | | --- | | | | | | |
| | SAMPLED | | | CRHE-DPT0345-033.0-20140924 | | | | | @ | 1153 | |
| 1216 | 0345 | 36-40 | 7.49 | 1.282 | --- | 0.05 | 27.58 | 0.57 | 0.707 | -496.8 | grey |
| 1218 | ↓ | ↓ | 7.46 | 0.607 | --- | 0.05 | 27.47 | 0.29 | 0.382 | -494.6 | grey |
| 1220 | ↓ | ↓ | 7.45 | 0.594 | --- | 0.06 | 27.38 | 0.28 | 0.385 | -502.7 | grey |
| | SAMPLED | | | CRHE-DPT0345-038.0-20140924 | | | | | @ | 1221 | |
| 1315 | 0345 | 41-45 | 7.42 | 2.070 | --- | 0.18 | 26.44 | 1.06 | 1.368 | -450.3 | grey |
| 1317 | ↓ | ↓ | 7.43 | 2.151 | --- | 0.11 | 26.14 | 1.09 | 1.390 | -465.3 | grey |
| 1319 | ↓ | ↓ | 7.49 | 2.046 | --- | 0.09 | 26.22 | 1.04 | 1.328 | -472.0 | grey |
| | SAMPLED | | | CRHE-DPT0345-043.0-20140924 | | | | | @ | 1320 | grey MB |
| 1336 | 0345 | 46-50 | 7.58 | 2.260 | --- | 0.10 | 26.62 | 1.07 | 1.377 | -484.9 | grey |
| 1338 | ↓ | ↓ | 7.51 | 2.188 | --- | 0.09 | 26.51 | 1.16 | 1.479 | -487.4 | grey |
| 1340 | ↓ | ↓ | 7.47 | 2.302 | --- | 0.07 | 26.45 | 1.19 | 1.518 | -488.6 | grey |
| | SAMPLED | | | CRHE-DPT0345-048.0-20140924 | | | | | @ | 1341 | |
| 1405 | 0345 | 51-55 | 7.61 | 2.551 | --- | 0.30 | 26.40 | 1.31 | 1.659 | -412.9 | grey |
| 1407 | ↓ | ↓ | 7.64 | 2.600 | --- | 0.08 | 26.28 | 1.35 | 1.702 | -480.2 | grey |
| 1409 | ↓ | ↓ | 7.64 | 2.783 | --- | 0.06 | 26.21 | 1.45 | 1.822 | -493.2 | grey |
| | SAMPLED | | | CRHE-DPT0345-053.0-20140924 | | | | | @ | 1410 | |
| 1431 | 0345 | 56-60 | 7.37 | 3.606 | --- | 0.17 | 26.48 | 1.96 | 2.463 | -447.0 | grey |
| 1433 | ↓ | ↓ | 7.57 | 4.011 | --- | 0.07 | 26.13 | 2.15 | 2.656 | -462.4 | grey |
| 1435 | ↓ | ↓ | 7.55 | 4.147 | --- | 0.06 | 26.05 | 2.14 | 2.700 | -467.4 | grey |
| | SAMPLED | | | CRHE-DPT0345-058.0-20140924 | | | | | @ | 1436 | |
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# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1 Date: 9/24/14 Sampler: M. Burcham

AS/DPT0344

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0905 | 0344 | 31-35 | 7.15 | 1.281 | --- | 0.19 | 25.99 | 0.63 | 0.824 | -248.7 | grey |
| 0907 | ↓ | ↓ | 7.33 | 1.289 | --- | 0.17 | 25.93 | 0.64 | 0.842 | -264.2 | grey/brown |
| 0909 | ↓ | ↓ | INSUFFICIENT VOLUME | | | | | | | | |
| | SAMPLED | | | CRHE-DPT0344-033.0-20140924 | | | | mB @ | | 0910 | |
| 0925 | 0344 | 36-40 | 7.37 | (.93) | --- | 0.17 | 26.14 | 0.99 | 1.277 | -248.7 | grey |
| 0927 | ↓ | ↓ | 7.32 | 2.016 | --- | 0.11 | 25.87 | 1.03 | 1.322 | -260.2 | cloudy/brown |
| 0929 | ↓ | ↓ | 7.32 | 2.057 | --- | 0.10 | 25.86 | 1.05 | 1.340 | -257.6 | " |
| | SAMPLED | | | CRHE-DPT0344-038.0-20140924 | | | | mB @ | | 0930 | |
| 0947 | 0344 | 41-45 | 7.58 | 0.883 | --- | 0.09 | 26.44 | 0.44 | 0.544 | -354.7 | grey |
| 0949 | ↓ | ↓ | 7.58 | 1.076 | --- | 0.07 | 26.39 | 0.53 | 0.692 | -384.5 | grey |
| 0951 | ↓ | ↓ | 7.57 | 0.873 | --- | 0.07 | 26.33 | 0.38 | 0.784 | -400.1 | cloudy grey |
| | SAMPLED | | | CRHE-DPT0344-043.0-20140924 | | | | @ | | 0952 | |
| 1009 | 0344 | 46-50 | 7.51 | 2.014 | --- | 0.11 | 26.63 | 1.06 | 1.357 | -467.6 | grey |
| 1011 | ↓ | ↓ | 7.44 | 2.243 | --- | 0.05 | 26.29 | 1.15 | 1.466 | -483.7 | grey |
| 1013 | ↓ | ↓ | 7.47 | 2.291 | --- | 0.05 | 26.18 | 1.17 | 1.491 | -440.1 | grey |
| | SAMPLED | | | CRHE-DPT0344-048.0-20140924 | | | | @ | | 1014 | |
| 1041 | 0344 | 51-55 | 7.50 | 3.333 | --- | 0.05 | 1.74→2.167→25.74 | | mB | -455.0 | grey |
| 1043 | ↓ | ↓ | 7.43 | 3.317 | --- | 0.04 | 25.80 | 1.73 | 2.157 | -453.5 | grey |
| 1045 | ↓ | ↓ | 7.39 | 3.319 | --- | 0.04 | 25.79 | 1.73 | 2.159 | -455.5 | grey |
| | SAMPLED | | | CRHE-DPT0344-053.0-20140924 | | | | @ | | 1046 | " |
| 1105 | 0344 | 56-60 | 7.61 | 2.986 | --- | 0.23 | 27.00 | 1.57 | 1.472 | -403.7 | grey |
| 1107 | ↓ | ↓ | 7.67 | 3.188 | --- | 0.03 | 26.71 | 1.70 | 2.135 | -431.5 | grey |
| 1109 | ↓ | ↓ | 7.63 | 3.591 | --- | 0.03 | 26.24 | 1.91 | 2.365 | -429.7 | grey |
| | SAMPLED | | | CRHE-DPT0344-058.0-20140924 | | | | @ | | 1110 | |
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# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1 Date: 9/23/14 Sampler: M. Burcham

EF/DPT0343 9/24/14

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1155 | 0343 | 31-35 | 7.53 | 1.572 | --- | 0.09 | 26.68 | 0.81 | 1.052 | -465.4 | grey |
| 1157 | ↓ | ↓ | 7.46 | 1.695 | --- | 0.08 | 25.38 | 0.87 | 1.120 | -481.8 | grey |
| 1159 | ↓ | ↓ | 7.29 | 1.766 | --- | 0.11 | 25.02 | 0.89 | 1.148 | -466.0 | cloudy |
| | SAMPLED | | | CRHE-DPT0343-033.0- | | | 20140923 | | @ | 1200 | |
| 1216 | 0343 | 36-40 | 7.36 | 1.696 | --- | 0.14 | 26.37 | 0.86 | 1.112 | -436.1 | grey |
| 1218 | ↓ | ↓ | 7.29 | 1.780 | --- | 0.15 | 25.24 | 0.90 | 1.157 | -398.8 | grey |
| 1220 | ↓ | ↓ | 7.21 | 1.769 | --- | 0.09 | 25.14 | 0.89 | 1.152 | -427.9 | grey |
| | SAMPLED | | | CRHE-DPT0343-038.0- | | | 20140923 | | @ | 1221 | |
| 1239 | 0343 | 41-45 | 7.61 | 1.516 | --- | 0.12 | 27.79 | 0.77 | 1.008 | -475.0 | grey |
| 1241 | ↓ | ↓ | 7.58 | 1.640 | --- | 0.04 | 26.83 | 0.83 | 1.075 | -495.3 | grey |
| 1243 | ↓ | ↓ | 7.55 | 1.707 | --- | 0.03 | 26.86 | 0.86 | 1.116 | -500.0 | grey |
| | SAMPLED | | | CRHE-DPT0343-043.0- | | | 20140923 | | @ | 1244 | |
| 1631 | 0343 | 46-50 | 7.64 | 1.401 | --- | 0.21 | 24.88 | 0.69 | 0.903 | -263.0 | grey |
| 1633 | ↓ | ↓ | 7.66 | 1.400 | --- | 0.14 | 24.87 | 0.71 | 0.919 | -285.1 | grey |
| 1635 | ↓ | NOT | SAMPLED. | See | Field | note | 1636 | | | | |
| 1735 | 0343 | 46-50 | 7.29 | 2.131 | --- | 0.16 | 24.05 | 1.09 | 1.387 | -362.0 | grey |
| 1737 | ↓ | ↓ | 7.17 | 2.134 | --- | 0.12 | 23.62 | 1.09 | 1.380 | -318.0 | grey |
| 1739 | ↓ | ↓ | 7.13 | 2.134 | --- | 0.12 | 23.56 | 1.09 | 1.384 | -295.2 | grey |
| | SAMPLED | | | CRHE-DPT0343-048.0- | | | 20140923 | | @ | 1740 | |
| 9/24/14 1221 | 0343 | 51-55 | 7.35 | 3.663 | --- | 0.19 | 28.08 | 1.92 | 2.381 | -218.6 | grey |
| 1223 | ↓ | ↓ | 7.45 | 3.690 | --- | 0.12 | 27.72 | 1.94 | 2.402 | -230.4 | grey/cloudy |
| 1225 | ↓ | ↓ | 7.45 | 3.719 | --- | 0.11 | 27.46 | 1.95 | 2.419 | -228.3 | " " |
| | SAMPLED | | | CRHE-DPT0343-053.0- | | | 20140924 | | @ | 1226 | |
| | 0343 | 56-60 | 7.60 | 3.800 | --- | 0.15 | 28.32 | 2.01 | 2.469 | -182.0 | grey |
| | ↓ | ↓ | 7.64 | 3.976 | --- | 0.06 | 27.76 | 2.10 | 2.599 | -185.1 | grey |
| | ↓ | ↓ | 7.63 | 4.070 | --- | 0.05 | 27.25 | 2.16 | 2.666 | -192.9 | grey |
| | SAMPLED | | | | --- | | | | | | |
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Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1

Date: 9/23/14 Sampler: M. Burcham

CT/DPTO342

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0838 | 0342 | 31-35 | 7.35 | 2.012 | --- | 0.16 | 25.95 | 1.02 | 1.312 | -491.1 | grey |
| 0840 | ↓ | ↓ | 7.35 | 2.029 | --- | 0.12 | 25.94 | 1.03 | 1.323 | -519.1 | grey |
| 0842 | ↓ | ↓ | 7.35 | 2.040 | --- | 0.15 | 25.90 | 1.04 | 1.325 | -530.4 | grey |
| | SAMPLED | | | CRHE-DPTO342-0332-20140923 @ 0943 | | | | | | | |
| 0858 | 0342 | 36-40 | 7.38 | 2.270 | --- | 0.15 | 26.01 | 1.17 | 1.483 | -314.3 | grey |
| 0900 | ↓ | ↓ | 7.40 | 2.329 | --- | 0.07 | 26.00 | 1.20 | 1.522 | -244.1 | grey |
| 0902 | ↓ | ↓ | 7.36 | 2.389 | --- | 0.06 | 25.99 | 1.23 | 1.556 | -336.7 | grey |
| | SAMPLED | | | CRHE-DPTO342-0380-20140923 @ 0903 | | | | | | | |
| 0922 | 0342 | 41-45 | 7.53 | 1.561 | --- | 0.07 | 26.44 | 0.81 | 1.063 | -481.4 | grey |
| 0924 | ↓ | ↓ | 7.53 | 2.027 | --- | 0.04 | 26.15 | 1.04 | 1.334 | -504.2 | grey |
| 0926 | ↓ | ↓ | 7.53 | 2.126 | --- | 0.04 | 26.10 | 1.09 | 1.397 | -512.0 | grey |
| | SAMPLED | | | CRHE-DPTO342-0430-20140923 @ 0927 | | | | | | | |
| 1032 | 0342 | 46-~~58~~ mb | 7.55 | 2.232 | --- | 0.12 | 26.50 | 1.03 | 1.324 | -500.0 mb | grey |
| 1034 | ↓ | ↓ | 7.58 | 2.231 | --- | 0.09 | 26.42 | 1.15 | 1.470 | -517.0 | grey |
| 1036 | ↓ | ↓ | 7.51 | 2.425 | --- | 0.09 | 26.47 | 1.25 | 1.595 | -513.9 | grey |
| | SAMPLED | | | CRHE-DPTO342-0480-20140923 @ 1037 | | | | | | | |
| 1056 mb | ~~1032~~ | 0342 | 56-60 | 7.66 | 3.303 | --- | 0.06 | 26.18 | 1.78 | 2.252 | -482.6 | grey |
| 1058 | ↓ | ↓ | 7.61 | 3.941 | --- | 0.05 | 25.78 | 2.09 | 2.583 | -364.5 | grey |
| 1100 | ↓ | ↓ | 7.60 | 4.050 | --- | 0.05 | 25.96 | 2.14 | 2.632 | -291.1 | grey |
| | SAMPLED | | | CRHE-DPTO342-0580-20140923 @ 1101 | | | | | | | |
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Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHE

Project No: FR1681/36*1

Date: 9/22 & 9/23/14 Sampler: M. Burcham

CX/ DPT0341

| | Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9/22 | 1251 | 0341 | ~~36-41~~ 31-35 | MB 7.63 | 1.854 | --- | 0.16 | 29.01 | 0.93 | 1.204 | -446.1 | grey |
| | 1253 | ↓ | ↓ | INSUFFICIENT VOLUME | | | | | | | | |
| | 1255 | ↓ | ↓ | --- | | | | | | | | |
| | | SAMPLED | | CRHE-DPT-0341-03 | | MB | 3.0-20140922 | | @ | 1256 | | |
| | 1315 | 0341 | 36-40 | 7.44 | 2.206 | --- | 0.07 | 28.40 | 1.13 | 1.444 | -514.1 | grey |
| | 1317 | ↓ | ↓ | 7.38 | 2.278 | --- | 0.05 | 28.24 | 1.16 | 1.487 | -487.2 | grey |
| | 1319 | ↓ | ↓ | 7.34 | 2.304 | --- | 0.05 | 28.18 | 1.18 | 1.502 | -453.0 | grey |
| | | SAMPLED | | CRHE-DPT0341-03 | | | 8.0-20140922 | | @ | 1320 | | |
| | 1337 | 0341 | 41-45 | 7.52 | 2.233 | --- | 0.10 | 29.01 | 1.15 | 1.476 | -487.4 | grey |
| | 1339 | ↓ | ↓ | 7.52 | 2.321 | --- | 0.04 | 28.44 | 1.18 | 1.510 | -511.7 | grey |
| | 1341 | ↓ | ↓ | 7.52 | 2.337 | --- | 0.04 | 28.14 | 1.19 | 1.520 | -526.8 | grey |
| | | SAMPLED | | CRHE-DPT0341-04 | | | 3.0-20140922 | | @ | 1342 | | |
| | 1406 | 0341 | 46-50 | 7.80 | 1.629 | --- | 0.05 | 0.85 MB 28.74 | | 1.057 | -548.0 | grey |
| | 1408 | ↓ | ↓ | 7.80 | 1.635 | --- | 0.04 | 28.72 | 0.82 | 1.059 | -556.4 | grey |
| | 1410 | ↓ | ↓ | Insufficient VOLUME | | | | | | | | |
| | | SAMPLED | | CRHE-DPT0341-04 | | | 8.0-20140922 | | @ | 1411 | | |
| | 1441 | 0341 | 51-55 | 7.58 | 2.667 | --- | 0.16 | 28.24 | 1.314 MB | 1.45 | -473.2 | grey |
| | 1443 | ↓ | ↓ | 7.61 | 3.044 | --- | 0.06 | ~~1.59~~ 27.40 | 1.59 | 2.019 | -506.0 | grey |
| | 1445 | ↓ | ↓ | 7.59 | 3.295 | --- | 0.05 | 27.22 | 1.72 | 2.152 | -514.0 | grey |
| | | SAMPLED | | CRHE-DPT0341-05 | | | 3.0-20140922 | | @ | 1446 | | |
| 9/23 | 0806 | 0341 | 56-60 | 7.79 | 2.365 | --- | 0.22 | 24.00 | 1.23 | 1.560 | -461.0 | grey |
| | 0808 | ↓ | ↓ | 7.84 | 2.595 | --- | 0.13 | 24.00 | 1.35 | 1.703 | -513.2 | grey |
| | 0810 | ↓ | ↓ | 7.84 | 2.687 | --- | 0.11 | 24.04 | 1.39 | 1.748 | -525.1 | grey |
| | | SAMPLED | | CRHE-DPT0341-05 | | | 8.0-20140923 | | @ | 0811 | | |
| | | | | | | --- | | | | | | |
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KSC, FL

Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRHF Annex

Project No: FR1681

Date: 10/10/14 Sampler: D. Sizemore

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1002 | DPT 358 (DA) | 26-30 | 7.96 | 1.131 | — | .15 | 25.00 | .55 | .72 | -17.8 | Gray |
| 1004 | " | " | 8.00 | 1.093 | — | .12 | 25.03 | .54 | .70 | -30.8 | " |
| 1006 | " | " | 8.00 | 1.078 | — | .12 | 25.01 | .55 | .70 | -29.9 | " |
| | | | Sampled @ | 1007 | | | | | | | |
| 1016 | DPT 358 | 31-35 | 7.47 | 1041 | — | .14 | 23.27 | .51 | .67 | -116.0 | Gray |
| 1018 | " | 31-35 | 7.48 | 1.176 | — | .34 | 25.38 | .59 | .77 | -108.4 | " |
| 1020 | " | " | 7.50 | 1.176 | — | .10 | 25.39 | .59 | .77 | -108.4 | " |
| | | | Sampled @ | 1021 | | | | | | | |
| 1032 | DPT 358 | 36-40 | 7.46 | 1.006 | — | .09 | 23.69 | .48 | .64 | -128.1 | Gray |
| | " | " | | Dry / Recharge then Sample | | | | | | | |
| | " | " | | | | | | | | | |
| | | | Sampled @ | 1039 | | | | | | | |
| 1050 | DPT 358 | 41-45 | 7.68 | 1.371 | — | .16 | 23.60 | .69 | .89 | -176.8 | Tan |
| 1052 | " | " | 7.72 | 1.395 | — | .11 | 23.99 | .70 | .91 | -178.9 | " |
| 1054 | " | " | 7.72 | 1.396 | — | .10 | 24.00 | .70 | .91 | -179.9 | " |
| | | | Sampled @ | 1055 | | | | | | | |
| 1106 | DPT 358 | 46-50 | 7.62 | 1.444 | — | .56 | 24.70 | .72 | .94 | -188.3 | Tan |
| 1108 | " | " | 7.57 | 1.447 | — | .37 | 25.00 | .73 | .94 | -188.9 | " |
| 1110 | " | " | 7.56 | 1.469 | — | .31 | 25.12 | .74 | .97 | -189.9 | " |
| | | | | Sampled @ | 1111 | | | | | | |
| 1126 | DPT 358 | 51-55 | 7.77 | 1.880 | — | .10 | 23.46 | .95 | 1.22 | -223.3 | " |
| | " | " | | Dry / Recharge | | | | | | | |
| 1135 | Dry | | | Sampled @ | 1135 | | | | | | |
| 1147 | 358 | 56-60 | 7.81 | 1.307 | — | .12 | 23.35 | 1.77 | 2.20 | -234.6 | Gray |
| 1149 | " | " | 7.41 | 3.429 | — | .13 | 23.75 | 1.76 | 2.21 | -236.1 | " |
| 1151 | " | " | 7.41 | 3.484 | — | .13 | 25.83 | 1.77 | 2.19 | -236.1 | " |
| | | | Sampled @ | 1152 | | | | | | | |

eosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CCAFE KSC, FL

Project No: FR 1681

Date: 11/10/14 Sampler: D. Sizemore

| Time | BE DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1350 | DPT 0359 | 31-35 | 7.90 | 2,089 | — | .21 | 24.65 | 1.07 | 1.36 | -108.2 | Gray |
| 1352 | " | " | 7.96 | 2,108 | — | .15 | 24.73 | 1.08 | 1.37 | -110.1 | " |
| 1354 | " | " | 7.99 | 2.116 | — | .13 | 24.74 | 1.08 | 1.38 | -111.0 | " |
| | | | | Sampled @ 1355 | | | | | | | |
| 1404 | 359 | 36-40 | 7.77 | 2.587 | — | .16 | 23.19 | 1.35 | 1.71 | -117.0 | Gray |
| 1406 | " | " | 7.80 | 2.631 | — | .11 | 23.75 | 1.36 | 1.72 | -122.0 | " |
| 1408 | " | " | 7.80 | 2.632 | — | .12 | 23.81 | 1.37 | 1.72 | -122.6 | " |
| | | | | Sampled @ 1409 | | | | | | | |
| 1418 | 359 | 41-45 | 7.79 | 2.973 | — | .12 | 21.82 | 1.55 | 1.93 | -116.1 | Gray |
| | " | " | | | Day 1 Recharge | | | | | | |
| | " | " | | | | | | | | | |
| | | | Sampled | @ 1423 | | | | | | | |
| 1434 | 359 | 46-50 | 7.46 | 3.729 | — | .11 | 24.08 | 1.99 | 2.46 | -176.3 | Gray |
| 1436 | " | " | 7.45 | 3.812 | — | .10 | 24.00 | 1.99 | 2.49 | -175.9 | " |
| 1438 | " | " | 7.45 | 3.815 | — | .09 | 24.01 | 1.99 | 2.49 | -176.0 | " |
| | | | | Sampled @ 1439 | | | | | | | |
| 1446 | 359 | 51-55 | 7.69 | 3.877 | — | .21 | 20.84 | 2.00 | 2.52 | -165.0 | Gray |
| 1451 | 359 | " | 7.65 | 3.875 | — | .19 | 20.95 | 2.06 | 2.52 | -163.9 | " |
| 1453 | 359 | " | 7.65 | 3.875 | — | .19 | 20.95 | 2.06 | 2.52 | -164.0 | " |
| | | | Sampled @ | 1454 | | | | | | | |

Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRREA KSC FL

Project No: FL1881

Date: 11/11/14 Sampler: D. Silvernoc

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 744 | DPT 359 | 56-60 | 7.95 | 3.689 | — | .91 | 20.68 | 2.00 | 250 | -21.3 | Gray |
| 746 | " | " | 7.95 | 3.915 | - | .57 | 21.00 | 2.00 | 2.57 | -22.6 | " |
| 748 | " | " | 7.98 | 3.986 | — | .47 | 21.13 | 2.00 | 2.61 | -23.0 | " |
| | | | | Sampled @ 749 | | | | | | | |
| | EB | | | | | | | | | | |
| 933 | DPT360 | 36-40 | 7.95 | 1.209 | — | .37 | 24.42 | .61 | .79 | -86.0 | Gray |
| 935 | " | " | 8.09 | 1.225 | — | .34 | 24.44 | .61 | .80 | -88.7 | " |
| 937 | " | " | 8.09 | 1.217 | — | .35 | 24.42 | .61 | .80 | -90.4 | " |
| | | | | Sampled @ 938 | | | | | | | |
| 946 | DPT360 | 41-45 | 7.90 | 1.426 | — | .13 | 24.41 | .72 | .94 | -68.8 | " |
| 948 | " | " | 7.97 | 1.478 | — | .09 | 24.69 | .74 | .96 | -73.0 | " |
| 950 | " | " | 7.95 | 1.482 | — | .09 | 24.63 | .74 | .90 | -74.0 | " |
| | | | | Sampled @ 951 | | 24+ | | | | | |
| 1001 | DPT360 | 46-50 | 7.89 | 1.712 | — | .09 | 25.24 | .89 | 1.15 | -76.2 | Gray |
| 1003 | " | " | 7.90 | 1.840 | — | .07 | 25.21 | .95 | 1.22 | -83.7 | " |
| 1005 | " | " | 7.86 | 1.854 | — | .07 | 25.25 | .96 | 1.25 | -83.9 | " |
| | | 51-55 | | Sampled @ 1006 | | | | | | | |
| 1023 | DPT360 | ~~46~~ | 7.82 | 2.611 | — | .13 | 25.49 | 1.35 | 1.71 | -33.4 | Gray |
| 1025 | " | " | 7.83 | 2.720 | — | .09 | 25.47 | 1.43 | 1.80 | -91.9 | " |
| 1027 | " | " | 7.84 | 2.821 | — | .08 | 25.50 | 1.48 | 1.87 | -97.4 | " |
| | | | | Sampled @ 1028 | | | | | | | |
| 1043 | 360 | 56-60 | 7.73 | 3.867 | — | .44 | 24.64 | 2.04 | 2.52 | -89.6 | Gray |
| 1045 | " | " | 7.71 | 3.874 | — | .24 | 24.66 | 2.05 | 2.52 | -91.9 | " |
| 1047 | " | " | 7.70 | 3.880 | — | .36 | 24.66 | 2.05 | 2.52 | -93.4 | " |
| | | | | Sampled @ 1048 | | | | | | | |

Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CAMFA KSC, FL

Project No: FA1681

Date: 11/11/14 Sampler: D. Sremore

| Time | EFK DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1301 | 361 | 31-35 | 8.10 | 1.282 | — | .57 | 25.60 | .64 | .93 | -92.7 | Gray |
| 1303 | " | " | 7.94 | 1.283 | — | .40 | 25.44 | .64 | .83 | -94.7 | " |
| 1305 | " | " | 7.95 | 1.282 | — | .38 | 25.39 | .64 | .83 | -98.1 | " |
| | | | | Sampled @ 1306 | | | | | | | |
| 1314 | 361 | 36-40 | 8.01 | 1.270 | — | .12 | 26.34 | .64 | .84 | -98.5 | Gray |
| 1316 | 361 | " | 8.09 | 1.300 | — | .09 | 26.30 | .64 | .84 | -101.3 | " |
| 1318 | " | " | 8.05 | 1.307 | — | .09 | 26.24 | .64 | .84 | -102.2 | " |
| | | | | Sampled @ 1319 | | | | | | | |
| 1327 | 361 | 41-45 | 7.81 | 1.256 | — | .09 | 26.20 | .63 | .83 | -119.4 | Gray |
| 1329 | " | " | 7.82 | 1.281 | — | .09 | 26.00 | .63 | .84 | -121.4 | " |
| 1331 | " | " | 7.82 | 1.297 | — | .09 | 25.01 | .63 | .84 | -122.0 | " |
| | | | | Sampled @ 1332 | | | | | | | |
| 1343 | 361 | 46-50 | 8.01 | 1.439 | — | .09 | 24.94 | .72 | .93 | -136.2 | Gray |
| 1345 | " | " | 8.00 | 1.436 | — | .07 | 25.11 | .72 | .94 | -137.8 | " |
| 1347 | " | " | 8.00 | 1.456 | — | .07 | 25.11 | .73 | .95 | -130.1 | " |
| | | | | Sampled @ 1348 | | | | | | | |
| 1400 | 361 | 51-55 | 7.88 | 1.603 | — | .07 | 25.57 | .84 | 1.07 | -134.9 | Gray |
| 1402 | " | " | 7.84 | 1.718 | — | .06 | 25.58 | .88 | 1.15 | -134.1 | Gray |
| 1404 | " | " | 7.84 | 1.719 | — | .06 | 25.60 | .88 | 1.15 | -135.2 | " |
| | | | | Sampled @ 1405 | | | | | | | |
| 1417 | 361 | 56-60 | 7.62 | 3.040 | — | .12 | 25.70 | 1.62 | 2.022 | -131.2 | Gray |
| 1419 | " | " | 7.59 | 3.142 | — | .08 | 25.56 | 1.67 | 2.094 | -133.8 | " |
| 1421 | " | " | 7.59 | 3.148 | — | .07 | 25.19 | 1.69 | 2.100 | -133.9 | " |
| | | | | Sampled @ 1422 | | | | | | | |

Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRIHEA KSC, FL

Project No: FR1681

Date: 11/11/14 Sampler: D. Sizemore

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1559 | DF | 31-35 | 8.40 | 1.560 | — | .11 | 25.80 | .78 | 1.01 | -106.8 | Gray |
| 1601 | DPT 362 | 31-35 | 8.40 | 1.557 | — | .11 | 25.80 | .78 | 1.01 | -108.5 | " |
| 1603 | " | " | 8.40 | 1.555 | — | .16 | 25.84 | .78 | 1.01 | -109.1 | " |
| | | | | Sampled @ | | 1604 | | | | | |
| 1613 | DPT 362 | 36-40 | 7.72 | 2.100 | — | .06 | 25.81 | 1.07 | 1.37 | -147.2 | Gray |
| 1615 | " | 36-40 | 7.72 | 2.086 | — | .08 | 26.11 | 1.06 | 1.36 | -146.2 | " |
| 1617 | " | 36-40 | 7.75 | 2.087 | — | .11 | 25.76 | 1.06 | 1.36 | -144.6 | " |
| | | | | Sampled @ | | 1618 | 25.23 | 1.22 | | | |
| 1628 | 362 | 41-45 | 7.72 | 2.126 | — | | ↓ | ↓ | 1.55 | -110.1 | Gray |
| 1630 | " | " | 7.56 | 2.418 | — | .06 | 26.06 | 1.26 | 1.60 | -112.5 | " |
| 1632 | " | " | 7.57 | 2.472 | — | .06 | 26.16 | 1.27 | 1.61 | -119.8 | " |
| | | | | Sampled @ | | 1633 | | | | | |
| | 11/12/14 | | | | | | | | | | |
| 727 | 362 | 46-50 | 8.19 | 2.357 | — | .45 | 22.56 | 1.24 | 1.57 | -46.1 | Gray |
| 729 | " | " | 8.20 | 2.462 | — | .30 | 22.85 | 1.29 | 1.57 | -74.1 | " |
| 731 | " | " | 8.21 | 2.469 | — | .29 | 22.89 | 1.30 | 1.62 | -75.3 | " |
| | | | | Sampled @ | | 732 | 20.00 | 1.49 | 1.84 | -88.9 | " |
| 746 | 362 | 51-55 | 7.92 | 2.786 | — | .23 | ↓ | ↓ | ↓ | ↓ | Gray |
| 748 | " | " | 7.92 | 2.940 | — | .14 | 19.28 | 1.41 | 2.01 | -96.1 | " |
| 750 | " | " | 7.92 | 2.949 | — | .10 | 19.64 | 1.64 | 2.03 | -96.5 | " |
| | | | | Sampled @ | | 751 | | | | | |
| 806 | 362 | 56-60 | 7.61 | 3.237 | — | .15 | 20.87 | 1.79 | 2.23 | -96.5 | Gray |
| 808 | " | " | 7.60 | 3.509 | — | .15 | 20.75 | 1.86 | 2.29 | -100.1 | " |
| 810 | " | " | 7.63 | 3.515 | — | .16 | 20.75 | 1.86 | 2.29 | -101.2 | " |
| | | | | Sampled @ | | 811 | | | | | |

Geosyntec consultants

# DPT GEOCHEMICAL DATA FORM

Site Name/Location: CRREA KSC, FL

Project No: FL1681

Date: 11/12/14 Sampler: D Sicenore

| Time | DPT Location | Screened Interval (ft BLS) | pH (SU) | Conductivity (mS/cm) | Turbidity (NTUs) | DO (mg/L) | Temp (°C) | Salinity (%) | TDS (g/L) | ORP (mV) | Color / Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1006 | DD 363 | 31-35 | 8.55 | .683 | – | .13 | 24.76 | .33 | .44 | -90.7 | gray |
| 1008 | " | " | 8.51 | .664 | – | .17 | 24.83 | .32 | .43 | -90.5 | " |
| 1010 | " | " | 8.50 | .654 | – | .17 | 24.85 | .32 | .43 | -93.8 | " |
| | | | Sampled @ | 1011 | | | | | | | |
| 1020 | 363 | 36-40 | 8.26 | .694 | – | .17 | 22.57 | .34 | .45 | -115.0 | Gray |
| 1022 | " | " | 8.28 | .694 | – | .08 | 22.70 | .34 | .45 | -120.0 | " |
| 1024 | " | " | 8.28 | .696 | – | .06 | 22.85 | .34 | .45 | -124.0 | " |
| | | | Sampled @ | 1025 | | | | | | | |
| 1034 | 363 | 41-45 | 7.97 | .968 | – | .06 | 25.61 | .47 | .63 | -96.4 | Gray |
| 1036 | " | " | 7.90 | .963 | – | .06 | 25.66 | .47 | .63 | -97.8 | " |
| 1038 | " | " | 7.95 | .963 | – | .06 | 25.71 | .47 | .63 | -98.3 | " |
| | | | Sampled @ | 1039 | | | | | | | |
| 1050 | 363 | 46-50 | 7.65 | 1.027 | – | .06 | 25.46 | .52 | .69 | -117.3 | Gray |
| 1052 | " | " | 7.69 | 1.037 | – | .06 | 25.50 | .52 | .69 | -117.5 | " |
| 1054 | " | " | 7.69 | 1.037 | – | .06 | 25.49 | .52 | .69 | -118.1 | " |
| | | | Sampled @ | 1055 | | | | | | | |
| 1106 | 363 | 51-55 | 7.91 | 1.334 | – | .31 | 23.49 | .77 | 1.01 | -90.8 | Gray |
| 1108 | " | " | 7.35 | 1.334 | – | .04 | 23.58 | 1.00 | 1.44 | -98.1 | " |
| 1110 | " | " | 7.35 | 2.235 | – | .80 | 23.72 | 1.16 | 1.47 | -101.1 | " |
| | | | | Sampled @ | 1111 | | | | | | |
| 1126 | 363 | 56-60 | 7.57 | 3.435 | – | .05 | 25.58 | 1.81 | 2.25 | -82.9 | Gray |
| 1128 | " | " | 7.59 | 3.465 | – | .05 | 25.66 | 1.82 | 2.26 | -95.1 | " |
| 1130 | " | " | 7.60 | 3.492 | – | .05 | 25.46 | 1.83 | 2.28 | -99.7 | " |
| | | | | Sampled @ | 1131 | | | | | | |

# SOIL BORING LOGS

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# BORING LOG

BOREHOLE LOCATION MAP

North side of the site.

BORING NO.: SB0001 PROJECT NO.: FR1681 PAGE 1 OF 2

SITE: Contractor's Rd. Heavy Equipment Area DATE: 1-21-2010

TOOLS AND METHOD: Sonic Drilling BIT DIA: 4" in 6"

TOTAL DEPTH: 80' BLS GROUNDWATER DEPTH: ~5' BLS

DRILLING COMPANY: Boart Longyear RIG: T300 Sonic SR109

DRILLERS: Neil Gamache/Ray/AJ/Fred LOGGER: Emily Guyer

| LITHOLOGY LOG | GRAPHIC LOG | DEPTH SCALE | DRILLING LOG |
|---|---|---|---|
| gray/light brown medium SAND (SW) with 20% 1" gravel | | 1 | |
| --same with less gravel (~5%) | | 2 | |
| --same with no gravel at 2' | | 3 | |
| black and tan silty SAND (SM) | | 4 | |
| gray medium SAND (SP) | | 5 | |
| --same, becomes tan (2.5Y 8/2) | | 6 | |
| --same, with 20% shell fragments (1-3 mm) | | 7 | |
| | | 8 | |
| Shell Hash with tan (2.5Y 7/2) fine to medium SAND (SW) (~80% 3-5mm shell fragments) | | 9 | |
| | | 10 | |
| | | 11 | |
| | | 12 | |
| gray (2.5Y 6/1) fine SAND (SP) w/50% shell fragments | | 13 | |
| | | 14 | |
| --same, w/ 15% shell fragments | | 15 | |
| | | 16 | |
| | | 17 | |
| --same, w/trace shell | | 18 | |
| --same, w/trace shells up to 1" length | | 19 | |
| | | 20 | |
| | | 21 | |
| | | 22 | |
| --same, with 20% shell fragments | | 23 | |
| | | 24 | |
| | | 25 | |
| --same, becomes light gray (GLEY1 8/N) | | 26 | |
| | | 27 | |
| | | 28 | |
| | | 29 | |
| | | 30 | |
| | | 31 | |
| | | 32 | |
| | | 33 | |
| | | 34 | |
| | | 35 | |
| | | 36 | |
| | | 37 | |
| | | 38 | |
| | | 39 | |

| LITHOLOGY LOG | GRAPHIC LOG | DEPTH SCALE | DRILLING LOG |
|---|---|---|---|
| black (GLEY1 3/N) and light gray (GLEY1 8/N) fine to medium SAND (SW) w/50% shell fragments | | 39 40 41 42 43 44 45 46 | |
| --same, w/larger shell fragments (~1" length) | | 47 48 49 50 | |
| light gray (GLEY2 1/10B) shell hash (wet, like mixed concrete) | | 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 | |
| gray (GLEY2 1/10B) silty-clayey-SAND (SM/SC) w/20% shell fragments<br>--same, becomes medium gray (GLEY2 7/5PB)<br>--same, becomes black and light gray w/15% shell fragments<br>--same, becomes light gray w/trace shell | | | |
| black and light gray medium SAND (SP) | | | |
| light gray silty fine SAND (SM) w/trace shell fragments | | | |
| light gray (GLEY1 8/N) w/50% shell fragments | | 67 68 69 70 71 72 73 74 75 76 77 78 79 80 | |
| gray (GLEY1 5/N) clayey SAND (SC)/sandy CLAY (CL) w/trace shell | | | |
| gray (GLEY1 5/N) clayey SAND (SC) w/30% shell fragments | | | |
| gray (GLEY1 5/N) fine silty SAND w/15% shell fragments | | | |
| BORING TERMINATED AT 80 FEET BELOW LAND SURFACE AND ABANDONED WITH BENTONITE CHIPS TO 5 FT BLS AND GROUTED TO LAND SURFACE. | | | |

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# BORING LOG

BOREHOLE LOCATION MAP

East side of the site.

BORING NO.: SB0002 PROJECT NO.: FR1681 PAGE 1 OF 2

SITE: Contractor's Rd. Heavy Equipment Area DATE: 1-21-2010

TOOLS AND METHOD: Sonic Drilling BIT DIA: 4" in 6"

TOTAL DEPTH: 80' BLS GROUNDWATER DEPTH: ~5' BLS

DRILLING COMPANY: Boart Longyear RIG: T300 Sonic SR109

DRILLERS: Neil Gamache/Ray/AJ/Fred LOGGER: Emily Guyer

| LITHOLOGY LOG | GRAPHIC LOG | DEPTH SCALE | DRILLING LOG |
|---|---|---|---|
| gray/light brown medium SAND (SP) with 20% 1.5" gravel<br>--same with no gravel | | 1<br>2<br>3<br>4 | |
| dark brown medium SAND (SP) w/organics and wood chips<br>--same, becomes tan (2.5Y 8/2)<br>--same, with trace shell fragments (1-3 mm)<br>--same, becomes medium brown | | 5<br>6<br>7<br>8<br>9<br>10<br>11<br>12 | |
| --same, becomes dark gray to black<br>--same, becomes gray w/50% shell fragments (1-3mm)<br>--same, w/larger shell fragments (5mm) | | 13<br>14<br>15<br>16<br>17<br>18 | |
| gray fine SAND (SP) w/trace shell fragments<br>--same, w/wet 20% shell fragments | | 19<br>20<br>21<br>22<br>23<br>24<br>25<br>26<br>27<br>28 | |
| Shell Hash w/gray fine to medium SAND (SW) | | 29<br>30<br>31<br>32<br>33 | |
| gray fine SAND (SP) w/trace shell | | 34<br>35<br>36<br>37<br>38<br>39 | |

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BORING NO.: SB0002 SITE: Contractor's Rd. Heavy Equipment Area PROJ. NO.: FR1681 PAGE 2 OF 2

| LITHOLOGY LOG | GRAPHIC LOG | DEPTH SCALE | DRILLING LOG |
|---|---|---|---|
| light gray and dark gray (salt and pepper) medium SAND (SP) w/50% shell fragments | | 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 | |
| ~2" layer of calcified shell/rock from 56'-56'2" | | | |
| light gray medium sand w/50% shell fragments (wet) | | 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 | |
| --same, w/chunks of clay | | | |
| --same, no clay, dryer | | | |
| gray silty SAND (SM) w/trace shell | | | |
| dark and light gray (salt and pepper) Shell Hash w/fine to medium sand | | | |
| gray clayey SAND (SC) | | | |
| gray clayey SAND (SC)/sandy CLAY (CL) w/trace shell | | | |
| silty clayey SAND (SM/SC) w/10% shell fragments | | | |
| BORING TERMINATED AT 80 FEET BELOW LAND SURFACE AND ABANDONED WITH BENTONITE CHIPS TO 5 FT BLS AND GROUTED TO LAND SURFACE. | | | |

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# BORING LOG

BOREHOLE LOCATION MAP

South side of the site.

BORING NO.: SB0003 PROJECT NO.: FR1681 PAGE 1 OF 2

SITE: Contractor's Rd. Heavy Equipment Area DATE: 1-21-2010

TOOLS AND METHOD: Sonic Drilling BIT DIA: 4" in 6"

TOTAL DEPTH: 80' BLS GROUNDWATER DEPTH: ~5' BLS

DRILLING COMPANY: Boart Longyear RIG: T300 Sonic SR109

DRILLERS: Neil Gamache/Ray/AJ/Fred LOGGER: Emily Guyer

| LITHOLOGY LOG | GRAPHIC LOG | DEPTH SCALE | DRILLING LOG |
|---|---|---|---|
| brown medium SAND (SW) with 20% 1" gravel | | 1 | road base, coarse |
| --same with less gravel (~5%) | | 2 | |
| --same, becomes dark brown | | 3 | |
| dark brown orange and tan medium SAND (SP) | | 4 | |
| dark and medium brown silty SAND (SM) w/organics | | 5 | |
| brown medium SAND (SP) | | 6 | |
| | | 7 | |
| --same, becomes light tan | | 8 | |
| --same, becomes light gray | | 9 | |
| --same, becomes gray and tan | | 10 | |
| --same, becomes gray w/roots and organics | | 11 | |
| shell hash with gray fine to medium SAND (SW) | | 12 | |
| | | 13 | |
| gray fine SAND (SP) w/40% shell fragments | | 14 | |
| | | 15 | |
| --same, w/25% shell fragments | | 16 | |
| | | 17 | |
| shell hash w/gray fine sand | | 18 | |
| | | 19 | |
| gray fine SAND (SP) w/trace shell fragments | | 20 | |
| | | 21 | |
| | | 22 | |
| | | 23 | |
| | | 24 | |
| --same, 2" layer of shell hash | | 25 | |
| | | 26 | |
| --same, w/10% shell fragments | | 27 | |
| | | 28 | |
| | | 29 | |
| | | 30 | |
| | | 31 | |
| shell hash w/gray sand | | 32 | |
| | | 33 | |
| gray fine silty SAND (SM) w/trace shell fragments | | 34 | |
| | | 35 | |
| | | 36 | |
| | | 37 | |
| | | 38 | |
| dark gray fine SAND (SP) w/50% shell fragments | | 39 | |

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BORING NO.: SB0003 SITE: Contractor's Rd. Heavy Equipment Area PROJ. NO.: FR1681 PAGE 2 OF 2

| LITHOLOGY LOG | GRAPHIC LOG | DEPTH SCALE | DRILLING LOG |
|---|---|---|---|
| | | 39 | |
| | | 40 | |
| | | 41 | |
| | | 42 | |
| | | 43 | |
| | | 44 | |
| | | 45 | |
| | | 46 | |
| | | 47 | |
| | | 48 | |
| | | 49 | |
| | | 50 | |
| | | 51 | Shell Hash |
| gray medium SAND (SP) w/80% shell fragments | | 52 | |
| fine silty-clayey SAND (SM/SC) w/50% shell fragments | | 53 | |
| | | 54 | |
| | | 55 | |
| | | 56 | |
| | | 57 | |
| | | 58 | |
| | | 59 | |
| dark gray and light gray medium SAND (SP) w/30% shell fragments | | 60 | Salt and pepper sand |
| | | 61 | |
| gray fine silty SAND (SM) w/trace shell fragments | | 62 | |
| | | 63 | |
| | | 64 | |
| | | 65 | |
| | | 66 | |
| | | 67 | |
| --same, w/30% shell fragments | | 68 | |
| | | 69 | |
| | | 70 | |
| gray clayey SAND/sandy CLAY (SC/CL) w/trace shell fragments and some whole shells (up to 2") and sand lenses | | 71 | |
| | | 72 | |
| | | 73 | |
| | | 74 | |
| | | 75 | |
| | | 76 | |
| | | 77 | |
| | | 78 | |
| gray silty SAND (SM) w/ 50% shell fragments | | 79 | |
| | | 80 | |
| BORING TERMINATED AT 80 FEET BELOW LAND SURFACE AND ABANDONED WITH BENTONITE CHIPS TO 5 FT BLS AND GROUTED TO LAND SURFACE. | | | |

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# BORING LOG

BOREHOLE LOCATION MAP

West side of the site.

BORING NO.: SB0004 PROJECT NO.: FR1681 PAGE 1 OF 2

SITE: Contractor's Rd. Heavy Equipment Area DATE: 1-22-2010

TOOLS AND METHOD: Sonic Drilling BIT DIA: 4" in 6"

TOTAL DEPTH: 80' BLS GROUNDWATER DEPTH: ~5' BLS

DRILLING COMPANY: Boart Longyear RIG: T300 Sonic SR109

DRILLERS: Neil Gamache/Ray/AJ/Fred LOGGER: Emily Guyer

| LITHOLOGY LOG | GRAPHIC LOG | DEPTH SCALE | DRILLING LOG |
|---|---|---|---|
| tan and dark brown medium SAND (SW) | | 1 | road base, coarse |
| --same w/some black staining | | 2 | |
| | | 3 | |
| | | 4 | |
| | | 5 | |
| --same, becomes light tan | | 6 | |
| --same, becomes brown w/organics and wood chips | | 7 | |
| --same, becomes tan w/no organics w/50% shell fragments | | 8 | |
| | | 9 | |
| --same, becomes gray | | 10 | |
| | | 11 | |
| gray fine SAND (SP) w/trace shell fragments | | 12 | |
| | | 13 | |
| | | 14 | |
| | | 15 | |
| | | 16 | |
| | | 17 | |
| | | 18 | |
| | | 19 | |
| | | 20 | |
| | | 21 | |
| | | 22 | |
| | | 23 | |
| gray fine to medium SAND (SW) w/30% shell fragments | | 24 | |
| | | 25 | |
| | | 26 | Shell Hash |
| gray medium SAND (SP) w/80% shell fragments | | 27 | |
| | | 28 | |
| --same, w/50% shell fragments | | 29 | |
| | | 30 | |
| | | 31 | |
| | | 32 | |
| --same, w/ trace calcified sand and shell | | 33 | |
| --same, no more calcified sand and shell | | 34 | |
| | | 35 | |
| | | 36 | |
| | | 37 | |
| | | 38 | |
| | | 39 | |

| LITHOLOGY LOG | GRAPHIC LOG | DEPTH SCALE | DRILLING LOG |
|---|---|---|---|
| | | 39 | |
| | | 40 | |
| | | 41 | |
| | | 42 | |
| | | 43 | |
| | | 44 | |
| | | 45 | |
| | | 46 | |
| | | 47 | |
| | | 48 | |
| | | 49 | |
| | | 50 | |
| | | 51 | |
| fine silty-clayey SAND (SM/SC) w/50% shell fragments | | 52 | Shell Hash |
| | | 53 | |
| | | 54 | |
| | | 55 | |
| | | 56 | |
| | | 57 | |
| | | 58 | |
| | | 59 | |
| gray fine silty SAND (SM) w/trace shell fragments | | 60 | |
| | | 61 | |
| | | 62 | |
| | | 63 | |
| | | 64 | |
| | | 65 | |
| | | 66 | |
| | | 67 | |
| | | 68 | |
| | | 69 | |
| --same, w/20% shell fragments | | 70 | |
| gray clayey SAND/sandy CLAY (SC/CL) w/trace shell fragments | | 71 | |
| | | 72 | |
| | | 73 | |
| | | 74 | |
| | | 75 | |
| | | 76 | |
| | | 77 | |
| gray fine SAND (SP) w/ 20% shell fragments | | 78 | |
| | | 79 | |
| | | 80 | |
| BORING TERMINATED AT 80 FEET BELOW LAND SURFACE AND ABANDONED WITH BENTONITE CHIPS TO 5 FT BLS AND GROUTED TO LAND SURFACE. | | | |

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# BORING LOG

BOREHOLE LOCATION MAP

BORING NO.: SB0005 PROJECT NO.: FR1681 PAGE 1 OF 3

SITE: NASA - CRHE DATE: 12.19.11

TOOLS AND METHOD: Sonic Drilling BIT DIA: 4"/6"

TOTAL DEPTH: 82 'bls GROUNDWATER DEPTH: ≈ 5 Ft bls

DRILLING COMPANY: Boart Longyear RIG: T300 Sonic SR109

DRILLERS: V. Scott, J. Kiever, J. Smith LOGGERS: J. McKinnon

| LITHOLOGY LOG | GRAPHIC LOG | DEPTH SCALE | PID (ppm) | DRILLING LOG |
|---|---|---|---|---|
| Fine SAND with organics, 10YR 4/2 (dark grayish brown), dry, loose, moderately sorted | | 1–2 | | |
| Fine SAND, 7.5 YR 6/4 (light brown), wet at 5 ft bls, loose, poorly sorted, (50% coarse fossils, 40% s, 10% f); fossiliferous, coarse size | | 3–6 | | |
| fine - medium SAND, medium - coarse fossiliferous, 2.5 Y 6/2 (light brownish gray), loose, moderately sorted, wet, (60% s, 40% fossil); (mostly bivalve fossils) | | 7–12 | | |
| Fine SAND with shells, 2.5 Y 6/1 (gray), wet, loose, moderately sorted, (75% s, 25% shell); bivalves, coarse size | | 13–26 | | |
| shell hash and Fine SAND, 2.5 Y 6/1 (gray) | | 27 | | |
| Fine - medium SAND with shells, 2.5 Y 7/1 (light gray), wet, loose, moderately to poorly sorted, (15 85% shell, 85% s) | | 28–39 | | |

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# BORING LOG

BOREHOLE LOCATION MAP

BORING NO.: SB0005 PROJECT NO.: FR1681 PAGE 2 OF 3

SITE: NASA-CRHE DATE: 12.19.11

TOOLS AND METHOD: Sonic Drilling BIT DIA: 4"/6"

TOTAL DEPTH: 82 ft bls GROUNDWATER DEPTH: ≈5 ft ~~bgs~~ bls

DRILLING COMPANY: Boart Longyear RIG: T300 Sonic SR109

DRILLERS: V. Scott, S. Kiever, J. Smith LOGGERS: J. McKinnon

| LITHOLOGY LOG | GRAPHIC LOG | DEPTH SCALE | PID (ppm) | DRILLING LOG |
|---|---|---|---|---|
| | | 41 | | |
| | | 42 | | |
| | | 43 | | |
| | | 44 | | |
| | | 45 | | |
| | | 46 | | |
| | | 47 | | |
| Sandy SILT, fossiliferous (coarse shells), GLEY 1 7/1 (light greenish gray), wet, medium dense, poorly sorted, (~~40~~ 45% s, 50% f, 5% fossil) | | 48 | | |
| | | 49 | | |
| | | 50 | | |
| | | 51 | | |
| | | 52 | | |
| | | 53 | | |
| | | 54 | | |
| | | 55 | | |
| | | 56 | | |
| fine-very fine SAND, GLEY 1 6/1 (greenish gray), wet, medium dense, well to moderately sorted, (85% sand), 10% f, 5% shell); trace shell | | 57 | | |
| | | 58 | | |
| | | 59 | | |
| | | 60 | | |
| | | 61 | | |
| | | 62 | | |
| | | 63 | | |
| | | 64 | | |
| | | 65 | | |
| silty SAND, GLEY 1 6/1 (greenish gray), wet, dense, well sorted; trace fossil | | 66 | | |
| | | 67 | | |
| | | 68 | | |
| shell hash | | 69 | | |
| clayey SILT, GLEY 1 6/1 (greenish gray), wet, stiff, low plasticity, (10% s, 80% f, 10% fossil); little fossil | | 70 | | |
| | | 71 | | |
| | | 72 | | |
| | | 73 | | |
| | | 74 | | |
| | | 75 | | |
| | | 76 | | |
| | | 77 | | |
| | | 78 | | |
| | | 79 | | |

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# BORING LOG

BOREHOLE LOCATION MAP

BORING NO.: SB0005 PROJECT NO.: FR1681 PAGE 3 OF 3

SITE: NASA - CRITE DATE: 12.19.4

TOOLS AND METHOD: Sonic Drilling BIT DIA: 4"/6"

TOTAL DEPTH: 82 ft bls GROUNDWATER DEPTH: ≈5 ft bls

DRILLING COMPANY: Boart Longyear RIG: T300 Sonic SR109

DRILLERS: ~~Scott, J. Kinney, J Smith~~ LOGGERS: J. McKinnon

| LITHOLOGY LOG | GRAPHIC LOG | DEPTH SCALE | PID (ppm) | DRILLING LOG |
|---|---|---|---|---|
| silty clayey SAND, little fossil, GLEY 1 6/1 (greenish gray), wet, medium dense, poorly sorted | | 81 | | |
| | | 82 | | |
| Borehole terminated at 82 ft bls. | | | | |

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# BORING LOG

BOREHOLE LOCATION MAP

BORING NO.: SB0006 PROJECT NO.: FR1681 PAGE 1 OF 2

SITE: NASA - CRHC DATE: 12.20.11

TOOLS AND METHOD: Sonic Drilling BIT DIA: 4"/6"

TOTAL DEPTH: 80 ft bls GROUNDWATER DEPTH: ≈ 5 ft bls

DRILLING COMPANY: Boart Longyear RIG: T300 Sonic SR109

DRILLERS: V. Scott, J. Kiner, J. Smith LOGGERS: J. McKinnon

| LITHOLOGY LOG | GRAPHIC LOG | DEPTH SCALE | PID (ppm) | DRILLING LOG |
|---|---|---|---|---|
| fine SAND with organics, 10YR 4/2 (dark grayish brown), dry, loose, moderately sorted | | 1, 2 | | |
| fine SAND, 2.5 Y 6/3 (light yellowish brown), wet at 5 ft bls, loose, moderately sorted; trace fines; trace fossils; trace medium sand | | 3, 4, 5, 6, 7, 8 | | |
| fine SAND with shells, 2.5 Y 6/3 (light brownish gray), wet, loose, (65% s, 35% fossil) | | 9, 10, 11, 12, 13 | | |
| fine SAND, 2.5 Y 6/3 (light brownish gray), wet, loose, moderately sorted; trace fossil | | 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 | | |
| fine SAND with shells, 2.5 Y 7/1 (light gray), wet, loose, poorly sorted, (55% s, 40% fossil, 5% f) | | 32, 33, 34 | | |
| fine SAND, 2.5 Y 7/1 (light gray), wet, loose, well sorted; trace fossil; trace medium grained SAND sand | | 35, 36, 37, 38, 39 | | |

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# BORING LOG

BOREHOLE LOCATION MAP

BORING NO.: SB006 PROJECT NO.: FR1681 PAGE 2 OF 2

SITE: NASA - CRHE DATE: 12.20.11

TOOLS AND METHOD: Sonic Drilling BIT DIA: 4"/6"

TOTAL DEPTH: 80 ft bls GROUNDWATER DEPTH: ≈ 5 ft bls

DRILLING COMPANY: Boart Longyear RIG: T300 Sonic SR109

DRILLERS: V. Scott, J. Kiewer, J. Smith LOGGERS: J. McKinnon

| LITHOLOGY LOG | GRAPHIC LOG | DEPTH SCALE | PID (ppm) | DRILLING LOG |
|---|---|---|---|---|
| SHELL HASH with fine sand, coarse to gravel size bivalves, 2.5 Y 7/1 (light gray) | | 41 42 43 44 45 46 47 48 49 50 51 | | |
| SHELL HASH with fine sand, coarse to gravel size bivalves, GLEY1 7/1 (light greenish gray); trace clay, (80% fossil, 15% s, 5% fine) | | 52 53 54 55 56 57 58 59 60 | | |
| silty SAND, GLEY1 5/1 (greenish gray), wet, medium dense, (60% s, 35% f, 5% fossil); trace fossil; fining downward | | 61 62 63 64 65 66 67 68 | | |
| Clayey SILT, GLEY 1 5/1, mg (greenish gray), wet moist, stiff; trace fossil | | 69 70 71 72 73 74 75 76 77 | | |
| silty CLAY, GLEY 1 5/1 (greenish gray), moist, stiff, with fossils (80% f, 20% fossil) | | 78 79 | | |



Boring terminates at 80 ft bls.

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# BORING LOG

BOREHOLE LOCATION MAP

BORING NO.: SB0007 PROJECT NO.: FR1681 PAGE 1 OF 2

SITE: NASA - CRHE DATE: 12.20.11

TOOLS AND METHOD: Sonic Drilling BIT DIA: 4" /6"

TOTAL DEPTH: 80 ft bls GROUNDWATER DEPTH: ≈ 6 ft bls

DRILLING COMPANY: Boart Longyear RIG: T300 Sonic SR109

DRILLERS: V. Scott, J. Kiever, J. Smith LOGGERS: J. McKinnon

| LITHOLOGY LOG | GRAPHIC LOG | DEPTH SCALE | PID (ppm) | DRILLING LOG |
|---|---|---|---|---|
| very fine-silty SAND with organics, 7.5 YR 4/2 (brown), dry | | 1 2 3 4 | | |
| Fine SAND, 2.5 Y 6/3 (light yellowish brown), wet at 6 ft bls, loose; trace fossil; trace fines | | 5 6 7 | | |
| fine SAND with shells, 2.5 Y 6/3 (light brownish gray), wet, loose, (65% s, 35% fossil) | | 8 9 10 11 12 13 | | |
| fine SAND, 2.5 Y 6/3 (light brownish gray), wet, loose, moderately sorted; trace fossil | | 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 | | |
| fine SAND with shells, 2.5 Y 7/1 (light gray), wet, loose, poorly sorted, (85% s, 5% f, 10% fossil) | | 29 30 31 32 | | |
| fine SAND, 2.5 Y 7/1 (light gray), wet, loose, well sorted; trace fossil; trace medium grained sand | | 33 34 35 36 37 38 39 | | |

Geosyntec consultants

# BORING LOG

BOREHOLE LOCATION MAP

BORING NO.: SB0007 PROJECT NO.: FR1681 PAGE 2 OF 2

SITE: NASA - CRHE DATE: 12.20.11

TOOLS AND METHOD: Sonic Drilling BIT DIA: 4"/6"

TOTAL DEPTH: 80 ft bls GROUNDWATER DEPTH: ≈ 6 ft bls

DRILLING COMPANY: Boart Longyear RIG: T300 Sonic SR159

DRILLERS: V. Scott, J. Kiever, J. Smith LOGGERS: J. McKinnon

| LITHOLOGY LOG | GRAPHIC LOG | DEPTH SCALE | PID (ppm) | DRILLING LOG |
|---|---|---|---|---|
| | | 41 | | |
| | | 42 | | |
| | | 43 | | |
| | | 44 | | |
| | | 45 | | |
| | | 46 | | |
| SHELL HASH with fine sand, coarse to gravel size bivalves, 2.5 Y 7/1 (light gray) | | 47 | | |
| | | 48 | | |
| | | 49 | | |
| | | 50 | | |
| clayey SHELL HASH, GLEY 7/1 (light greenish gray) | | 51 | | |
| | | 52 | | |
| | | 53 | | |
| | | 54 | | |
| | | 55 | | |
| | | 56 | | |
| | | 57 | | |
| | | 58 | | |
| | | 59 | | |
| | | 60 | | |
| silty SAND, GLEY 1 5/1 (greenish gray), wet, medium dense, (60% s, 35% f, 5% fossil); trace fossil; fining downward | | 61 | | |
| | | 62 | | |
| | | 63 | | |
| | | 64 | | |
| | | 65 | | |
| | | 66 | | |
| | | 67 | | |
| | | 68 | | |
| | | 69 | | |
| clayey SILT, GLEY 1 5/1 (greenish gray), moist, stiff; trace fossil | | 70 | | |
| | | 71 | | |
| | | 72 | | |
| | | 73 | | |
| | | 74 | | |
| | | 75 | | |
| | | 76 | | |
| | | 77 | | |
| | | 78 | | |
| silty CLAY @ GLEY 1 5/1 (greenish gray), moist, stiff with fossils (80% f, 20% fossil) | | 79 | | |



Boring terminated at 80 ft bls

# GROUNDWATER
# SAMPLING LOGS

**Monitori Vell Sampling**

Site: CHRE Project No.: FR1681 Task: 21*1 Date: 7-11-13 Sampled By: Rachel Donahue

Station (Well ID): MW0040 Purge Method: (Pump) Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) X Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): QED pump Purge Rate: ~0.1 gpm Water Quality Meter (Make & Model) 451 5526 mPS Water Level Meter: SOlinst

Time @ Start of Purging: 1024 Time @ End of Purging: 1046 Total Purging Time: ~~1046~~ 22 min Depth of Pump or Intake Tubing: 70 ft. (BTOC)
Rec 7/11

Water Level: 2.32 Total Well Depth: 75 Reference: TOC Well diameter: 2 in. Volume in well: 11.140

screen interval: 65-75 ft

Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1024 | Start | — | — | — | — | — | — | — | — | — | — |
| 1034 | ~~0.5~~ 1.0 | 25.63 | 7.27 | 4.796 | 8.64 | 2.57 | -61.9 | 6.57 | 3.131 | clear | — |
| 1037 | ~~1~~ 1.3 | 25.84 | 7.23 | 4.955 | 29.4 | 2.65 | -83.1 | 0.51 | 3.222 | clear | — |
| 1040 | ~~1.5~~ 1.6 | 26.35 | 7.22 | 4.963 | 22.2 | 2.65 | -89.9 | 0.44 | 3.228 | clear | — |
| 1042 | ~~2~~ 1.8 | 26.36 | 7.23 | 4.950 | 19.4 | 2.65 | -92.6 | 0.43 | 3.220 | clear | — |
| 1044 | ~~2.5~~ 2.0 | 26.38 | 7.23 | 4.958 | 17.2 | 2.65 | -92.9 | 0.42 | 3.221 | clear | — |
| 1046 | ~~3~~ 2.2 | 24.46 | 7.23 | 4.955 | 15.6 | 2.65 | -92.0 | 0.40 | 3.221 | clear | — |
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Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs
If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater
For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CHRE-MW0040-0702-20130711 Time Collected: 1050 Comments: VOCs by Mobile lab

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)=~~0.3~~ gal

**Monitoring Well Sampling**

Site: KSC - CRHC Project No.: FA1651 Task: 174 Date: 3/21/2012 Sampled By: Beth / Geosyntec

Station (Well ID): IW0014I Purge Method: (Pump) Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Cheapump Purge Rate: 0.1 gpm Water Quality Meter (Make & Model) YSI MPS 552 Water Level Meter: SoLinst

Time @ Start of Purging: 0840 Time @ End of Purging: 0904 Total Purging Time: 24 Depth of Pump or Intake Tubing: 40 ft. (BTOC)

Water Level: 4.50 Total Well Depth: 45' Reference: BTOC BGS Well diameter: 2 in. Volume in well: 6.6 gal

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0840 | Start | | | | | | | | | | 4.50 |
| 0845 | 0.5 | 23.62 | 7.01 | 0.649 | 13.8 | - | 145.8 | 3.33 | - | clear | |
| 0850 | 1.0 | 23.66 | 6.87 | 0.696 | 7.16 | - | 104.8 | 0.90 | - | | |
| 0855 | 1.5 | 23.75 | 6.56 | 0.706 | 5.11 | - | 96.4 | 0.82 | - | | |
| 0900 | 2.0 | 23.85 | 6.89 | 0.711 | 3.25 | - | 89.6 | 0.61 | - | | |
| 0902 | 2.2 | 23.86 | 6.90 | 0.713 | 2.86 | - | 85.9 | 0.56 | - | | |
| 0904 | 2.4 | 23.92 | 6.90 | 0.715 | 4.86 | - | 87.2 | 0.54 | | | |
| ~~0906~~ (3rd) | ~~2.6~~ (3rd) | | | | | | | | | | |
| ~~0908~~ (4th) | ~~2.8~~ (4th) | | | | | | | | | | |
| 0910 (3rd) | 3.0 (4th) | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CRHC-IW0014I-03212012 Time Collected: 0905 Comments: _____

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)= 0.6 gal

**Monitoring Well Sampling**

Site: KSC - CRHE Project No.: FR1681 Task: 17#4 Date: 3-19-2012 Sampled By: Peter / Groundtec

Station (Well ID): IW0015I Purge Method: Pump Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ~~__~~ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: 0.1 gpm Water Quality Meter (Make & Model) YSI MPS 556 Water Level Meter: Solinst

Time @ Start of Purging: 1740 Time @ End of Purging: 1810 Total Purging Time: 30 min Depth of Pump or Intake Tubing: 45 ft. (BTOC)

Water Level: 4.42 Total Well Depth: ~~450~~ 450 (FB) Reference: BGS/BLS Well diameter: 2 in. Volume in well: ___

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1740 | Start | | | | | | | | | | |
| 1745 | 0.5 | 24.65 | 8.24 | 1.575 | 6.47 | | -64.8 | 2.43 | | | |
| 1750 | 1 | 24.61 | 8.26 | 1.480 | 2.20 | | -89.1 | 2.20 | | | |
| 1755 | 1.5 | 24.69 | 7.87 | 1.465 | 1.77 | | -112.8 | 1.77 | | | |
| 1800 | 2 | 24.72 | 7.78 | 1.457 | 1.52 | | -115.1 | 1.52 | | | |
| 1805 | 2.5 | 24.67 | 7.76 | 1.452 | 1.42 | | -117.0 | 1.42 | | | |
| 1810 | 3 | 24.62 | 7.72 | 1.443 | 1.15 | | -112.0 | 1.15 | | | |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CRHE-IW0015I-03192012 Time Collected: 1810 Comments: ___

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)= ___gal

**Monitoring Well Sampling**

Site: KSC - CCHE Project No.: FR1681 Task: 17*4 Date: 3-20-2012 Sampled By: L. Petty / Geosyntec

Station (Well ID): IW0071 Purge Method: (Pump) Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: 0.1 gpm Water Quality Meter (Make & Model) YSI 556MPS Water Level Meter: Solinst

Time @ Start of Purging: 1425 Time @ End of Purging: 1510 Total Purging Time: 25min Depth of Pump or Intake Tubing: 30 ft. (BTOC)

Water Level: 4.43 Total Well Depth: 35 (BTOC) (BGS) Reference: BTOC (BGS) Well diameter: 2 in. Volume in well: 5 gal

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1425 | Start | | | | | | | | | | 4.43 |
| 1450 | 0.5 | 23.87 | 7.72 | 1.256 | 23.4 | - | -51.3 | 1.58 | - | clear | |
| 1455 | 1.0 | 23.86 | 7.60 | 1.314 | 48.0 | - | -55.4 | 1.31 | - | clear | |
| 1500 | 1.0 | 23.91 | 7.56 | 1.289 | 26.3 | - | -76.9 | 2.52 | - | clear | |
| 1502 | 1.2 | 23.99 | 7.63 | 1.297 | 16.9 | - | -86.4 | 2.51 | - | | |
| 1504 | 1.4 | 23.98 | 7.53 | 1.293 | 14.3 | - | -89.9 | 2.47 | - | | |
| 1506 | 1.6 | 23.93 | 7.47 | 1.290 | 16.5 (14.5) | - | -93.1 | 2.46 | - | | |
| 1508 | 1.8 | 23.93 | 7.38 | 1.290 | 13.6 | - | -92.4 | 2.51 | - | | |
| 1510 | 2.0 | 23.97 | 7.35 | 1.275 | 13.2 | - | -91.5 | 2.50 | - | | |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CCHE-IW0071-032012 Time Collected: 1510 Comments: _____

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)=0.5 gal

**Monitoring Well Sampling**

Site: KSC NASA Project No.: FR1681 Task: 17#4 Date: 3-20-2012 Sampled By: Lauren Petty Geosyntec

Station (Well ID): 1400121 Purge Method: (Pump) Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Peristaltic Purge Rate: 0.5 gpm Water Quality Meter (Make & Model) YSI 556 Water Level Meter: Solinst 101

Time @ Start of Purging: 0910 Time @ End of Purging: 0940 Total Purging Time: 30min Depth of Pump or Intake Tubing: 40 ~~BTOC~~ ft. (BTOC)

Water Level: 4.52 Total Well Depth: 45' Reference: ~~BTOC~~ BLS Well diameter: 1 in. Volume in well: 1.7gal

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments Depth to H2O |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0910 | Start | | | 2.995 | | | | | | | 4.52 |
| 0915 | 0.5 | 24.06 | 7.54 | ~~410.8~~ | 17.1 | — | -~~108.8~~ | 0.52 | — | clear | 4.57 |
| 0920 | 1.0 | 24.13 | 7.36 | 2.739 | 14.3 | — | -96.0 | 0.47 | — | ↓ | ↓ |
| 0925 | 1.5 | 24.11 | 7.35 | 2.719 | 13.2 | — | -97.3 | 0.46 | — | ↓ | ↓ |
| 0930 | 2.0 | 24.14 | 7.28 | 2.510 | 9.54 | — | -91.0 | 0.48 | — | ↓ | ↓ |
| 0935 | 2.5 | 24.14 | 7.27 | 2.406 | 7.37 | — | -94.0 | 0.43 | — | ↓ | ↓ |
| 0940 | 3.0 | 24.17 | 7.14 | 2.330 | 7.13 | — | -86.4 | 0.42 | — | ✓ | ✓ |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CHG-1400121-032012 Time Collected: 0940 Comments: Analysis 8260B

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)= ~~0.9~~ 2.1 gal

**Monitoring Well Sampling**

Site: KSC NASA Project No.: FR1681 Task: 1764 Date: 3-19-12 Sampled By: Petty / Geosyntec

Station (Well ID): IW0020I Purge Method: Pump Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: 0.1 gpm Water Quality Meter (Make & Model) YSI MPS556 Water Level Meter: Solinst

Time @ Start of Purging: 1600 Time @ End of Purging: 1640 Total Purging Time: 40min Depth of Pump or Intake Tubing: 45 ft. (BTOC)

Water Level: 4.76 Total Well Depth: 50 Reference: BLS Well diameter: 1 in. Volume in well: ——

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1600 | Start | | | | | | | | | | |
| 1605 | 0.5 | 25.04 | 8.05 | 1.710 | ~~8.27~~ 82.7 | | -115.7 | 1.14 | | | |
| 1610 | 1.0 | 24.95 | 7.99 | 1.679 | 50.5 | | -115.0 | 0.99 | | | |
| 1615 | 1.5 | 24.68 | 7.72 | 1.650 | 47.4 | | -115.7 | 0.84 | | | |
| 1620 | 2.0 | 24.89 | 7.65 | 1.671 | 52.5 | | -120.6 | 0.92 | | | |
| 1625 | 2.5 | 25.01 | 7.63 | 1.651 | 44.7 | | -125.9 | 0.80 | | | |
| 1630 | 3.0 | 24.96 | 7.59 | 1.650 | 28.9 | | -126.7 | 0.75 | | | |
| 1635 | 3.5 | 24.95 | 7.59 | 1.648 | 27.0 | | -127.2 | 0.72 | | | |
| 1640 | 4.0 | 25.05 | 7.59 | 1.649 | 26.1 | | -126.1 | 0.71 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CAHE-IW0020I-03192012 Time Collected: 1640 Comments: _____

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)= ___gal

**Monitoring Well Sampling**

Site: CRHR Project No.: FR1681 Task: ~~17#3~~ 17#4 Date: 3/20/12 Sampled By: D. Sizemore

Station (Well ID): IW21I Purge Method: (Pump) Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: .07 gpm Water Quality Meter (Make & Model) ~~YSI 556~~ YSI 556 Water Level Meter: Solonist

Time @ Start of Purging: 1055 Time @ End of Purging: 1123 Total Purging Time: 28 Depth of Pump or Intake Tubing: 45 ft. (BTOC)

Water Level: ~~5.68~~ 2.15 Total Well Depth: 50 Reference: TOC Well diameter: 1 in. Volume in well: ~

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1102 | ~~Start~~ 0.5 | 25.63 | 7.12 | 2.034 | 16.9 | 1.04 | -90.8 | 1.47 | 1.32 | Clear | |
| 1109 | 1.0 | 25.70 | 7.10 | 2.035 | 17.0 | 1.05 | -95.0 | 1.12 | 1.32 | " | |
| 1116 | 1.5 | 25.65 | 7.10 | 2.035 | 15.1 | 1.05 | -96.1 | 0.91 | ~~1.32~~ | " | |
| 1123 | 2.0 | 25.70 | 7.12 | 2.036 | 9.4 | 1.05 | -100.2 | 0.73 | 1.32 | " | |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs
If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater
For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: ~~DUP~~ IW21I Time Collected: 1123 Comments: 8260

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow thru vol)= ___ gal

.0026 • 45 + .5 = .61

**Monitoring Well Sampling**

Site: KSC-CRHE Project No.: FR1641 Task: 1754 Date: 03-21-12 Sampled By: Petty/Geosyntec

Station (Well ID): MW0022 Purge Method: (Pump) Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: 0.1 gpm Water Quality Meter (Make & Model) YSI 556 MPS Water Level Meter: Solinst

Time @ Start of Purging: 1445 Time @ End of Purging: 1505 Total Purging Time: 20 min Depth of Pump or Intake Tubing: 65 ft. (BTOC)

Water Level: 3.82 Total Well Depth: 70.1 Reference: BTOC BGS Well diameter: 1 in. Volume in well: 2.7 gal

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1445 | Start | | | | | | | | | | 3.82 |
| 1450 | 0.5 | 25.57 | 7.06 | 1.409 | 14.5 | — | -23.9 | 0.93 | — | Clear | |
| 1455 | 1.0 | 25.54 | 7.55 | 1.445 | 11.5 | — | -45.1 | 0.70 | — | | |
| ~~1500~~ 1457 | ~~1.5~~ 1.2 | 25.50 | 7.90 | 1.449 | 6.41 | — | -43.1 | 0.65 | — | | |
| ~~1.5~~ 1459 | 1.4 | 25.52 | 7.81 | 1.501 | 4.64 | — | -41.0 | 0.62 | — | | |
| 1501 | 1.6 | 25.54 | 7.64 | 1.535 | 3.49 | — | -44.5 | 0.57 | — | | |
| 1503 | 1.8 | 25.55 | 7.62 | 1.536 | 3.38 | — | -44.1 | 0.56 | — | | |
| 1505 | 2.0 | 25.55 | 7.63 | 1.536 | 3.40 | — | -42.1 | 0.58 | — | ↓ | |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CRHE-MW0022-032112 Time Collected: 1505 Comments: _____

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)= 0.6 gal

**Monitoring Well Sampling**

Site: KSC NASA Project No.: FR1681 Task: 1754 Date: 3-19-12 Sampled By: Petty / Geosyntec

Station (Well ID): MW0023 Purge Method: Pump Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: 0.1 gpm Water Quality Meter (Make & Model) YSI MPS556 Water Level Meter: Solinst

Time @ Start of Purging: 1405 Time @ End of Purging: 1440 Total Purging Time: 35 min Depth of Pump or Intake Tubing: 65 ft. (BTOC)

Water Level: 4.76 Total Well Depth: 70 Reference: BLS Well diameter: 2 in. Volume in well: ——

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1405 | Start | | | | | | | | | | |
| 1410 | 0.5 | 24.52 | 9.21 | 2.327 | 7.49 | | -36.0 | 1.10 | | Clear | |
| 1415 | 1.0 | 24.46 | 9.22 | 2.369 | 1.88 | | -45.7 | 9.6 | | | |
| 1420 | 1.5 | 24.53 | 9.53 | 2.420 | 1.14 | | -67.7 | 7.2 | | | |
| 1425 | 2.0 | 24.49 | 9.02 | 2.692 | 1.11 | | -202.3 | 0.64 | | | |
| 1430 | 2.5 | 24.34 | 8.38 | 2.995 | 0.82 | | -201.2 | 0.48 | | | |
| 1435 | 3.0 | 24.43 | 8.13 | 3.243 | 1.94 | | -180.8 | 0.55 | | | |
| 1440 | 3.5 | 24.48 | 7.98 | 3.336 | 1.70 | | -180.6 | 0.46 | | ✓ | |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs
If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater
For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CRTC-MW0023-03192012 Time Collected: 1440 Comments: _____

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)= ___gal

**Monitoring Well Sampling**

Site: KSC-CRHE Project No.: FR1691 Task: 1764 Date: 3-21-12 Sampled By: Beth / Cross Match

Station (Well ID): MW0024 Purge Method: (Pump) Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: 0.1 gpm Water Quality Meter (Make & Model) YSI 6820 MPS Water Level Meter: Solinst

Time @ Start of Purging: 1720 Time @ End of Purging: 1750 Total Purging Time: 30min Depth of Pump or Intake Tubing: 10 ft. (BTOC)

Water Level: 3.31 Total Well Depth: 15' Reference: BTOC BGS Well diameter: 1 in. Volume in well: 0.5 gal

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1720 | Start | | | | 355 | | | | | | |
| 1725 | 0.5 | 22.79 | 7.70 | 0.453 | ~~35.5~~ NT | - | 46.9 | 3.59 | - | Cloudy | |
| 1730 | 1.0 | 22.79 | 7.25 | 0.395 | 129 | - | 5.4 | 2.54 | - | ↓ | |
| 1735 | 1.5 | 22.60 | 7.50 | 0.357 | 60.5 | - | -4.2 | 0.75 | - | ↓ | |
| 1740 | 2.0 | 22.60 | 7.27 | 0.348 | 29.2 | - | -9.2 | 0.67 | ↓ | Clear | |
| 1742 | 2.2 | 22.59 | 7.22 | 0.347 | 24.8 | - | -9.6 | 0.67 | ↓ | ↓ | |
| 1744 | 2.4 | 22.52 | 7.24 | 0.345 | 23.0 | - | -8.6 | 0.69 | ↓ | ↓ | |
| 1746 | 2.6 | 22.53 | 7.21 | 0.336 | 21.7 | - | ~~2.5~~ 6.7 | 0.66 | ↓ | ↓ | |
| 1748 | 2.8 | 22.57 | 7.18 | 0.336 | 16.0 | - | 5.7 | 0.66 | ↓ | ↓ | |
| 1750 | 3.0 | 22.54 | 7.18 | 0.336 | 15.0 | - | 6.3 | 0.66 | ↓ | ↓ | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CRHE-MW0024-032112 Time Collected: 1750 Comments: _____

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)= 0.5 gal

**Monitoring Well Sampling**

Site: KSC CRHE Project No.: FR1691 Task: 7454 Date: 3-21-2012 Sampled By: Petty / Geosyntec

Station (Well ID): MW0025 Purge Method: (Pump) Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: 0.6 gpm Water Quality Meter (Make & Model) YSI ~~650~~ 556 MPS Water Level Meter: Solinst

Time @ Start of Purging: 1755 Time @ End of Purging: 1825 Total Purging Time: 30 min Depth of Pump or Intake Tubing: 30 ft. (BTOC)

Water Level: 3.39 Total Well Depth: 35' Reference: ~~BTOC~~ BGS Well diameter: 1 in. Volume in well: 1.3 gal

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1755 | Start | | | | | | | | | | 3.39 |
| 1800 | 0.5 | 23.22 | 7.26 | 0.441 | 109.7 | — | -70.7 | 1.57 | — | cloudy | |
| 1805 | 1.0 | 23.40 | 7.36 | 0.477 | 30.3 | — | -63.6 | 0.42 | — | ↓ | |
| 1810 | 1.5 | 23.35 | 7.35 | 0.495 | 78.8 | — | -59.9 | 0.39 | — | clear | |
| 1815 | 2.0 | 23.43 | 7.26 | 0.504 | 34.8 | — | -50.9 | 0.41 | — | ↓ | |
| ~~1817~~ | ~~2.2~~ | 2 | — | — | — | — | — | — | — | — | |
| ~~1819~~ | ~~2.4~~ | — | — | — | — | — | — | — | — | — | |
| 1821 | 2.6 | 23.36 | 7.24 | 0.507 | 21.2 | — | -47.0 | 0.30 | — | clear | |
| 1823 | 2.9 | 23.39 | 7.22 | 0.506 | 13.2 | — | -37.8 | 0.27 | — | ↓ | |
| 1825 | 3.0 | 23.42 | 7.23 | 0.509 | 12.2 | — | -39.6 | 0.25 | — | ↓ | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CRHE-MW0025-032112 Time Collected: 1830 Comments: _____

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)= 0.6 gal

**Monitoring Well Sampling**

Site: CRHC - KSC Project No.: FR1681 Task: 1744 Date: 3-21-12 Sampled By: Petty / Geosolutec

Station (Well ID): MW0026 Purge Method: Pump Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: 0.1 gpm Water Quality Meter (Make & Model) YSI 556 MPS Water Level Meter: Solinst

Time @ Start of Purging: 1115 Time @ End of Purging: 1155 Total Purging Time: 40min Depth of Pump or Intake Tubing: 35 ft. (BTOC)

Water Level: 3.61 Total Well Depth: 40' Reference: BTOC BLS Well diameter: 1 in. Volume in well: 1.5 gal

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1115 | Start | | | | | | | | | | 3.61 |
| 1120 | 0.5 | 24.30 | 7.50 | 0.639 | 994 | – | 65.2 | 0.37 | – | cloudy | |
| 1125 | 1.0 | 24.39 | 7.40 | 0.620 | E6 | – | -84.0 | 0.24 | – | | |
| 1130 | 1.5 | 24.33 | 7.35 | 0.609 | 990 | – | -71.6 | 023 | – | | |
| 1135 | 2.0 | 24.34 | 7.31 | 0.608 | 197 | – | -37.4 | 0.21 | – | | |
| 1137 | 2.2 | 24.32 | 7.29 | 0.607 | 113 | – | -33.0 | 0.20 | – | | |
| 1139 | 2.4 | 24.34 | 7.29 | 0.606 | 92.5 | – | -38.4 | 0.20 | – | ↓ | |
| 1141 | 2.6 | 24.18 | 7.25 | 0.602 | 52.3 | – | -56.7 | 0.20 | – | Clear | |
| 1143 | 2.8 | 24.24 | 7.25 | 0.602 | 43.3 | – | -70.3 | 0.20 | – | | |
| 1145 | 3.0 | 24.15 | 7.24 | 0.603 | 36.7 | – | -69.4 | 0.20 | – | | |
| 1150 | 3.5 | 24.08 | 7.23 | 0.602 | 21.5 | – | -69.2 | 0.20 | – | | |
| 1155 | 4.0 | 24.11 | 7.22 | 0.602 | 14.2 | – | -69.3 | 0.20 | – | ↓ | |

Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CRHC-MW0026-032112 Time Collected: 1200 Comments: _____

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow thru vol)= ___gal

**Monitoring Well Sampling**

Site: KSC-CRHE Project No.: FR4681 Task: 1754 Date: 3-21-12 Sampled By: Petty / Geosyntec

Station (Well ID): MW0027 Purge Method: (Pump) Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: 0.1 gpm Water Quality Meter (Make & Model) YSI 556MPS Water Level Meter: Solinst

Time @ Start of Purging: 1515 Time @ End of Purging: 1545 Total Purging Time: 30Min Depth of Pump or Intake Tubing: 35 45 ft. (BTOC)

Water Level: 3.76 Total Well Depth: ~~40~~ 50' Reference: ~~BTOC~~ BLS Well diameter: 1 in. Volume in well: 1.9gal

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1315 1515 | Start | | | | | | | | | | 3.76 |
| 1320 1520 | 0.5 | 25.72 | 7.58 | 0.953 | 266 | – | -10.5 | 0.68 | – | cloudy | |
| 1325 1525 | 1.0 | 25.49 | 7.44 | 0.928 | 89.7 | – | -15.7 | 0.54 | – | ↓ | |
| 1330 1530 | 1.5 | 25.57 | 7.43 | 0.921 | 69.1 | – | -22.7 | 0.53 | – | ↓ | |
| 1332 1532 | 1.7 | 25.51 | 7.39 | 0.910 | 54.1 | – | -29.2 | 0.48 | – | clear | |
| 1334 1534 | 1.9 | 25.40 | 7.32 | 0.899 | 46.9 | – | -29.6 | 0.45 | – | ↓ | |
| 1336 1536 | 2.1 | 25.48 | 7.31 | 0.899 | 42.3 | – | -33.4 | 0.42 | – | | |
| 1338 1538 | 2.3 | 25.49 | 7.31 | 0.898 | 41.0 | – | -34.2 | 0.41 | – | | |
| 1342 1540 | 2.5 | 25.52 | 7.31 | 0.900 | 36.0 | – | -33.5 | 0.41 | – | ↓ | |
| (3) 1545 | 3.0 | 25.59 | 7.31 | 0.902 | ~~35~~ 35.1 | – | -30.2 | 0.40 | – | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CRHE-MW0027-032112 Time Collected: 1545 Comments: _____

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)= ___gal

**Monitoring Well Sampling**

Site: KSC - CRHC Project No.: FR1681 Task: 17K4 Date: 3-20-12 Sampled By: Petty / Grosynta

Station (Well ID): MW0029 Purge Method: (Pump) Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: 0.1 gpm Water Quality Meter (Make & Model) YSI 556MPS Water Level Meter: Solinst

Time @ Start of Purging: 1345 Time @ End of Purging: 1420 Total Purging Time: 35 Depth of Pump or Intake Tubing: 40' ft. (BTOC)

Water Level: 4.84 Total Well Depth: 45' ~~BTOC~~ (BLS) Reference: ~~TOC~~ BLS Well diameter: 1 in. Volume in well: 1.6 gal

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1345 | Start | | | | | | | | | | |
| 1350 | 0.5 | 24.06 | 7.63 | 1.467 | 171. | – | -139.8 | 0.76 | – | cloudy | |
| 1355 | 1.0 | 24.10 | 7.59 | 1.435 | 66.8 | – | -136.3 | 0.71 | – | ↓ | |
| 1400 | 1.5 | 24.09 | 7.43 | 1.384 | 40.4 | – | -138.1 | 0.78 | – | slight | |
| 1405 | 2.0 | 24.11 | 7.41 | 1.376 | 37.0 | – | -125.7 | 0.76 | – | | |
| 1410 | 2.5 | 24.28 | 7.32 | 1.372 | 27.6 | – | -157.4 | 0.35 | – | | |
| 1413 | 2.8 | 24.47 | 7.38 | 1.366 | 23.5 | – | -162.4 | 0.33 | – | | |
| 1416 | 3.1 | 24.47 | 7.38 | 1.367 | 17.5 | – | -162.9 | 0.31 | – | | |
| ~~1420~~ 1420 | 3.5 | 24.47 | 7.58 | 1.369 | 18.4 | – | -165.2 | 0.30 | – | ↓ | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Correction Factors: (2" use 0.163, 4" use 0.653, 6" ~~use~~ 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CRHC-~~IW0~~ MW0029-03202012 Time Collected: 1420 Comments: _____

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)= 0.6 gal

**Monitoring Well Sampling**

Site: CSC-CRHE Project No.: FR1681 Task: 7#4 Date: 3-21-2012 Sampled By: Patty / Geosyntec

Station (Well ID): MW0029 Purge Method: (Pump) Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: 0.1 gpm Water Quality Meter (Make & Model) YSI 556 MPS Water Level Meter: Solinst

Time @ Start of Purging: 1025 Time @ End of Purging: 1055 Total Purging Time: 30 min Depth of Pump or Intake Tubing: 45 ft. (BTOC)

Water Level: 3.71 Total Well Depth: ~~45~~ 50' Reference: ~~BTOC~~ TOC (40) MLS Well diameter: 1 in. Volume in well: 1.9 gal

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1025 | Start | | | | | | | | | | 3.71 |
| 1030 | 0.5 | 24.43 | 7.53 | 1.152 | 215 | - | 3.8 | 2.38 | - | cloudy | |
| 1035 | 1.0 | 24.53 | 7.36 | 1.129 | 314 | - | 9.5 | 0.53 | - | | |
| 1040 | 1.5 | 24.68 | 7.30 | 1.122 | 58.7 | - | 9.2 | 0.43 | - | | |
| 1045 | 2.0 | 24.63 | 7.27 | 1.108 | 26.3 | - | 5.6 | 0.39 | - | | |
| 1047 | 2.2 | 24.66 | 7.25 | 1.100 | 14.6 | - | 3.8 | 0.36 | - | | |
| 1049 | 2.4 | 24.67 | 7.25 | 1.102 | 10.5 | - | 3.6 | 0.35 | - | clear | |
| 1051 | 2.6 | 24.68 | 7.25 | 1.101 | 7.25 | - | 3.1 | 0.34 | - | | |
| 1053 | 2.8 | 24.46 | 7.25 | 1.094 | 5.01 | - | 1.2 | 0.31 | - | | |
| 1055 | 3.0 | 24.48 | 7.22 | 1.092 | 4.98 | - | 1.1 | 0.30 | - | | |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs
If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater
For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CRHE-MW0029-03212012 Time Collected: 1107 Comments: _____

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)= 0.6 gal

**Monitoring Well Sampling**

Site: KSC NASA Project No.: FR1681 Task: 1784 Date: 3-19-12 Sampled By: Petty / Geosyntec

Station (Well ID): MW0030 Purge Method: Pump Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: 0.1 gpm Water Quality Meter (Make & Model) YSI MPS 556 Water Level Meter: Solinst

Time @ Start of Purging: 1135 Time @ End of Purging: 1205 Total Purging Time: 30min Depth of Pump or Intake Tubing: 10 ft. (BTOC)

Water Level: 4.64 Total Well Depth: 15 Reference: BLS Well diameter: 1 in. Volume in well: ——

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1135 | Start | | | | | | | | | | |
| 1140 | 0.5 | 23.87 | 7.25 | 1.324 | 138 | | -133.7 | 0.54 | | brown | |
| 1145 | 1.0 | 23.85 | 7.25 | 1.324 | 30.7 | | -133.3 | 0.56 | | ↓ | |
| 1150 | 1.5 | 23.67 | 7.29 | 1.310 | 29.1 | | -132.5 | 0.44 | | clear | |
| 1155 | 2.0 | 23.84 | 7.21 | 1.308 | 30.5 | | -126.4 | 0.43 | | | |
| 1200 | 2.5 | 23.80 | 7.22 | 1.306 | 25.0 | | -123.6 | 0.41 | | | |
| 1205 | 3.0 | 23.65 | 7.24 | 1.295 | 24.5 | | -122.8 | 0.37 | | ↓ | |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CRTG-MW0030-031912 Time Collected: 1205 Comments: _____

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)= ___gal

**Monitoring Well Sampling**

Site: KSC NASA Project No.: FR1681 Task: 1784 Date: 3-19-2012 Sampled By: Petty / Geosyntec

Station (Well ID): MW0031 Purge Method: Pump Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: 0.1 gpm Water Quality Meter (Make & Model) YSI MPS 556 Water Level Meter: Solinst

Time @ Start of Purging: 1455 Time @ End of Purging: 1525 Total Purging Time: 30Min Depth of Pump or Intake Tubing: 45 ft. (BTOC)

Water Level: 4.43 Total Well Depth: 50 Reference: BLS Well diameter: 1 in. Volume in well: ——

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1455 | Start | | | | | | | | | | |
| 1500 | 0.5 | 24.89 | 7.69 | 3.245 | 27.9 | | -105.6 | 0.54 | | | |
| 1505 | 1.0 | 25.00 | 7.51 | 3.186 | 10.2 | | -110.0 | 0.71 | | | |
| 1510 | 1.5 | 25.00 | 7.40 | 3.188 | 6.71 | | -119.3 | 0.75 | | | |
| 1515 | 2.0 | 25.16 | 7.41 | 3.182 | 5.73 | | -121.2 | 0.59 | | | |
| 1520 | 2.5 | 25.17 | 7.52 | 3.190 | 6.01 | | -120.6 | 0.56 | | | |
| 1525 | 3.0 | 24.71 | 7.53 | 3.108 | 8.72 | | -121.3 | 0.54 | | | |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CBHG-MW0031-03192012 Time Collected: 1525 Comments: _____

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)= ___gal

**Monitoring Well Sampling**

Site: KSC NASA Project No.: FR1681 Task: 1754 Date: 3-19-2012 Sampled By: Petty / Geosyntec

Station (Well ID): MW0032 Purge Method: Pump Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: 0.1 gpm Water Quality Meter (Make & Model) YSI MPS 556 Water Level Meter: Solinst

Time @ Start of Purging: 1020 Time @ End of Purging: 1100 Total Purging Time: 40 min Depth of Pump or Intake Tubing: 45 ft. (BTOC)

Water Level: 5.07 Total Well Depth: 50 Reference: BLS Well diameter: 1 in. Volume in well: ——

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1020 | Start | | | | | | | | | | |
| 1025 | 0.5 | 25.86 | 7.11 | 2.056 | 7999 | | — | 1.63 | | Cloudy | |
| 1030 | 1.0 | 25.95 | 7.19 | 2.111 | 104 | | — | 1.44 | | ↓ | |
| 1035 | 1.5 | 25.71 | 7.20 | 2.194 | 67.1 | | -139.6 | 1.05 | | | |
| 1040 | 2.0 | 26.10 | 7.24 | 2.334 | 33.5 | | -137.4 | 0.95 | | | |
| 1045 | 2.5 | 26.28 | 7.29 | 2.385 | 21.0 | | -158.4 | 0.97 | | | |
| 1050 | 3.0 | 25.85 | 7.30 | 2.345 | 15.5 | | -172.8 | 0.86 | | ↓ | |
| 1055 | 3.5 | 26.20 | 7.42 | 2.340 | 13.6 | | -178.9 | 0.79 | | Clear | |
| 1100 | 4.0 | 26.21 | 7.39 | 2.357 | 12.2 | | -172.9 | 0.75 | | ↓ | |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: CAPE-MW0032-03192012 Time Collected: 1100 Comments: _____

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow tru vol)= ___gal

**Monitoring Well Sampling**

1744

Site: CRHR Project No.: FR1681 Task: ~~1745~~ (RD) Date: 3/20/12 Sampled By: D. Sizemore

Station (Well ID): MW33 Purge Method: (Pump) Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic Centrifugal ___ Bladder

Pump (Make & Model): G-20pump Purge Rate: .07 gpm Water Quality Meter (Make & Model) YSI 556 Water Level Meter: Solonist

Time @ Start of Purging: 940 Time @ End of Purging: 1017 Total Purging Time: 28 min Depth of Pump or Intake Tubing: ~~48.5~~ 45 ft. (BTOC)

Water Level: 5.68 Total Well Depth: 50 Reference: BLS Well diameter: 1 in. Volume in well: ___

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 956 | ~~Start~~ .5 | 24.79 | 7.24 | 1.953 | 257 | .75 | -197.3 | .29 | .92 | White | |
| 1003 | 1.0 | 25.02 | 7.35 | 1.955 | 16.4 | .63 | -205.1 | .12 | .93 | Clear | |
| 1010 | 1.5 | 25.00 | 7.36 | 1.955 | 14.9 | .63 | -205.0 | .10 | .94 | " | |
| 1017 | 2.0 | 25.05 | 7.37 | 1.955 | 13.9 | .63 | -206.1 | .15 | .94 | " | |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ½ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: MW33 Time Collected: ~~949~~ 1017 Comments: 8260 3.0'

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow thru vol)= ___gal

.0026 • 48.5 ≈ .5 = .63

TOC is ~~3.5'~~ Above Grade

~~TOC is 3.5 Above Grade~~ only

**Monitoring Well Sampling**

Site: CH2E Project No.: FR1681 Task: ~~17#3~~ 1764 WP Date: 3/20/12 Sampled By: D. Sicamore

Station (Well ID): MW34 Purge Method: Pump Bailer Pump Type: __ Submersible __ Teflon __ SS __ Other) ✓ Peristaltic __ Centrifugal __ Bladder

Pump (Make & Model): Geopump Purge Rate: .07 gpm Water Quality Meter (Make & Model) YSI 556 Water Level Meter: Solonist

Time @ Start of Purging: 909 Time @ End of Purging: 937 Total Purging Time: 28minutes Depth of Pump or Intake Tubing: 38.5 ft. (BTOC)

Water Level: 4.92 Total Well Depth: 40 Reference: bLs Well diameter: 1 in. Volume in well: ____

| Time (hrs) | Cumulative Purge Volume (gal) DNS | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 916 | ~~Start~~ .5 | 23.78 | 7.51 | 1.593 | >1000 | .69 | -197.3 | .92 | .90 | White | |
| 923 | 1.5 | 23.74 | 7.52 | 1.595 | 19.1 | .69 | -205.4 | .69 | .90 | Clear | |
| 930 | 2.0 | 23.75 | 7.55 | 1.595 | 12.4 | .69 | -209.3 | .70 | .90 | " | |
| 937 | 2.5 | 23.80 | 7.55 | 1.595 | 16.8 | .69 | -210.1 | .62 | .90 | " | |
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Correction Factors: (2"-use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp. pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: MW34 Time Collected: 937 Comments: 816

When using 3/16-in. ID tubing FV= ((0.041) (0.035x tubing length))+0.5(flow thru vol)= ___gal

.0026 • 38.5 + .5 = .6

3' Above-Grade Completion

**Monitoring Well Sampling**

Site: CRHR Project No.: ~~FR1660-5~~ FR1601 Task: ~~1743~~ 1744 Date: 3/20/12 Sampled By: D. Sizemore

Station (Well ID): MW35 Purge Method: (Pump) Bailer Pump Type: ___ Submersible (__ Teflon _ SS __ Other) L Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): G20 pump Purge Rate: .07 gpm Water Quality Meter (Make & Model) YSI 556 Water Level Meter: Solonist

Time @ Start of Purging: 1343 Time @ End of Purging: 1411 Total Purging Time: 20 min Depth of Pump or Intake Tubing: 40' ft. (BTOC)

Water Level: 4.97 Total Well Depth: 45 Reference: BLS Well diameter: 1 in. Volume in well: ~~1~~

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1350 | ~~Start~~ .5 | 25.00 | 7.25 | 2.004 | 390 | .87 | -109.1 | 1.23 | 1.24 | Cloudy | |
| 1357 | 1.0 | 25.13 | 7.25 | 2.009 | 19.3 | .87 | -109.5 | .24 | 1.25 | Clear | |
| 1404 | 1.5 | 25.15 | 7.25 | 2.009 | 13.9 | .87 | -110.5 | .23 | 1.25 | " | |
| 1411 | 2.0 | 25.10 | 7.26 | 2.010 | 12.5 | .89 | -111.9 | .25 | 1.25 | " | |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs
If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes: Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater
For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: MW35 Time Collected: 1411 Comments: 8260

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow thru vol)= ___gal

.0026 • 40 + .5 = .6

**Monitoring Well Sampling**

Site: CRHR Project No.: FR1681 Task: ~~1743~~ 1744 Date: 3/20/12 Sampled By: D. Sizemore

Station (Well ID): mw36 Purge Method: (Pump) Bailer Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Geopump Purge Rate: .07 gpm Water Quality Meter (Make & Model) YSI 556 Water Level Meter: Solonist

Time @ Start of Purging: 1453 Time @ End of Purging: 1521 Total Purging Time: 28 min Depth of Pump or Intake Tubing: 10 ft. (BTOC)

Water Level: 4.62 Total Well Depth: 15 Reference: BEC Well diameter: 1 in. Volume in well: _____

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1500 | ~~Start~~ 5 | 25.12 | 7.03 | 0.623 | 104 | .37 | -71.1 | .75 | .59 | Clear | |
| 1507 | 1.0 | 25.11 | 7.10 | 0.631 | 12.9 | .37 | -75.6 | .22 | .60 | " | |
| 1514 | 1.5 | 25.12 | 7.14 | 0.631 | 13.0 | .37 | -69.7 | .22 | .60 | " | |
| 1521 | 2.0 | 25.13 | 7.15 | 0.631 | 11.5 | .37 | -70.5 | .19 | .60 | " | |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: mw36 Time Collected: 1521 Comments: 8260

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow thru vol)= ___gal

.53

**Monitoring Well Sampling** 1764

Site: CRHR Project No.: FR1687 Task: ~~D&C~~ WP Date: 3/20/12 Sampled By: D. Silemore

Station (Well ID): mw37 Purge Method: Pump Bailer Pump Type: __ Submersible (__ Teflon __ SS __ Other) ✓ Peristaltic __ Centrifugal __ Bladder

Pump (Make & Model): GeoPump Purge Rate: .07 gpm Water Quality Meter (Make & Model) YSI 556 Water Level Meter: Solinst

Time @ Start of Purging: ~~1425~~ 1420 Time @ End of Purging: 1441 Total Purging Time: 21 min Depth of Pump or Intake Tubing: 30 ft. (BTOC)

Water Level: 4.75 Total Well Depth: 35 Reference: TOC Well diameter: 1 in. Volume in well: ———

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1427 | ~~Start~~ .5 | 25.11 | 7.73 | 0.356 | 19.7 | .81 | -141.2 | 1.03 | 1.03 | Clear | |
| 1434 | 1.0 | 25.12 | 7.75 | 0.360 | 11.4 | .82 | -142.0 | .90 | .95 | " | |
| 1441 | 1.5 | 25.10 | 7.75 | 0.361 | 12.13 | .81 | -143.5 | .73 | ~~.96~~ .98 | " | |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs
If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater
For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: mw37 Time Collected: 1441 Comments: 8260

When using 3/16-in. ID tubing EV= ((0.041) (0.035x tubing length))+0.5(flow thru vol)= ___gal

.026 • 30 + .5 = .50

**Monitoring Well Sampling**

Site: CRHE Project No.: FR1681 Task: ~~1754~~ 1764 Date: 3/~~20~~19/12 Sampled By: D. Szenore

Station (Well ID): MW 38 Purge Method: Pump ~~Bailer~~ Bailer ☐ Pump Type: ___ Submersible (__ Teflon __ SS __ Other) ~~Peristaltic~~ Peristaltic ___ Centrifugal ___ Bladder

Pump (Make & Model): Grundfos Purge Rate: .07 gpm Water Quality Meter (Make & Model) YSI 556 Water Level Meter: Solonist

Time @ Start of Purging: 1743 Time @ End of Purging: 1872 Total Purging Time: ___ Depth of Pump or Intake Tubing: 10 ft. (BTOC)

Water Level: ~~10~~ 5.00 Total Well Depth: ~~18~~ 15' Reference: TOC Well diameter: 1 in. Volume in well: ___

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1750 | ~~Start~~ 0 | 24.09 | 7.29 | .852 | 695 | .70 | -225.9 | 1.59 | .91 | Cloudy | |
| 1757 | 1.0 | 24.01 | 7.35 | .856 | 420 | .70 | -232.6 | 1.60 | .91 | " | |
| 1804 | 1.5 | 24.10 | 7.49 | .856 | 253 | .70 | -232.0 | 1.61 | .92 | " | |
| 1811 | 2.0 | 23.99 | 7.49 | .859 | 104 | .70 | -239.6 | 1.62 | .92 | Clear | |
| 1818 | 2.5 | 24.02 | 7.50 | .859 | 63 | .70 | -240.1 | 1.16 | .93 | Clear | |
| 1825 | 3.0 | 24.04 | 7.50 | .860 | 59 | .70 | -240.0 | 1.19 | .93 | " | |
| 1832 | 3.5 | 24.05 | 7.51 | .860 | 60 | .70 | -240.3 | 1.00 | .93 | " | |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater

For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

~~Duplicate~~

Sample ID: MW38 Time Collected: 1837 Comments: 8260

When using 3/16-in. ID tubing EV= ((0.041) ~~(0.026~~ tubing length))+0.5(flow thru vol)= ___gal

1¼" Tubing 10 · .0026 + .5 = .53

**Monitoring Well Sampling**

Site: CRHS Project No.: FR1681 Task: ~~1774~~ 1779 Date: 3/19/12 Sampled By: D. Sizemore

Station (Well ID): MW39 Purge Method: Pump ☒ Bailer ☐ Pump Type: __ Submersible (__ Teflon __ SS __ Other) Peristaltic ☒ Centrifugal __ Bladder

Pump (Make & Model): Geopump Purge Rate: .07 gpm Water Quality Meter (Make & Model) YSI 556 Water Level Meter: Solonist

Time @ Start of Purging: 1704 Time @ End of Purging: 1739 Total Purging Time: 35min Depth of Pump or Intake Tubing: 30 ft. (BTOC)

Water Level: 4.73 Total Well Depth: 35 Reference: TOC Well diameter: 1 in. Volume in well: ——

| Time (hrs) | Cumulative Purge Volume (gal) | Temp (°C) | pH | Conductivity (mS/cm) | Turbidity (NTU) | Salinity (%) | ORP (mV) | DO (mg/L) | TDS (g/L) | Color | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1711 | ~~Start~~ .5 | 25.12 | 7.16 | 1.554 | 67.9 | .68 | -169.1 | 1.13 | .95 | Clear | |
| 1718 | 1.0 | 25.4 | 7.21 | 1.595 | 68.3 | .70 | -170.2 | 0.75 | 93 | " | |
| 1725 | 1.5 | 25.20 | 7.22 | 1.601 | 19.3 | .71 | -172.3 | .76 | .95 | " | |
| 1732 | 2.0 | 25.21 | 7.23 | 1.603 | 11.9 | .71 | -173.4 | .24 | .95 | " | |
| 1739 | 2.5 | 25.23 | 7.25 | 1.604 | 12.5 | .71 | -175.6 | .19 | .95 | " | |
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Correction Factors: (2" use 0.163, 4" use 0.653, 6" use 1.469)

Note: When purging well with pump or intake tubing within the well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature: ± 0.2 °C; pH: ±0.2 standard units; Specific Conductance: ± 5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity ≤ 20 NTUs
If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater; and Turbidity ± 5 NTUs or 10%, whichever is greater
For high turbidity and DO, check flow through cell for air bubbles, which may be causing erroneous readings. Turbidity should be verified visually and with a separate Turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Check water quality meter calibration before using again.

Sample ID: MW39 Time Collected: 1739 Comments: 8260

~~When using 3/16-in. ID tubing~~ EV= ((0.041) (0.035x tubing length))+0.5(flow thru vol)= __gal

.0026 • 30 + .5 = .58

# APPENDIX L

# SURVEY DATA
# (electronic copy only)

***KUGELMANN LAND SURVEYING, INC***
***30 N. TROPICAL TRL, SUITE B***
***MERRITT ISLAND, FL 32953***
***PH: (321) 459-0930***
***FAX: (321) 459-9413***
***klsinc@cfl.rr.com***

GEOSYNTEC CONSULTANTS
CRHE @ KENNEDY SPACE CENTER
MARCH 17, 2012

| NORTHING (M) | EASTING (M) | TOC (FT) | GND (FT) | DESC | ID |
|---|---|---|---|---|---|
| 469494.640 | 233954.520 | 4.60 | 4.8 | MW | MW0022 |
| 469514.365 | 233845.518 | 5.45 | 5.6 | MW | MW0023 |
| 469488.302 | 234005.338 | 4.00 | 4.3 | MW | MW0024 |
| 469488.293 | 234004.717 | 4.16 | 4.3 | MW | MW0025 |
| 469496.317 | 233975.070 | 4.36 | 4.6 | MW | MW0026 |
| 469494.541 | 233955.135 | 4.51 | 4.8 | MW | MW0027 |
| 469631.506 | 233954.678 | 5.58 | 5.7 | MW | MW0028 |
| 469507.385 | 233904.902 | 4.56 | 4.7 | MW | MW0029 |
| 469514.354 | 233844.760 | 5.26 | 5.5 | MW | MW0030 |
| 469514.377 | 233844.223 | 5.17 | 5.5 | MW | MW0031 |
| 469546.807 | 233882.497 | 5.78 | 6.1 | MW | MW0032 |
| 469550.476 | 233784.377 | 6.35 | 2.8 | MW | MW0033 |
| 469647.673 | 233792.588 | 5.40 | 2.5 | MW | MW0034 |
| 469576.553 | 233717.764 | 5.34 | 5.3 | MW | MW0035 |
| 469666.000 | 233717.581 | 4.92 | 5.0 | MW | MW0036 |
| 469666.513 | 233717.509 | 5.07 | 5.0 | MW | MW0037 |
| 469574.538 | 233668.662 | 3.23 | 3.2 | MW | MW0038 |
| 469573.936 | 233668.678 | 3.22 | 3.2 | MW | MW0039 |

ABBREVIATIONS

| | |
|---|---|
| TOC = | TOP OF CASING |
| EL = | ELEVATION |
| GND = | GROUND |
| DESC = | DESCRIPTION |
| ID = | IDENTIFICATION |
| MW = | MONITORING WELL |
| (M) = | METERS |
| (FT) = | FEET |

SURVEYOR'S NOTES:

1. THE PURPOSE OF THIS SURVEY IS TO DETERMINE THE HORIZONTAL AND VERTICAL POSITION OF GROUND WATER MONITORING WELLS.
2. THE COORDINATES DEPICTED HEREON ARE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83), 1990 ADJUSTMENT AND ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT 'WRIGHT', HAVING PUBLISHED COORDINATES OF NORTH 1544816.33 AND EAST 768783.06 FEET.
3. THE ELEVATIONS DEPICTED HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT 'WRIGHT', HAVING AN PUBLISHED ELEVATION OF 7.45 FEET.
4. THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE CLIENT(S) SHOWN HEREON

# APPENDIX M

# LABORATORY DATA
# (electronic copy only)

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

***Telephone* (352) 367-0073**
***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

August 10, 2009

Jill Johnson
GeoSyntec Consultants
9511 Holsberry Lane, Suite C
Pensacola, Florida 32534

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 09-107**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from June 21 to August 6 2009. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form. This information will also be sent electronically.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

KB Labs, Inc.
6821 SW Archer Road
Gainesville, FL 32608
Phone: 352-367-0073
Fax: 352-367-0073
Email: info@kbmobilelabs.com

# PROJECT NARRATIVE

## Project Scope

From June 21 to August 6, 2009, a total of 195 water samples were analyzed for GeoSyntec Consultants at NASA CHRE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB1: FDOH NELAP Certification Number E82815

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0

KB Labs, Inc.
6821 SW Archer Road
Gainesville, FL 32608
Phone: 352-367-0073
Fax: 352-367-0073
Email: info@kbmobilelabs.com

ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

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# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. Sample ID CRHEA-DPT0019-038.0 reported 1,1,dichloroethene 1.0 changed to <1.0ug/L.

3. Changes for sample ID CRHEA-DPT0020-018.0 reported analytes <1.0 changed to <10ug/L.

4. Changes for sample ID CRHE-DPT0033-043.0 reported:
   1,1-dichloroethene 3.6 changed to 18ug/L.
   t-1,2-dichloroethene 14 changed to 72ug/L.
   trichloroethene <1.3 changed to <5.0ug/L.

5. Changes for sample ID CRHE-DPT0034-043.0 all analytes reported <1.0 changed to <2.0ug/L.

6. Changes for sample ID CRHE-DPT0036-038.0 reported:

*KB Labs, Inc.*
*6821 SW Archer Road*
*Gainesville, FL 32608*
*Phone: 352-367-0073*
*Fax: 352-367-0073*
*Email: info@kbmobilelabs.com*

1,1-dichloroethene <45 changed to <100ug/L.
trichloroethene <26 changed to <100ug/L.
tetrachloroethene <18 changed to <100ug/L.

7. Changes for sample ID CRHE-DPT0036-043.0 reported trichloroethene and tetrachloroethene <1.0 changed to <2.0ug/L.

8. Values between KB Labs Reporting Limit (RL) and Method Detection Limit (MDL) are indicated with a “I” Data Qualifier.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-107 |
| **On-site Dates**: 6/21/09-8/6/09 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| VSTD 1 | 06/21/09 | 110 | 104 | 98 | 102 | Pass | Pass | Pass | Pass |
| VSTD 5 | 06/21/09 | 107 | 108 | 93 | 99 | Pass | Pass | Pass | Pass |
| VSTD 10 | 06/21/09 | 110 | 105 | 103 | 105 | Pass | Pass | Pass | Pass |
| RSTD 20 | 06/21/09 | 104 | 97 | 102 | 98 | Pass | Pass | Pass | Pass |
| VSTD 30 | 06/21/09 | 99 | 100 | 106 | 98 | Pass | Pass | Pass | Pass |
| VSTD 50 | 06/21/09 | 56 | 69 | 107 | 82 | < LCL | Pass | Pass | Pass |
| VSTD 100 | 06/21/09 | 94 | 112 | 101 | 98 | Pass | Pass | Pass | Pass |
| BLANK | 06/21/09 | 105 | 102 | 98 | 98 | Pass | Pass | Pass | Pass |
| RSTD 50 | 06/22/09 | 82 | 79 | 103 | 97 | Pass | Pass | Pass | Pass |
| LCS 50 | 06/22/09 | 81 | 94 | 107 | 103 | Pass | Pass | Pass | Pass |
| BLANK | 06/22/09 | 78 | 95 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-010.0 | 06/22/09 | 74 | 96 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-018.0 | 06/22/09 | 73 | 93 | 94 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-028.0 | 06/22/09 | 74 | 94 | 98 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-038.0 | 06/22/09 | 73 | 108 | 94 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-043.0 1:5 | 06/22/09 | 70 | 108 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-063.0 | 06/22/09 | 71 | 115 | 95 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-048.0 | 06/22/09 | 65 | 107 | 93 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0018-010.0 | 06/22/09 | 58 | 96 | 92 | 91 | < LCL | Pass | Pass | Pass |
| CRHEA-DPT0018-018.0 | 06/22/09 | 64 | 108 | 95 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0018-028.0 | 06/22/09 | 62 | 88 | 88 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0018-038.0 1:5 | 06/22/09 | 69 | 84 | 93 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0018-043.0 1:5 | 06/22/09 | 67 | 77 | 97 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0018-048.0 | 06/22/09 | 65 | 73 | 98 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0018-063.0 | 06/22/09 | 71 | 76 | 95 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-038.0 1:5 | 06/22/09 | 67 | 80 | 92 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0018-048.0 1:5 | 06/22/09 | 71 | 85 | 95 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-010.0 | 06/22/09 | 73 | 84 | 93 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-018.0 | 06/22/09 | 66 | 78 | 92 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-028.0 | 06/22/09 | 71 | 81 | 92 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-038.0 | 06/22/09 | 63 | 72 | 90 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-043.0 1:5 | 06/22/09 | 71 | 81 | 96 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-048.0 1:5 | 06/22/09 | 64 | 72 | 96 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-063.0 | 06/22/09 | 66 | 79 | 95 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-010.0 MS | 06/22/09 | 69 | 97 | 97 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-010.0 MSD | 06/22/09 | 64 | 96 | 96 | 100 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/22/09 | 66 | 99 | 101 | 98 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/23/09 | 87 | 94 | 98 | 105 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/23/09 | 80 | 85 | 99 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 06/23/09 | 65 | 97 | 106 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-010.0 | 06/23/09 | 61 | 99 | 91 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-018.0 1:10 | 06/23/09 | 62 | 99 | 106 | 104 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-028.0 | 06/23/09 | 63 | 84 | 101 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-038.0 1:5 | 06/23/09 | 63 | 99 | 103 | 106 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (61% - 144%)
S2 = 1,2- Dichloroethane-D4 (64% - 138%)
S3 = Toluene-D8 (80% - 119%)
S4 = 4-Bromofluorobenzene (71% - 132%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-107 |
| **On-site Dates**: 6/21/09-8/6/09 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHEA-DPT0020-043.0 1:5 | 06/23/09 | 60 | 77 | 99 | 101 | < LCL | Pass | Pass | Pass |
| CRHEA-DPT0020-048.0 | 06/23/09 | 68 | 102 | 97 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-038.0 1:10 | 06/23/09 | 67 | 104 | 101 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-063.0 | 06/23/09 | 64 | 99 | 94 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-010.0 MS | 06/23/09 | 73 | 105 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-010.0 MSD | 06/23/09 | 73 | 99 | 98 | 101 | Pass | Pass | Pass | Pass |
| BLANK | 06/23/09 | 62 | 106 | 95 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0021-010.0 | 06/23/09 | 63 | 102 | 90 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-018.0 | 06/23/09 | 62 | 96 | 94 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0021-028.0 | 06/23/09 | 64 | 88 | 93 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0021-038.0 | 06/23/09 | 66 | 78 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0021-043.0 | 06/23/09 | 64 | 88 | 95 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0021-048.0 | 06/23/09 | 62 | 83 | 100 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0021-063.0 | 06/23/09 | 63 | 92 | 90 | 107 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-010.0 | 06/23/09 | 62 | 77 | 93 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-018.0 | 06/23/09 | 65 | 105 | 93 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-028.0 | 06/23/09 | 64 | 88 | 95 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-043.0 1:10 | 06/23/09 | 65 | 98 | 96 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-063.0 1:2 | 06/23/09 | 65 | 107 | 90 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-038.0 | 06/23/09 | 60 | 104 | 97 | 98 | < LCL | Pass | Pass | Pass |
| CCS 20 | 06/23/09 | 71 | 94 | 100 | 96 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/24/09 | 84 | 91 | 108 | 100 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/24/09 | 88 | 95 | 96 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 06/24/09 | 95 | 89 | 97 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-043.0 1:5 | 06/24/09 | 97 | 93 | 93 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-048.0 | 06/24/09 | 101 | 93 | 86 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-063.0 | 06/24/09 | 96 | 92 | 94 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-010.0 | 06/24/09 | 72 | 96 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-018.0 | 06/24/09 | 74 | 94 | 89 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-028.0 | 06/24/09 | 73 | 97 | 88 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-038.0 1:5 | 06/24/09 | 0 | 66 | 0 | 82 | < LCL | Pass | < LCL | Pass |
| CRHEA-DPT0023-038.0 RPT | 06/24/09 | 63 | 96 | 88 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-043.0 | 06/24/09 | 64 | 103 | 97 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-048.0 | 06/24/09 | 62 | 98 | 87 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-063.0 | 06/24/09 | 64 | 99 | 96 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0024-010.0 | 06/24/09 | 60 | 91 | 96 | 99 | < LCL | Pass | Pass | Pass |
| CRHEA-DPT0024-018.0 | 06/24/09 | 63 | 101 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0024-028.0 | 06/24/09 | 66 | 101 | 93 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0024-038.0 1:10 | 06/24/09 | 64 | 101 | 92 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-038.0 1:5 | 06/24/09 | 67 | 110 | 93 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0024-043.0 1:5 | 06/24/09 | 65 | 80 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0024-048.0 | 06/24/09 | 66 | 87 | 96 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0024-063.0 | 06/24/09 | 63 | 97 | 91 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-073.0 | 06/24/09 | 58 | 89 | 98 | 104 | < LCL | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (61% - 144%)
S2 = 1,2- Dichloroethane-D4 (64% - 138%)
S3 = Toluene-D8 (80% - 119%)
S4 = 4-Bromofluorobenzene (71% - 132%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-107 |
| **On-site Dates**: 6/21/09-8/6/09 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHEA-DPT0022-073.0 | 06/24/09 | 61 | 70 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-010.0 MS | 06/24/09 | 0 | 0 | 0 | 87 | < LCL | < LCL | < LCL | Pass |
| CRHEA-DPT0023-010.0 MSD | 06/24/09 | 71 | 102 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-010.0 MS | 06/24/09 | 70 | 94 | 104 | 106 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/24/09 | 70 | 98 | 92 | 99 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/25/09 | 85 | 87 | 106 | 107 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/25/09 | 94 | 93 | 104 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 06/25/09 | 96 | 88 | 92 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-010.0 | 06/25/09 | 98 | 90 | 91 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-018.0 | 06/25/09 | 94 | 90 | 91 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-028.0 | 06/25/09 | 94 | 93 | 102 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-038.0 | 06/25/09 | 97 | 93 | 93 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-043.0 | 06/25/09 | 95 | 92 | 94 | 105 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-048.0 | 06/25/09 | 102 | 97 | 90 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-063.0 | 06/25/09 | 99 | 97 | 102 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-010.0 | 06/25/09 | 80 | 98 | 99 | 10 | Pass | Pass | Pass | < LCL |
| CRHEA-DPT0025-010.0 MS | 06/25/09 | 83 | 99 | 92 | 103 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-010.0 MSD | 06/25/09 | 78 | 104 | 97 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 06/25/09 | 67 | 101 | 96 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-018.0 | 06/25/09 | 64 | 97 | 97 | 105 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-028.0 | 06/25/09 | 66 | 102 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-038.0 | 06/25/09 | 66 | 102 | 96 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-043.0 | 06/25/09 | 66 | 106 | 94 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-048.0 | 06/25/09 | 67 | 106 | 96 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-063.0 | 06/25/09 | 67 | 105 | 89 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-010.0 | 06/25/09 | 68 | 105 | 96 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-018.0 | 06/25/09 | 61 | 98 | 91 | 91 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-028.0 | 06/25/09 | 67 | 104 | 93 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-038.0 1:5 | 06/25/09 | 65 | 102 | 98 | 110 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-043.0 | 06/25/09 | 64 | 100 | 93 | 103 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-038.0 1:5 | 06/25/09 | 66 | 106 | 93 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-048.0 | 06/25/09 | 67 | 108 | 94 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-063.0 | 06/25/09 | 67 | 103 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-038.0 1:20 | 06/25/09 | 68 | 107 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-043.0 1:5 | 06/25/09 | 66 | 104 | 92 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-010.0 MS | 06/25/09 | 72 | 94 | 104 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-010.0 MSD | 06/25/09 | 82 | 100 | 98 | 98 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/25/09 | 75 | 94 | 95 | 96 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/26/09 | 79 | 77 | 98 | 95 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/26/09 | 88 | 88 | 104 | 105 | Pass | Pass | Pass | Pass |
| BLANK | 06/26/09 | 100 | 88 | 94 | 93 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0028-010.0 | 06/26/09 | 92 | 89 | 100 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0028-018.0 | 06/26/09 | 74 | 90 | 105 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0028-028.0 1:5 | 06/26/09 | 78 | 98 | 91 | 98 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (61% - 144%)
S2 = 1,2- Dichloroethane-D4 (64% - 138%)
S3 = Toluene-D8 (80% - 119%)
S4 = 4-Bromofluorobenzene (71% - 132%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-107 |
| **On-site Dates**: 6/21/09-8/6/09 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHEA-DPT0028-038.0 1:20 | 06/26/09 | 75 | 97 | 97 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0028-043.0 1:5 | 06/26/09 | 79 | 103 | 92 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0028-048.0 | 06/26/09 | 76 | 99 | 92 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0028-063.0 | 06/26/09 | 83 | 90 | 89 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-010.0 | 06/26/09 | 74 | 101 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-018.0 | 06/26/09 | 68 | 101 | 94 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-028.0 | 06/26/09 | 65 | 97 | 91 | 93 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-038.0 | 06/26/09 | 63 | 98 | 97 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-043.0 | 06/26/09 | 63 | 97 | 91 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-048.0 | 06/26/09 | 67 | 101 | 93 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-063.0 | 06/26/09 | 63 | 97 | 94 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-010.0 MS | 06/26/09 | 72 | 100 | 106 | 108 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-010.0 MSD | 06/26/09 | 74 | 102 | 105 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0030-010.0 | 06/26/09 | 64 | 102 | 93 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0030-018.0 | 06/26/09 | 62 | 100 | 93 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0030-028.0 | 06/26/09 | 67 | 105 | 91 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0030-038.0 | 06/26/09 | 66 | 104 | 101 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0030-043.0 | 06/26/09 | 66 | 105 | 95 | 92 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0030-048.0 | 06/26/09 | 66 | 103 | 91 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0030-063.0 | 06/26/09 | 63 | 97 | 94 | 97 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/26/09 | 60 | 104 | 97 | 100 | < LCL | Pass | Pass | Pass |
| BLANK/BFB | 07/16/09 | 70 | 76 | 100 | 110 | Pass | Pass | Pass | Pass |
| VSTD 20 | 07/16/09 | 75 | 86 | 99 | 100 | Pass | Pass | Pass | Pass |
| RSTD 20 | 07/16/09 | 66 | 72 | 92 | 106 | Pass | Pass | Pass | Pass |
| BLANK | 07/16/09 | 69 | 84 | 96 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0032-010.0 1:5 | 07/16/09 | 67 | 75 | 94 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0032-018.0 | 07/16/09 | 61 | 68 | 93 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0032-028.0 | 07/16/09 | 61 | 71 | 94 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0032-038.0 | 07/16/09 | 62 | 74 | 93 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0032-043.0 | 07/16/09 | 64 | 81 | 86 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0032-010.0 | 07/16/09 | 56 | 72 | 95 | 94 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0032-048.0 | 07/16/09 | 57 | 64 | 91 | 92 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0032-063.0 | 07/16/09 | 62 | 102 | 92 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-010.0 | 07/16/09 | 59 | 88 | 97 | 98 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0031-018.0 | 07/16/09 | 87 | 94 | 83 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-028.0 | 07/16/09 | 100 | 97 | 89 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-038.0 | 07/16/09 | 78 | 101 | 94 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-043.0 | 07/16/09 | 76 | 94 | 88 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-048.0 | 07/16/09 | 98 | 91 | 85 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-063.0 | 07/16/09 | 97 | 95 | 88 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0033-010.0 | 07/16/09 | 100 | 99 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0033-018.0 1:10 | 07/16/09 | 95 | 93 | 89 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0033-028.0 1:10 | 07/16/09 | 97 | 92 | 96 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT033-038.0 | 07/16/09 | 97 | 93 | 100 | 97 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (61% - 144%)
S2 = 1,2- Dichloroethane-D4 (64% - 138%)
S3 = Toluene-D8 (80% - 119%)
S4 = 4-Bromofluorobenzene (71% - 132%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-107 |
| **On-site Dates**: 6/21/09-8/6/09 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT033-043.0 1:5 | 07/16/09 | 102 | 97 | 89 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT033-048.0 | 07/16/09 | 98 | 91 | 89 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT033-063.0 | 07/16/09 | 98 | 93 | 92 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-010.0 MS | 07/17/09 | 80 | 82 | 92 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-010.0 MSD | 07/17/09 | 90 | 85 | 100 | 109 | Pass | Pass | Pass | Pass |
| VSTD 20 | 07/17/09 | 93 | 83 | 89 | 104 | Pass | Pass | Pass | Pass |
| RSTD 20 | 07/17/09 | 90 | 82 | 94 | 89 | Pass | Pass | Pass | Pass |
| BLANK/BFB | 07/17/09 | 68 | 79 | 86 | 104 | Pass | Pass | Pass | Pass |
| VSTD 20 | 07/17/09 | 71 | 76 | 98 | 107 | Pass | Pass | Pass | Pass |
| RSTD 20 | 07/17/09 | 88 | 80 | 96 | 101 | Pass | Pass | Pass | Pass |
| BLANK | 07/17/09 | 96 | 87 | 105 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-038.0 1:2 | 07/17/09 | 88 | 79 | 94 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0033-018.0 | 07/17/09 | 94 | 87 | 88 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT033-028.0 | 07/17/09 | 98 | 94 | 95 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT034-010.0 | 07/17/09 | 96 | 86 | 110 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT034-018.0 | 07/17/09 | 80 | 89 | 98 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT034-036.0 | 07/17/09 | 96 | 90 | 87 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT034-028.0 | 07/17/09 | 92 | 88 | 91 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT034-043.0 | 07/17/09 | 74 | 81 | 83 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT034-048.0 | 07/17/09 | 82 | 91 | 87 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT034-063.0 | 07/17/09 | 91 | 89 | 87 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT035-010.0 | 07/17/09 | 5 | 88 | 98 | 96 | < LCL | Pass | Pass | Pass |
| CRHE-DPT035-018.0 | 07/17/09 | 96 | 103 | 86 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT035-028.0 | 07/17/09 | 69 | 95 | 97 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT035-010.0 | 07/17/09 | 0 | 92 | 88 | 94 | < LCL | Pass | Pass | Pass |
| CRHE-DPT035-038.0 | 07/17/09 | 54 | 87 | 92 | 95 | < LCL | Pass | Pass | Pass |
| CRHE-DPT035-043.0 | 07/17/09 | 61 | 96 | 84 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT035-048.0 | 07/17/09 | 62 | 97 | 84 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT035-063.0 | 07/17/09 | 56 | 96 | 92 | 95 | < LCL | Pass | Pass | Pass |
| CRHE-DPT036-010.0 | 07/17/09 | 51 | 88 | 49 | 204 | < LCL | Pass | < LCL | > UCL |
| CRHE-DPT036-018.0 | 07/17/09 | 57 | 94 | 90 | 93 | < LCL | Pass | Pass | Pass |
| CRHE-DPT036-028.0 | 07/17/09 | 69 | 94 | 92 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT036-038.0 1:100 | 07/17/09 | 57 | 93 | 86 | 93 | < LCL | Pass | Pass | Pass |
| CRHE-DPT036-043.0 1:2 | 07/17/09 | 95 | 95 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT036-048.0 | 07/17/09 | 82 | 96 | 86 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT036-063.0 | 07/17/09 | 101 | 98 | 86 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT036-028.0 1:2 | 07/17/09 | 91 | 87 | 87 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT036-048 MS | 07/17/09 | 95 | 85 | 98 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT036-048 MSD | 07/17/09 | 92 | 84 | 102 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT031-038 1:5 | 07/17/09 | 113 | 91 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT031-043 1:5 | 07/17/09 | 114 | 97 | 96 | 79 | Pass | Pass | Pass | Pass |
| CRHE-DPT033-038 1:5 | 07/17/09 | 120 | 99 | 95 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT033-043 1:20 | 07/17/09 | 114 | 100 | 96 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT033-48 1:2 | 07/17/09 | 121 | 97 | 97 | 79 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (61% - 144%)
S2 = 1,2- Dichloroethane-D4 (64% - 138%)
S3 = Toluene-D8 (80% - 119%)
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## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

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|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
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| **On-site Dates**: 6/21/09-8/6/09 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| BLANK/BFB | 08/04/09 | 113 | 98 | 81 | 104 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/04/09 | 113 | 93 | 105 | 100 | Pass | Pass | Pass | Pass |
| RSTD 20 | 08/04/09 | 102 | 88 | 91 | 89 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/04/09 | 97 | 87 | 104 | 98 | Pass | Pass | Pass | Pass |
| BLANK | 08/04/09 | 93 | 87 | 99 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0037-010.0 | 08/04/09 | 99 | 97 | 91 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0037-018.0 | 08/04/09 | 115 | 111 | 95 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0037-026.0 | 08/04/09 | 102 | 99 | 89 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0037-038.0 | 08/04/09 | 81 | 100 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0037-043.0 | 08/04/09 | 90 | 80 | 97 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0037-048.0 | 08/04/09 | 92 | 85 | 87 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0037-063.0 | 08/04/09 | 79 | 79 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0038-018.0 | 08/04/09 | 65 | 86 | 97 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0038-028.0 | 08/04/09 | 77 | 96 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0038-010.0 | 08/04/09 | 62 | 94 | 95 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0038-038.0 | 08/04/09 | 71 | 98 | 82 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0038-043.0 | 08/04/09 | 63 | 102 | 90 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0038-048.0 | 08/04/09 | 62 | 102 | 89 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0038-063.0 | 08/04/09 | 58 | 102 | 88 | 93 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0039-010.0 | 08/04/09 | 49 | 79 | 81 | 81 | < LCL | Pass | Pass | Pass |
| CCS 20 | 08/05/09 | 79 | 108 | 106 | 98 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/05/09 | 79 | 98 | 93 | 96 | Pass | Pass | Pass | Pass |
| BLANK | 08/05/09 | 78 | 101 | 89 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-018.0 | 08/05/09 | 77 | 93 | 98 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-028.0 | 08/05/09 | 79 | 80 | 88 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-038.0 1:5 | 08/05/09 | 72 | 95 | 93 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-043.0 | 08/05/09 | 76 | 96 | 89 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-048.0 | 08/05/09 | 76 | 90 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-063.0 | 08/05/09 | 74 | 85 | 87 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-038.0 1:20 | 08/05/09 | 73 | 83 | 88 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-010.0 1:5 | 08/05/09 | 77 | 76 | 92 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-010.0 | 08/05/09 | 74 | 69 | 88 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-018.0 | 08/05/09 | 82 | 82 | 96 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-028.0 1:2 | 08/05/09 | 84 | 79 | 93 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-038.0 | 08/05/09 | 79 | 78 | 112 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-043.0 | 08/05/09 | 76 | 74 | 87 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-048.0 | 08/05/09 | 73 | 71 | 91 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-063.0 | 08/05/09 | 81 | 80 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0041-010.0 | 08/05/09 | 80 | 83 | 91 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0041-018.0 | 08/05/09 | 80 | 75 | 94 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0041-028.0 | 08/05/09 | 78 | 89 | 91 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0041-038.0 | 08/05/09 | 94 | 86 | 93 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-063.0 MS | 08/05/09 | 72 | 73 | 91 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-063.0 MSD | 08/05/09 | 99 | 81 | 102 | 102 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (61% - 144%)
S2 = 1,2- Dichloroethane-D4 (64% - 138%)
S3 = Toluene-D8 (80% - 119%)
S4 = 4-Bromofluorobenzene (71% - 132%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-107 |
| **On-site Dates**: 6/21/09-8/6/09 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0040-038.0 1:10 | 08/05/09 | 78 | 85 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-043.0 1:10 | 08/05/09 | 79 | 88 | 102 | 98 | Pass | Pass | Pass | Pass |
| RSTD 20 | 08/06/09 | 79 | 96 | 100 | 102 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/06/09 | 76 | 84 | 99 | 91 | Pass | Pass | Pass | Pass |
| BLANK | 08/06/09 | 84 | 93 | 93 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0041-043.0 | 08/06/09 | 83 | 82 | 80 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0041-048.0 | 08/06/09 | 68 | 73 | 88 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0041-063.0 | 08/06/09 | 78 | 94 | 95 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-010.0 | 08/06/09 | 74 | 93 | 95 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-018.0 | 08/06/09 | 72 | 88 | 78 | 93 | Pass | Pass | < LCL | Pass |
| CRHE-DPT0042-028.0 | 08/06/09 | 70 | 91 | 87 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-038.0 1:2 | 08/06/09 | 72 | 96 | 90 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-048.0 | 08/06/09 | 86 | 98 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-063.0 | 08/06/09 | 78 | 98 | 87 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-043.0 | 08/06/09 | 74 | 97 | 84 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-038.0 1:10 | 08/06/09 | 66 | 89 | 88 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-043.0 1:20 | 08/06/09 | 56 | 88 | 92 | 87 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0043-010.0 | 08/06/09 | 56 | 87 | 84 | 91 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0043-018.0 | 08/06/09 | 63 | 96 | 88 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0043-028.0 | 08/06/09 | 63 | 98 | 93 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0043-043.0 | 08/06/09 | 67 | 95 | 88 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0043-048.0 1:2 | 08/06/09 | 71 | 96 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0043-038.0 1:10 | 08/06/09 | 62 | 101 | 92 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0043-063.0 | 08/06/09 | 52 | 80 | 101 | 84 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0043-028.0 | 08/06/09 | 63 | 98 | 93 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-010.0 MS | 08/06/09 | 59 | 90 | 96 | 96 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0042-010.0 MSD | 08/06/09 | 64 | 107 | 88 | 98 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/06/09 | 61 | 107 | 92 | 94 | Pass | Pass | Pass | Pass |
| RSTD 20 | 08/06/09 | 64 | 99 | 92 | 95 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/06/09 | 61 | 82 | 105 | 97 | Pass | Pass | Pass | Pass |
| BLANK | 08/06/09 | 79 | 102 | 86 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0044-033 | 08/06/09 | 68 | 95 | 92 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT044-038 | 08/06/09 | 98 | 97 | 88 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT044-043 1:5 | 08/06/09 | 112 | 103 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT044-048 1:2 | 08/06/09 | 108 | 98 | 87 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0043-018.0 MS | 08/06/09 | 96 | 83 | 92 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0043-018.0 MSD | 08/06/09 | 103 | 99 | 92 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/06/09 | 101 | 88 | 107 | 100 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (61% - 144%)
S2 = 1,2- Dichloroethane-D4 (64% - 138%)
S3 = Toluene-D8 (80% - 119%)
S4 = 4-Bromofluorobenzene (71% - 132%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-107 |
| **Onsite Dates:** 6/21/09-8/6/09 | **Client Project Manager:** Rebecca DaPrato | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHEA-DPT0019-010.0 **Date of Analysis:** 6/22/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 93 | 91 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 100 | 93 | 8 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 98 | 91 | 7 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 94 | 86 | 9 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 101 | 96 | 5 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 101 | 98 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHEA-DPT0020-010.0 **Date of Analysis:** 6/23/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 88 | 100 | 13 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 95 | 110 | 14 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 95 | 109 | 13 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 94 | 104 | 10 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 97 | 111 | 14 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 96 | 111 | 15 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHEA-DPT0023-010.0 **Date of Analysis:** 6/24/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 92 | 91 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 103 | 108 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 104 | 112 | 8 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 97 | 105 | 7 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 104 | 113 | 8 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 113 | 108 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHEA-DPT0025-010.0 **Date of Analysis:** 6/25/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 92 | 87 | 6 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 105 | 99 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 102 | 98 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 99 | 97 | 2 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 108 | 101 | 7 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 106 | 101 | 6 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-107 |
| **Onsite Dates:** 6/21/09-8/6/09 | **Client Project Manager:** Rebecca DaPrato | **Matrix**: Water |

**Samples:** CRHEA-DPT0027-010.0 **Date of Analysis:** 6/25/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 86 | 92 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 101 | 107 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 101 | 109 | 7 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 99 | 106 | 7 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 108 | 113 | 4 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 109 | 106 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHEA-DPT0029-010.0 **Date of Analysis:** 6/26/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 87 | 82 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 92 | 95 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 95 | 99 | 5 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 93 | 97 | 4 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 103 | 102 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 109 | 113 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0031-010.0 **Date of Analysis:** 7/16/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 90 | 90 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 97 | 98 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 92 | 95 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 91 | 92 | 2 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 88 | 91 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 90 | 89 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0036-048.9 **Date of Analysis:** 7/17/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 86 | 83 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 87 | 83 | 4 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 85 | 79 | 7 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 80 | 76 | 5 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 89 | 84 | 6 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 93 | 92 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-107 |
| **Onsite Dates:** 6/21/09-8/6/09 | **Client Project Manager:** Rebecca DaPrato | **Matrix**: Water |

**Samples:** CRHE-DPT0039-063.0 **Date of Analysis:** 8/6/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 83 | 65 | 24 | Pass | Pass | > RPDL |
| 1,1-Dichloroethene | 61 | 137 | 20 | 75 | 81 | 7 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 72 | 82 | 13 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 76 | 87 | 13 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 83 | 90 | 9 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 82 | 101 | 21 | Pass | Pass | > RPDL |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0042-010.0 **Date of Analysis:** 8/6/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 85 | 83 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 97 | 95 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 94 | 97 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 85 | 88 | 3 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 101 | 103 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 112 | 104 | 8 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-107 |
| **Onsite Dates:** 6/21/09-8/6/09 | **Client Project Manager:** Rebecca DaPrato | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 — **Date of Analysis:** 6/21/2009
LCS 2 — 6/22/2009
LCS 3 — 6/22/2009

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 54 | to | 130 | 102 | 107 | 103 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 55 | to | 136 | 107 | 94 | 113 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 106 | 90 | 113 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 61 | to | 130 | 104 | 87 | 111 | Pass | Pass | Pass |
| Trichloroethene | 65 | to | 127 | 101 | 91 | 103 | Pass | Pass | Pass |
| Tetrachloroethene | 69 | to | 126 | 101 | 100 | 112 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 — **Date of Analysis:** 6/23/2009
LCS 5 — 6/24/2009
LCS 6 — 6/25/2009

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | LCS#6 | LCS#4 | LCS#5 | LCS#6 |
| Vinyl Chloride | 54 | to | 130 | 124 | 106 | 108 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 55 | to | 136 | 130 | 114 | 116 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 129 | 113 | 117 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 61 | to | 130 | 131 | 115 | 118 | > UCL | Pass | Pass |
| Trichloroethene | 65 | to | 127 | 116 | 106 | 106 | Pass | Pass | Pass |
| Tetrachloroethene | 69 | to | 126 | 115 | 105 | 117 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 7 — **Date of Analysis:** 6/26/2009
LCS 8 — 7/16/2009
LCS 9 — 7/17/2009

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#7 | LCS#8 | LCS#9 | LCS#7 | LCS#8 | LCS#9 |
| Vinyl Chloride | 54 | to | 130 | 101 | 114 | 102 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 55 | to | 136 | 110 | 95 | 89 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 110 | 87 | 86 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 61 | to | 130 | 115 | 82 | 83 | Pass | Pass | Pass |
| Trichloroethene | 65 | to | 127 | 103 | 94 | 88 | Pass | Pass | Pass |
| Tetrachloroethene | 69 | to | 126 | 115 | 85 | 84 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-107 |
| **Onsite Dates:** 6/21/09-8/6/09 | **Client Project Manager:** Rebecca DaPrato | **Matrix**: Water |

**Samples:** LCS 10, LCS 11, LCS 12 **Date of Analysis:** 7/17/2009, 8/4/2009, 8/5/2009

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#10 | LCS#11 | LCS#12 | LCS#10 | LCS#11 | LCS#12 |
| Vinyl Chloride | 54 | to | 130 | 123 | 133 | 85 | Pass | > UCL | Pass |
| 1,1-Dichloroethene | 55 | to | 136 | 105 | 131 | 83 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 101 | 138 | 83 | Pass | > UCL | Pass |
| Cis-1,2-Dichloroethene | 61 | to | 130 | 99 | 140 | 89 | Pass | > UCL | Pass |
| Trichloroethene | 65 | to | 127 | 90 | 118 | 91 | Pass | Pass | Pass |
| Tetrachloroethene | 69 | to | 126 | 93 | 109 | 97 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 13, LCS 14 **Date of Analysis:** 8/6/2009, 8/6/2009

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#13 | LCS#14 | | LCS#13 | LCS#114 | |
| Vinyl Chloride | 54 | to | 130 | 92 | 74 | | Pass | Pass | |
| 1,1-Dichloroethene | 55 | to | 136 | 89 | 75 | | Pass | Pass | |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 90 | 76 | | Pass | Pass | |
| Cis-1,2-Dichloroethene | 61 | to | 130 | 92 | 78 | | Pass | Pass | |
| Trichloroethene | 65 | to | 127 | 88 | 88 | | Pass | Pass | |
| Tetrachloroethene | 69 | to | 126 | 99 | 93 | | Pass | Pass | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

Project Number : 09-107

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.21** | **0.45** | **0.20** | **0.28** | **0.26** | **0.18** |
| CRHE-DPT0017-010.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0017-018.0-20090622 | 6/22/09 | Water | 1 | **2.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0017-028.0-20090622 | 6/22/09 | Water | 1 | **4.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0017-038.0-20090622 | 6/22/09 | Water | 1, 5 | **210** | <1.0 | **1.1** | **1.6** | <1.0 | <1.0 |
| CRHE-DPT0017-043.0-20090622 | 6/22/09 | Water | 5 | **42** | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| CRHE-DPT0017-048.0-20090622 | 6/22/09 | Water | 1 | **11.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0017-063.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0018-010.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0018-018.0-20090622 | 6/22/09 | Water | 1 | **3.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0018-028.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0018-038.0-20090622 | 6/22/09 | Water | 5 | **78** | < 5.0 | < 5.0 | **6.1** | < 5.0 | < 5.0 |
| CRHE-DPT0018-043.0-20090622 | 6/22/09 | Water | 5 | **270** | < 5.0 | **4.2 I** | **300** | < 5.0 | < 5.0 |
| CRHE-DPT0018-048.0-20090622 | 6/22/09 | Water | 1, 5 | **270** | <1.0 | **4.0** | **120** | <1.0 | <1.0 |
| CRHE-DPT0018-063.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.0** | <1.0 | <1.0 |
| CRHE-DPT0019-010.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0019-018.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0019-028.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0019-038.0-20090622 | 6/22/09 | Water | 1 | **8.3** | <1.0 | **2.0** | **16.1** | <1.0 | <1.0 |
| CRHE-DPT0019-043.0-20090622 | 6/22/09 | Water | 5 | **7.6** | < 5.0 | < 5.0 | **22** | < 5.0 | < 5.0 |
| CRHE-DPT0019-048.0-20090622 | 6/22/09 | Water | 5 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| CRHE-DPT0019-063.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0020-010.0-20090623 | 6/23/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0020-018.0-20090623 | 6/23/09 | Water | 10 | **65** | <10 | <10 | <10 | <10 | <10 |
| CRHE-DPT0020-028.0-20090623 | 6/23/09 | Water | 1 | **57.4** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0020-038.0-20090623 | 6/23/09 | Water | 5, 10 | **540** | < 5.0 | **13** | **800** | < 5.0 | < 5.0 |
| CRHE-DPT0020-043.0-20090623 | 6/23/09 | Water | 5, 10 | **470** | < 5.0 | **21** | **380** | < 5.0 | < 5.0 |
| CRHE-DPT0020-048.0-20090623 | 6/23/09 | Water | 1 | **3.3** | < 1.0 | < 1.0 | **3.6** | < 1.0 | < 1.0 |
| CRHE-DPT0020-063.0-20090623 | 6/23/09 | Water | 1, 2 | **120** | < 1.0 | **3.4** | **140** | < 1.0 | < 1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 09-107

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.21** | **0.45** | **0.20** | **0.28** | **0.26** | **0.18** |
| CRHE-DPT0021-010.0-20090623 | 6/23/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0021-018.0-20090623 | 6/23/09 | Water | 1 | **1.2** | < 1.0 | < 1.0 | **1.2** | < 1.0 | < 1.0 |
| CRHE-DPT0021-028.0-20090623 | 6/23/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0021-038.0-20090623 | 6/23/09 | Water | 1 | **11.7** | < 1.0 | **2.9** | **33.5** | < 1.0 | < 1.0 |
| CRHE-DPT0021-043.0-20090623 | 6/23/09 | Water | 1 | **11.8** | < 1.0 | **3.6** | **47.9** | < 1.0 | < 1.0 |
| CRHE-DPT0021-048.0-20090623 | 6/23/09 | Water | 1 | **3.2** | < 1.0 | < 1.0 | **1.6** | < 1.0 | < 1.0 |
| CRHE-DPT0021-063.0-20090623 | 6/23/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | **1.2** | < 1.0 | < 1.0 |
| CRHE-DPT0022-010.0-20090623 | 6/23/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0022-018.0-20090623 | 6/23/09 | Water | 1 | **5.8** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0022-028.0-20090623 | 6/23/09 | Water | 1 | **7.8** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0022-038.0-20090623 | 6/23/09 | Water | 1, 5 | **230** | < 1.0 | **1.4** | **2.3** | < 1.0 | < 1.0 |
| CRHE-DPT0022-043.0-20090624 | 6/24/09 | Water | 5 | **16** | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| CRHE-DPT0022-048.0-20090624 | 6/24/09 | Water | 1 | **3.8** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0022-063.0-20090624 | 6/24/09 | Water | 1 | **4.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0023-010.0-20090624 | 6/24/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0023-018.0-20090624 | 6/24/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0023-028.0-20090624 | 6/24/09 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.3** | <1.0 | <1.0 |
| CRHE-DPT0023-038.0-20090624 | 6/24/09 | Water | 1 | **11.6** | <1.0 | **8.0** | **94.2** | <1.0 | <1.0 |
| CRHE-DPT0023-043.0-20090624 | 6/24/09 | Water | 1 | **15.6** | <1.0 | **4.0** | **52.4** | <1.0 | <1.0 |
| CRHE-DPT0023-048.0-20090624 | 6/24/09 | Water | 1 | **1.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0023-063.0-20090624 | 6/24/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0024-010.0-20090624 | 6/24/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0024-018.0-20090624 | 6/24/09 | Water | 1 | **2.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0024-028.0-20090624 | 6/24/09 | Water | 1 | **65.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0024-038.0-20090624 | 6/24/09 | Water | 10 | **570** | < 10 | **10** | **590** | < 10 | < 10 |
| CRHE-DPT0024-043.0-20090624 | 6/24/09 | Water | 5 | **390** | < 5.0 | **17** | **210** | < 5.0 | < 5.0 |
| CRHE-DPT0024-048.0-20090624 | 6/24/09 | Water | 1 | **1.9** | < 1.0 | < 1.0 | **2.3** | < 1.0 | < 1.0 |
| CRHE-DPT0024-063.0-20090624 | 6/24/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 09-107

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.21** | **0.45** | **0.20** | **0.28** | **0.26** | **0.18** |
| CRHE-DPT0020-073.0-20090624 | 6/24/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0022-073.0-20090624 | 6/24/09 | Water | 1 | **1.0** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0025-010.0-20090625 | 6/25/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0025-018.0-20090625 | 6/25/09 | Water | 1 | **11.3** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0025-028.0-20090625 | 6/25/09 | Water | 1 | **12.9** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0025-038.0-20090625 | 6/25/09 | Water | 1 | **67.3** | < 1.0 | **1.1** | **8.1** | < 1.0 | < 1.0 |
| CRHE-DPT0025-043.0-20090625 | 6/25/09 | Water | 1 | **4.1** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0025-048.0-20090625 | 6/25/09 | Water | 1 | **1.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0025-063.0-20090625 | 6/25/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0026-010.0-20090625 | 6/25/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0026-018.0-20090625 | 6/25/09 | Water | 1 | **24** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0026-028.0-20090625 | 6/25/09 | Water | 1 | **1.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0026-038.0-20090625 | 6/25/09 | Water | 1,5 | **390** | <1.0 | **3.2** | **42.8** | <1.0 | <1.0 |
| CRHE-DPT0026-043.0-20090625 | 6/25/09 | Water | 1 | **27.9** | <1.0 | **1.1** | **4.2** | <1.0 | <1.0 |
| CRHE-DPT0026-048.0-20090625 | 6/25/09 | Water | 1 | **2.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0026-063.0-20090625 | 6/25/09 | Water | 1 | **1.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0027-010.0-20090625 | 6/25/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0027-018.0-20090625 | 6/25/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0027-028.0-20090625 | 6/25/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0027-038.0-20090625 | 6/25/09 | Water | 5,20 | **770** | < 5.0 | **38** | **270** | < 5.0 | < 5.0 |
| CRHE-DPT0027-043.0-20090625 | 6/25/09 | Water | 1,5 | **310** | < 1.0 | **20.5** | **1.4** | < 1.0 | < 1.0 |
| CRHE-DPT0027-048.0-20090625 | 6/25/09 | Water | 1 | **3.7** | < 1.0 | < 1.0 | <1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0027-063.0-20090625 | 6/25/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0028-010.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0028-018.0-20090626 | 6/26/09 | Water | 1 | **2.7** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0028-028.0-20090626 | 6/26/09 | Water | 5 | **6.0** | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| CRHE-DPT0028-038.0-20090626 | 6/26/09 | Water | 20 | **290** | < 20 | < 20 | **1000** | < 20 | < 20 |
| CRHE-DPT0028-043.0-20090626 | 6/26/09 | Water | 5 | **430** | < 5.0 | **14** | **440** | < 5.0 | < 5.0 |

# KB LABS, INC.

Final Data Report

Project Number : 09-107

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.21** | **0.45** | **0.20** | **0.28** | **0.26** | **0.18** |
| CRHE-DPT0028-048.0-20090626 | 6/26/09 | Water | 1 | **3.2** | < 1.0 | < 1.0 | <1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0028-063.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0029-010.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0029-018.0-20090626 | 6/26/09 | Water | 1 | **1.5** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0029-028.0-20090626 | 6/26/09 | Water | 1 | **2.1** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0029-038.0-20090626 | 6/26/09 | Water | 1 | **96.6** | < 1.0 | < 1.0 | **8.5** | < 1.0 | < 1.0 |
| CRHE-DPT0029-043.0-20090626 | 6/26/09 | Water | 1 | **58.2** | < 1.0 | < 1.0 | **6.3** | < 1.0 | < 1.0 |
| CRHE-DPT0029-048.0-20090626 | 6/26/09 | Water | 1 | **2.2** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0029-063.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0030-010.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0030-018.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0030-028.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | **1.2** | < 1.0 | < 1.0 |
| CRHE-DPT0030-038.0-20090626 | 6/26/09 | Water | 1 | **4.2** | < 1.0 | **2.1** | **12.6** | < 1.0 | < 1.0 |
| CRHE-DPT0030-043.0-20090626 | 6/26/09 | Water | 1 | **5.3** | < 1.0 | **3.5** | **26.0** | < 1.0 | < 1.0 |
| CRHE-DPT0030-048.0-20090626 | 6/26/09 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0030-063.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0032-010.0-20090716 | 7/16/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0032-018.0-20090716 | 7/16/09 | Water | 1 | **1.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0032-028.0-20090716 | 7/16/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0032-038.0-20090716 | 7/16/09 | Water | 1 | **38.3** | <1.0 | <1.0 | **5.9** | <1.0 | <1.0 |
| CRHE-DPT0032-043.0-20090716 | 7/16/09 | Water | 1 | **23.1** | <1.0 | **1.0** | **12.3** | <1.0 | <1.0 |
| CRHE-DPT0032-048.0-20090716 | 7/16/09 | Water | 1 | **5.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0032-063.0-20090716 | 7/16/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0031-010.0-20090716 | 7/16/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0031-018.0-20090716 | 7/16/09 | Water | 1 | **32.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0031-028.0-20090716 | 7/16/09 | Water | 1 | **1.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0031-038.0-20090716 | 7/16/09 | Water | 1,2,5 | **340** | <1.0 | **2.9** | **67.9** | <1.0 | <1.0 |
| CRHE-DPT0031-043.0-20090716 | 7/16/09 | Water | 1,5 | **200** | <1.0 | **7.3** | **83.8** | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 09-107

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.21** | **0.45** | **0.20** | **0.28** | **0.26** | **0.18** |
| CRHE-DPT0031-048.0-20090716 | 7/16/09 | Water | 1 | **9.3** | <1.0 | <1.0 | **1.5** | <1.0 | <1.0 |
| CRHE-DPT0031-063.0-20090716 | 7/16/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0033-010.0-20090716 | 7/16/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0033-018.0-20090716 | 7/17/09 | Water | 1 | **2.1** | **2.4** | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0033-028.0-20090716 | 7/17/09 | Water | 1 | <1.0 | **1.9** | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0033-038.0-20090716 | 7/16/09 | Water | 1,5 | **190** | <1.0 | <1.0 | **23.4** | <1.0 | <1.0 |
| CRHE-DPT0033-043.0-20090716 | 7/16/09 | Water | 5,20 | **360** | **18** | **72** | **780** | <5.0 | <5.0 |
| CRHE-DPT0033-048.0-20090716 | 7/16/09 | Water | 1,2 | **120** | <1.0 | **2.3** | **13.7** | <1.0 | <1.0 |
| CRHE-DPT0033-063.0-20090716 | 7/16/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0034-010.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0034-018.0-20090717 | 7/17/09 | Water | 1 | **4.8** | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 |
| CRHE-DPT0034-036.0-20090717 | 7/17/09 | Water | 1 | **22.8** | <1.0 | **1.7** | **99.2** | <1.0 | <1.0 |
| CRHE-DPT0034-028.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0034-043.0-20090717 | 7/17/09 | Water | 2 | **21** | <2.0 | **2.8** | **140** | <2.0 | <2.0 |
| CRHE-DPT0034-048.0-20090717 | 7/17/09 | Water | 1 | **15.6** | <1.0 | <1.0 | **18.5** | <1.0 | <1.0 |
| CRHE-DPT0034-063.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0035-010.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0035-018.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0035-028.0-20090717 | 7/17/09 | Water | 1 | **6.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0035-038.0-20090717 | 7/17/09 | Water | 1 | **69.8** | <1.0 | <1.0 | **9.6** | <1.0 | <1.0 |
| CRHE-DPT0035-043.0-20090717 | 7/17/09 | Water | 1 | **13.8** | <1.0 | <1.0 | **5.2** | <1.0 | <1.0 |
| CRHE-DPT0035-048.0-20090717 | 7/17/09 | Water | 1 | **1.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0035-063.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0036-010.0-20090717 | 7/17/09 | Water | 1 | **1.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0036-018.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0036-028.0-20090717 | 7/17/09 | Water | 1, 2 | **130** | <1.0 | <1.0 | **19.2** | <1.0 | <1.0 |
| CRHE-DPT0036-038.0-20090717 | 7/17/09 | Water | 100 | **910** | <100 | **280** | **2100** | <100 | <100 |
| CRHE-DPT0036-043.0-20090717 | 7/17/09 | Water | 2 | **110** | <2.0 | **19** | **130** | <2.0 | <2.0 |

# KB LABS, INC.

Final Data Report

Project Number : 09-107

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.21** | **0.45** | **0.20** | **0.28** | **0.26** | **0.18** |
| CRHE-DPT0036-048.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0036-063.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0037-010.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0037-018.0-20090804 | 8/4/09 | Water | 1 | **1.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0037-026.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0037-038.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0037-043.0-20090804 | 8/4/09 | Water | 1 | **1.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0037-048.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0037-063.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0038-010.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0038-018.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0038-028.0-20090804 | 8/4/09 | Water | 1 | **11.4** | <1.0 | <1.0 | **6.0** | <1.0 | <1.0 |
| CRHE-DPT0038-038.0-20090804 | 8/4/09 | Water | 1 | **17.7** | <1.0 | **3.7** | **19.3** | <1.0 | <1.0 |
| CRHE-DPT0038-043.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0038-048.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0038-063.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0039-010.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0039-018.0-20090805 | 8/5/09 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.3** | <1.0 | <1.0 |
| CRHE-DPT0039-028.0-20090805 | 8/5/09 | Water | 1 | **88.5** | <1.0 | **1.5** | **48.2** | <1.0 | <1.0 |
| CRHE-DPT0039-038.0-20090805 | 8/5/09 | Water | 5, 20 | **1200** | **5.3** | **290** | **730** | <5.0 | <5.0 |
| CRHE-DPT0039-043.0-20090805 | 8/5/09 | Water | 1 | **7.3** | <1.0 | <1.0 | **2.0** | <1.0 | <1.0 |
| CRHE-DPT0039-048.0-20090805 | 8/5/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0039-063.0-20090805 | 8/5/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0040-010.0-20090805 | 8/5/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0040-018.0-20090805 | 8/5/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0040-028.0-20090805 | 8/5/09 | Water | 2 | **130** | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 |
| CRHE-DPT0040-038.0-20090805 | 8/5/09 | Water | 1,10 | **290** | <1.0 | **5.5** | **2.3** | <1.0 | <1.0 |
| CRHE-DPT0040-043.0-20090805 | 8/5/09 | Water | 1,10 | **460** | <1.0 | **8.2** | **2.1** | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 09-107

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.21** | **0.45** | **0.20** | **0.28** | **0.26** | **0.18** |
| CRHE-DPT0040-048.0-20090805 | 8/6/09 | Water | 1 | **1.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0040-063.0-20090805 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0041-010.0-20090805 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0041-018.0-20090805 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0041-028.0-20090805 | 8/6/09 | Water | 1 | **2.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0041-038.0-20090805 | 8/6/09 | Water | 1 | **60.8** | <1.0 | <1.0 | **7.6** | <1.0 | <1.0 |
| CRHE-DPT0041-043.0-20090806 | 8/6/09 | Water | 1 | **99.1** | <1.0 | <1.0 | **15.1** | <1.0 | <1.0 |
| CRHE-DPT0041-048.0-20090806 | 8/6/09 | Water | 1 | **2.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0041-063.0-20090806 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0042-010.0-20090806 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0042-018.0-20090806 | 8/6/09 | Water | 1 | **18.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0042-028.0-20090806 | 8/6/09 | Water | 1 | **45.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0042-038.0-20090806 | 8/6/09 | Water | 2, 10 | **570** | <2.0 | **2.7** | **120** | <2.0 | <2.0 |
| CRHE-DPT0042-043.0-20090806 | 8/6/09 | Water | 1, 20 | **430** | **1.7** | **15.4** | **290** | <1.0 | <1.0 |
| CRHE-DPT0042-048.0-20090806 | 8/6/09 | Water | 1 | **21.2** | <1.0 | <1.0 | **1.9** | <1.0 | <1.0 |
| CRHE-DPT0042-063.0-20090806 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0043-010.0-20090806 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0043-018.0-20090806 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0043-028.0-20090806 | 8/6/09 | Water | 1 | **29.3** | <1.0 | **3.7** | **2.0** | <1.0 | <1.0 |
| CRHE-DPT0043-038.0-20090806 | 8/6/09 | Water | 10 | **600** | <10 | **47** | **28** | <10 | <10 |
| CRHE-DPT0043-043.0-20090806 | 8/6/09 | Water | 1 | **4.7** | <1.0 | <1.0 | **3.0** | <1.0 | <1.0 |
| CRHE-DPT0043-048.0-20090806 | 8/6/09 | Water | 2 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 |
| CRHE-DPT0043-063.0-20090806 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0044-033.0-20090806 | 8/6/09 | Water | 1 | **2.3** | <1.0 | <1.0 | **9.6** | <1.0 | <1.0 |
| CRHE-DPT0044-038.0-20090806 | 8/6/09 | Water | 1 | **3.9** | <1.0 | <1.0 | **20.8** | <1.0 | <1.0 |
| CRHE-DPT0044-043.0-20090806 | 8/6/09 | Water | 5 | **17** | < 5.0 | < 5.0 | **79** | < 5.0 | < 5.0 |
| CRHE-DPT0044-048.0-20090806 | 8/6/09 | Water | 2 | **34** | < 2.0 | < 2.0 | **13** | < 2.0 | < 2.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☑ 6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073
FAX (352) 367-0074

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB 1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE | KSC, FL |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
| | Jan | |

**PRESERVATION**: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0017-010.0 | 6/22/09 | 0904 | | ✓ | 6/22/09 | 0915 | | GW | 2 | ✓ | KB1-062209-1 |
| -018.0 | | 0916 | | | | 0923 | | | | | -2 |
| -028.0 | | 0929 | | | | 0937 | | | | | -3 |
| -038.0 | | 0944 | | | | 0955 | | | | | -4 |
| -043.0 | | 1050 | | | | 1100 | | | | | -5 |
| -048.0 | | 1110 | | | | 1118 | | | | | -6 |
| -063.0 | | 1130 | | | | 1138 | | | | | -7 |
| DPT0018-010.0 | | 1250 | | | | 1314 | | | | | -8 |
| -018.0 | | 1304 | | | | 1314 | | | | | -9 |
| -028.0 | | 1318 | | | | 1328 | | | | | -10 |
| -038.0 | | 1334 | | | | 1345 | | | | | -11 |
| -043.0 | | 1404 | | | | 1410 | | | | | -12 |
| -048.0 | | 1420 | | | | 1428 | | | | | -13 |
| -063.0 | | 1442 | | | | 1451 | | | | | -14 |
| DPT0019-010.0 | | 1604 | | | | 1611 | | | | | -15 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 6/22/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☑ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE KSC, FL | |
| SAMPLERS | CONTACT PERSON: Jan | BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0019-010.0 | 6/22/09 | 1614 | | ✓ | 6/22/09 | 1620 | | GW | 2 | ✓ | KB1-062209-16 |
| -028.0 | | 1624 | | | | 1632 | | | | | -17 |
| -038.0 | | 1638 | | | | 1648 | | | | | -18 |
| -043.0 | | 1704 | | | | 1712 | | | | | -19 |
| -48.0 | | 1720 | | | | 1726 | | | | | -20 |
| -63.0 | | 1740 | | | | 1751 | | | | | -21 |
| | | | | | | | | | | | |
| CRHEA-DPT0020-~~010.0~~ 010.1 | 6/23/09 | ~~0920~~ 0920 | | | 6/23/09 | 0933 | | GW | 2 | 1 | KB1-062309-1 |
| -018.0 | | 0938 | | | | 0949 | | | | | -2 |
| -028.0 | | 0957 | | | | 1007 | | | | | -3 |
| -038.0 | | 1018 | | | | 1034 | | | | | -4 |
| -043.0 | | 1053 | | | | 1109 | | | | | -5 |
| -048.0 | | 1119 | | | | 1137 | | | | | -6 |
| -063.0 | | 1145 | | | | 1200 | | | | | -7 |
| DPT0021-010.0 | | 1340 | | | | 1355 | | | | | -8 |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | 6/23/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB 1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRHE KSC, FL

SAMPLERS

CONTACT PERSON: Jan

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0021 -018.0 | 6/23/09 | 1404 | | ✓ | 6/23/09 | 1464 | | GW | 2 | ✓ | KB1 - 062309 - 9 |
| -028.0 | | 1421 | | | | 1433 | | | | | -10 |
| -038.0 | | 1453 | | | | 1505 | | | | | -11 |
| -043.0 | | 1517 | | | | 1530 | | | | | -12 |
| -048.0 | | 1545 | | | | 1557 | | | | | -13 |
| -063.0 | | 1614 | | | | 1635 | | | | | -14 |
| DPT022 -010.0 | | 1654 | | | | 1709 | | | | | -15 |
| -018.0 | | 1708 | | | | 1720 | | | | | -16 |
| -028.0 | | 1724 | | | | 1737 | | | | | -17 |
| -038.0 | | 1745 | | | | 1755 | | | | | -18 |

N/A TL 6/23/09

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | 6/23/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

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Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB 1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE KSC, FL | |
| SAMPLERS | CONTACT PERSON: Alex | BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0022-043.0 | 6/24/09 | 0754 | | ✓ | 6/24/09 | 0810 | | GW | 2 | ✓ | KB1-062409-1 |
| -048.0 | | 0822 | | | | 0830 | | | | | -2 |
| -063.0 | | 0851 | | | | 0905 | | | | | -3 |
| DPT0023-010.0 | | 0958 | | | | 1011 | | | | | -4 |
| -018.0 | | 1011 | | | | 1025 | | | | | -5 |
| -028.0 | | 1026 | | | | 1039 | | | | | -6 |
| -038.0 | | 1045 | | | | 1057 | | | | | -7 |
| -43.0 | | 1156 | | | | 1210 | | | | | -8 |
| -048.0 | | 1221 | | | | 1233 | | | | | -9 |
| -063.0 | | 1249 | | | | 1300 | | | | | -10 |
| DPT0024-010.0 | | 1331 | | | | 1345 | | | | | -11 |
| -018.0 | | 1401 | | | | 1414 | | | | | -12 |
| -028.0 | | 1422 | | | | 1434 | | | | | -13 |
| -038.0 | | 1449 | | | | 1502 | | | | | -14 |
| -043.0 | | 1511 | | | | 1522 | | | | | -15 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time: 6/24/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB 1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE | KSC, FL |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
| | Alex | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0024-048.0 | 6/24/09 | 1534 | | ✓ | 6/24/09 | 1545 | | GW | 2 | ✓ | KB1-062409-16 |
| CRHEA-DPT0024-063.0 | | 1602 | | | | 1615 | | | | | -17 |
| DPT0020-73 | | 1653 | | | | 1705 | | | | | -18 |
| DPT0022-73 | | 1729 | | | | 1742 | | | | | -19 |
| | | | | | | | | | | | |
| CRHEA-DPT0025-010.0 | 6/25/09 | 0817 | | ✓ | 6/25/09 | 0830 | | GW | 2 | ✓ | KB1-062509-1 |
| -018.0 | | 0831 | | | | 0845 | | | | | -2 |
| -028.0 | | 0855 | | | | 0910 | | | | | -3 |
| -038.0 | | 0916 | | | | 0935 | | | | | -4 |
| -043.0 | | 0941 | | | | 0952 | | | | | -5 |
| -048.0 | | 1003 | | | | 1014 | | | | | -6 |
| -063.0 | | 1036 | | | | 1050 | | | | | -7 |
| DPT0026-010.0 | | 1110 | | | | 1121 | | | | | -8 |
| -018.0 | | 1210 | | | | 1222 | | | | | -9 |
| -028.0 | | 1229 | | | | 1240 | | | | | -10 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/25/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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TEL (919) 678-0030


**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRHE KSC, FL

SAMPLERS

CONTACT PERSON: Alex

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-BPT0026-038.0 | 6/25/09 | 1257 | | ✓ | 6/25/09 | 1309 | | GW | 2 | ✓ | KB1-062509-11 |
| -043.0 | | 1321 | | | | 1332 | | | | | -12 |
| -048.0 | | 1343 | | | | 1355 | | | | | -13 |
| -063.0 | | 1409 | | | | 1421 | | | | | -14 |
| BPT0027-010.0 | | 1452 | | | | 1504 | | | | | -15 |
| -018.0 | | 1508 | | | | 1521 | | | | | -16 |
| -028.0 | | 1527 | | | | 1541 | | | | | -17 |
| -038.0 | | 1547 | | | | 1600 | | | | | -18 |
| -043.0 | | 1618 | | | | 1630 | | | | | -19 |
| -048.0 | | 1642 | | | | 1654 | | | | | -20 |
| -063.0 | | 1704 | | | | 1716 | | | | | -21 |

N/A TL 6/25/09

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time 6/25/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRFE KSC, FL

SAMPLERS

CONTACT PERSON: Alex

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRFEA-DPT0028-010.0 | 6/26/09 | 0724 | | ✓ | 6/26/09 | 0805 | | GW | 2 | ✓ | KB1-062609-1 |
| -018.0 | | 0739 | | | | | | | | | -2 |
| -028.0 | | 0757 | | | | | | | | | -3 |
| -038.0 | | 0817 | | | | 0830 | | | | | -4 |
| -043.0 | | 0844 | | | | 0856 | | | | | -5 |
| -048.0 | | 0906 | | | | 0915 | | | | | -6 |
| -063.0 | | 934 | | | | 945 | | | | | -7 |
| DPT0029-010.0 | | 1009 | | | | 1021 | | | | | -8 |
| -018.0 | | 1023 | | | | 1035 | | | | | -9 |
| -028.0 | | 1041 | | | | 1149 | | | | | -10 |
| -038.0 | | 1101 | | | | 1119 | | | | | -11 |
| -043.0 | | 1214 | | | | 1225 | | | | | -12 |
| -048.0 | | 1239 | | | | 1250 | | | | | -13 |
| -063.0 | | 1305 | | | | 1320 | | | | | -14 |
| DPT0030-010.0 | | 1440 | | | | 1452 | | | | | -15 |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/26/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRHE KSC, FL

SAMPLERS

CONTACT PERSON: Alex

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-SPT0030-018.0 | 6/26/09 | 1457 | | ✓ | 6/26/09 | 1510 | | GW | 2 | ✓ | KB1-062609-16 |
| -028.0 | | 1516 | | | | 1527 | | | | | -17 |
| -038.0 | | 1534 | | | | 1546 | | | | | -18 |
| -043.0 | | 1601 | | | | 1614 | | | | | -19 |
| -048.0 | | 1621 | | | | 1632 | | | | | -20 |
| -063.0 | | 1643 | | | | 1655 | | | | | -21 |

N/A TC 6/26/09

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/26/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☑ 6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073
FAX (352) 367-0074

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB 1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE | KSC, FL |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
| | Jon | |

**PRESERVATION**: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0017-010.0 | 6/22/09 | 0904 | | ✓ | 6/22/09 | 0915 | | GW | 2 | ✓ | KB1-062209-1 |
| -018.0 | | 0916 | | | | 0923 | | | | | -2 |
| -028.0 | | 0929 | | | | 0937 | | | | | -3 |
| -038.0 | | 0944 | | | | 0955 | | | | | -4 |
| -043.0 | | 1050 | | | | 1100 | | | | | -5 |
| -048.0 | | 1110 | | | | 1118 | | | | | -6 |
| -063.0 | | 1130 | | | | 1138 | | | | | -7 |
| DPT0018-010.0 | | 1250 | | | | 1314 | | | | | -8 |
| -018.0 | | 1304 | | | | 1314 | | | | | -9 |
| -028.0 | | 1318 | | | | 1328 | | | | | -10 |
| -038.0 | | 1334 | | | | 1345 | | | | | -11 |
| -043.0 | | 1404 | | | | 1410 | | | | | -12 |
| -048.0 | | 1420 | | | | 1428 | | | | | -13 |
| -063.0 | | 1442 | | | | 1451 | | | | | -14 |
| DPT0019-010.0 | | 1604 | | | | 1611 | | | | | -15 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/22/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☑ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE KSC, FL | |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
| | Jan | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0019-018.0 | 6/22/09 | 1614 | | ✓ | 6/22/09 | 1620 | | GW | 2 | ✓ | KB1-062209-16 |
| -028.0 | | 1624 | | | | 1632 | | | | | -17 |
| -038.0 | | 1638 | | | | 1648 | | | | | -18 |
| -043.0 | | 1704 | | | | 1712 | | | | | -19 |
| -48.0 | | 1720 | | | | 1726 | | | | | -20 |
| -63.0 | | 1740 | | | | 1751 | | | | | -21 |
| | | | | | | | | | | | |
| CRHEA-DPT0020-~~010.0~~ 0120 | 6/23/09 | ~~0920~~ 0920 | | | 6/23/09 | 0933 | | GW | 2 | 1 | KB1-062309-1 |
| -018.0 | | 0938 | | | | 0949 | | | | | -2 |
| -028.0 | | 0957 | | | | 1007 | | | | | -3 |
| -038.0 | | 1018 | | | | 1034 | | | | | -4 |
| -043.0 | | 1053 | | | | 1109 | | | | | -5 |
| -048.0 | | 1119 | | | | 1137 | | | | | -6 |
| -063.0 | | 1145 | | | | 1200 | | | | | -7 |
| DPT0021-010.0 | | 1340 | | | | 1355 | | | | | -8 |

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/23/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB 1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE | KSC, FL |
| SAMPLERS | CONTACT PERSON: Jan | BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0021 -018.0 | 6/23/09 | 1404 | | ✓ | 6/23/09 | 1414 | | GW | 2 | ✓ | KB1 - 062309 - 9 |
| -028.0 | | 1421 | | | | 1433 | | | | | -10 |
| -038.0 | | 1453 | | | | 1505 | | | | | -11 |
| -043.0 | | 1517 | | | | 1530 | | | | | -12 |
| -048.0 | | 1545 | | | | 1557 | | | | | -13 |
| -063.0 | | 1614 | | | | 1635 | | | | | -14 |
| DPT022 -010.0 | | 1654 | | | | 1709 | | | | | -15 |
| -018.0 | | 1708 | | | | 1720 | | | | | -16 |
| -028.0 | | 1724 | | | | 1737 | | | | | -17 |
| -038.0 | | 1745 | | | | 1755 | | | | | -18 |

N/A TL 6/23/09

| Precleaned Containers / Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 6/23/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRHE KSC, FL

SAMPLERS

CONTACT PERSON: Alex

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0022-043.0 | 6/24/09 | 0759 | | ✓ | 6/24/09 | 0810 | | GW | 2 | ✓ | KB1-062409-1 |
| -048.0 | | 0822 | | | | 0830 | | | | | -2 |
| -063.0 | | 0851 | | | | 0905 | | | | | -3 |
| DPT0023-010.0 | | 0958 | | | | 1011 | | | | | -4 |
| -018.0 | | 1011 | | | | 1025 | | | | | -5 |
| -028.0 | | 1026 | | | | 1039 | | | | | -6 |
| -038.0 | | 1045 | | | | 1057 | | | | | -7 |
| -43.0 | | 1156 | | | | 1210 | | | | | -8 |
| -048.0 | | 1221 | | | | 1233 | | | | | -9 |
| -063.0 | | 1249 | | | | 1300 | | | | | -10 |
| DPT0024-010.0 | | 1331 | | | | 1345 | | | | | -11 |
| -018.0 | | 1401 | | | | 1414 | | | | | -12 |
| -028.0 | | 1422 | | | | 1434 | | | | | -13 |
| -038.0 | | 1449 | | | | 1502 | | | | | -14 |
| -043.0 | | 1511 | | | | 1522 | | | | | -15 |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | | | |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time: 6/24/09 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRHE KSC, FL

SAMPLERS

CONTACT PERSON: Alex

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0024-048.0 | 6/24/09 | 1534 | | ✓ | 6/24/09 | 1545 | | GW | 2 | ✓ | KB1-062409-16 |
| CRHEA-DPT0024-63.0 | | 1602 | | | | 1615 | | | | | -17 |
| DPT0020-73 | | 1653 | | | | 1705 | | | | | -18 |
| DPT0022-73 | | 1729 | | | | 1742 | | | | | -19 |
| | | | | | | | | | | | |
| CRHEA-DPT0025-010.0 | 6/25/09 | 0817 | | ✓ | 6/25/09 | 0830 | | GW | 2 | ✓ | KB1-062509-1 |
| -018.0 | | 0831 | | | | 0845 | | | | | -2 |
| -028.0 | | 0855 | | | | 0910 | | | | | -3 |
| -038.0 | | 0916 | | | | 0935 | | | | | -4 |
| -043.0 | | 0941 | | | | 0952 | | | | | -5 |
| -048.0 | | 1003 | | | | 1014 | | | | | -6 |
| -063.0 | | 1036 | | | | 1050 | | | | | -7 |
| DPT0026-010.0 | | 1110 | | | | 1121 | | | | | -8 |
| -018.0 | | 1210 | | | | 1222 | | | | | -9 |
| -028.0 | | 1229 | | | | 1240 | | | | | -10 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/25/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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**MOBILE UNIT #** KB1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE | KSC, FL |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
| | Alex | |

**PRESERVATION**: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-BPT0026-038.0 | 6/25/09 | 1257 | | ✓ | 6/25/09 | 1309 | | GW | 2 | ✓ | KB1-062509-11 |
| -043.0 | | 1321 | | | | 1332 | | | | | -12 |
| -048.0 | | 1343 | | | | 1355 | | | | | -13 |
| -063.0 | | 1409 | | | | 1421 | | | | | -14 |
| BPT0027-010.0 | | 1452 | | | | 1504 | | | | | -15 |
| -018.0 | | 1508 | | | | 1521 | | | | | -16 |
| -028.0 | | 1527 | | | | 1541 | | | | | -17 |
| -038.0 | | 1547 | | | | 1600 | | | | | -18 |
| -043.0 | | 1618 | | | | 1630 | | | | | -19 |
| -048.0 | | 1642 | | | | 1654 | | | | | -20 |
| -063.0 | | 1704 | | | | 1716 | | | | | -21 |

N/A TC 6/25/09

| Precleaned Containers / Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 6/25/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030

**MOBILE UNIT #** KB1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE | KSC, FL |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
| | Alex | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0028-010.0 | 6/26/09 | 0724 | | ✓ | 6/26/09 | 0805 | | GW | 2 | ✓ | KB1-062609-1 |
| -018.0 | | 0739 | | | | ↓ | | | | | -2 |
| -028.0 | | 0757 | | | | | | | | | -3 |
| -038.0 | | 0817 | | | | 0830 | | | | | -4 |
| -043.0 | | 0844 | | | | 0856 | | | | | -5 |
| -048.0 | | 0906 | | | | 0915 | | | | | -6 |
| -063.0 | | 934 | | | | 945 | | | | | -7 |
| DPT0029-010.0 | | 1009 | | | | 1021 | | | | | -8 |
| -018.0 | | 1023 | | | | 1035 | | | | | -9 |
| -028.0 | | 1041 | | | | 1149 | | | | | -10 |
| -038.0 | | 1101 | | | | 1119 | | | | | -11 |
| -043.0 | | 1214 | | | | 1225 | | | | | -12 |
| -048.0 | | 1239 | | | | 1250 | | | | | -13 |
| -063.0 | | 1305 | | | | 1320 | | | | | -14 |
| DPT0030-010.0 | | 1440 | | | | 1452 | | | | | -15 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/26/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE | KSC, FL |
| SAMPLERS | CONTACT PERSON: Alex | BATCH # (Lab Use Only) |

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-SPT0030-018.0 | 6/26/09 | 1457 | | ✓ | 6/26/09 | 1510 | | GW | 2 | ✓ | KB1-062609-16 |
| -028.0 | | 1516 | | | | 1527 | | | | | -17 |
| -038.0 | | 1534 | | | | 1546 | | | | | -18 |
| -043.0 | | 1601 | | | | 1614 | | | | | -19 |
| -048.0 | | 1621 | | | | 1632 | | | | | -20 |
| -063.0 | | 1643 | | | | 1655 | | | | | -21 |

N/A TL 6/26/09

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| Precleaned Containers / Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 6/26/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #**

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| GEOSYNTEC | NASA CRARE KSC, FL | 7/16 |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
| | IAN BARFUS | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0032-010.0 | 7/16/09 | 1228 | | ✓ | 7/16/09 | 1430 | | GW | 2 | ✓ | |
| -018.0 | | 1246 | | | | | | | | | |
| -028.0 | | 1256 | | | | | | | | | |
| -038.0 | | 1312 | | | | | | | | | |
| -043.0 | | 1336 | | | | | | | | | |
| -48.0 | | 1356 | | | | 1645 | | | | | |
| -63.0 | | 1416 | | | | ↓ | | | | | |
| CRHE-DPT0031-010.0 | | 0850 | | | | 1745 | | | | | |
| -018.0 | | 0900 | | | | | | | | | |
| -028.0 | | 0910 | | | | | | | | | |
| -038.0 | | 0926 | | | | | | | | | |
| -043.0 | | 0958 | | | | | | | | | |
| -048.0 | | 1018 | | | | | | | | | |
| -063.0 | | 1036 | | | | | | | | | |
| CRHE-DPT0033-010.0 | ↓ | 1458 | | ↓ | ↓ | ↓ | | ↓ | ↓ | ↓ | |

| Precleaned Containers / Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| | | | | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 7/16/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

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Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #**

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NAS CAHE KSC, FL

SAMPLERS:

CONTACT PERSON: JAN Barfus

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CAHE-DPT0033-018.0 | 7/16/09 | 1512 | | ✓ | 7/16/09 | 1745 | | GW | 2 | ✓ | |
| -028.0 | | 1618 | | | | | | | | | |
| -038.0 | | 1632 | | | | | | | | | |
| -043.0 | | 1700 | | | | | | | | | |
| -048.0 | | 1718 | | | | | | | | | |
| -063.0 | | 1734 | | | | | | | | | |

| Precleaned Containers Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 7/16/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030


**MOBILE UNIT #**

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRHE KSC, FL

SAMPLERS

CONTACT PERSON: JAY BARFUS

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0034-010.0 | 7/17/09 | 0759 | | ✓ | 7/17/09 | 0810 | | GW | 2 | ✓ | |
| -018.0 | | 0811 | | | | 0820 | | | | | |
| -028.0 | | 0826 | | | | 0835 | | | | | |
| -036.0 | | 0844 | | | | 0854 | | | | | |
| -043.0 | | 0914 | | | | 0924 | | | | | |
| -048.0 | | 0933 | | | | 0942 | | | | | |
| -063.0 | | 0953 | | | | 1004 | | | | | |
| CRHE-DPT0035-010.0 | | 1044 | | | | 1057 | | | | | |
| -018.0 | | 1058 | | | | 1106 | | | | | |
| -028.0 | | 1108 | | | | 1117 | | | | | |
| -038.0 | | 1216 | | | | 1226 | | | | | |
| -043.0 | | 1230 | | | | 1241 | (HK) 7/17 | | | | |
| -048.0 | | 1246 | | | | 1305 | 1305 | | | | |
| -063.0 | | 1312 | | | | 1323 | | | | | |
| CRHE-DPT0036-010.0 | | 1406 | | | | 1430 | | | | | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | [signature] | 7/17/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #**

CLIENT NAME: Geosystec

PROJECT NAME & ADDRESS: NASA CRHE KSC, FL

SAMPLERS

CONTACT PERSON: JAN BARFUS

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0036-018.0 | 7/17/09 | 1416 | | | 7/17/09 | 1430 | | GW | 2 | ✓ | |
| -028.0 | | 1432 | | | | 1441 | | | | | |
| -038.0 | | 1446 | | | | 1455 | | | | | |
| -043.0 | | 1512 | | | | 1525 | | | | | |
| -048.0 | | 1528 | | | | 1540 | | | | | |
| -063.0 | | 1546 | | | | 1602 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 7/17/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

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Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KBI

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS:

CONTACT PERSON: Alex Rivera

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0037-010.0-20090804 | 8/4/09 | 0900 | | ✓ | 8/4/09 | 0900 | | W | 2 | ✓ | | | | |
| -018.0 | | 0915 | | | | 0930 | | | | | | | | |
| -026.0 | | 0932 | | | | 0945 | | | | | | | | |
| -038.0 | | 0952 | | | | 1000 | | | | | | | | |
| -043.0 | | 1036 | | | | 1052 | | | | | | | | |
| -048.0 | | 1058 | | | | 1115 | | | | | | | | |
| -063.0 | | 1123 | | | | 1145 | | | | | | | | |
| DPT0038-010.0 | | 1305 | | | | 1350 | | | | | | | | |
| -019.0 | | 1318 | | | | ↓ | | | | | | | | |
| -028.0 | | 1335 | | | | | | | | | | | | |
| -038.0 | | 1354 | | | | 1409 | | | | | | | | |
| -043.0 | | 1434 | | | | 1450 | | | | | | | | |
| -048.0 | | 1456 | | | | 1513 | | | | | | | | |
| -063.0 | | 1525 | | | | 1542 | | | | | | | | |
| DPT0039-010.0 | | 1613 | | | | 1628 | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KBI

CLIENT NAME: Geosyntec
PROJECT NAME & ADDRESS: CRHE KSGFL
SAMPLERS:
CONTACT PERSON: ALEX RIVERA
BATCH # (Lab Use Only):

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE-DPT0039-0180-20090805 | 8/5/09 | 0724 | | ✓ | 8/5/09 | 1715 | | W | 2 | ✓ | |
| -028.0 | | 0742 | | | | | | | | | |
| -038.0 | | 0807 | | | | | | | | | |
| -043.0 | | 0834 | | | | | | | | | |
| -048.0 | | 0855 | | | | | | | | | |
| -063.0 | | 0920 | | | | | | | | | |
| DPT0040-010.0 | | 0955 | | | | | | | | | |
| -018.0 | | 1008 | | | | | | | | | |
| -028.0 | | 1024 | | | | | | | | | |
| -038.0 | | 1044 | | | | | | | | | |
| -043.0 | | 1342 | | | | | | | | | |
| -048.0 | | 1404 | | | | | | | | | |
| -063.0 | | 1429 | | | | | | | | | |
| DPT0041-010.0 | | 1512 | | | | | | | | | |
| -018.0 | | 1525 | | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | | | |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

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Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS:

CONTACT PERSON: JAN BARFUS

BATCH # (Lab Use Only):

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE DPT0041-043.0-20090806 | 8/6/09 | 0740 | ✓ | | 8/6/09 | 0753 | | W | 2 | ✓ | |
| -048.0 | | 0758 | | | | 0816 | | | | | |
| -063.0 | | 0822 | | | | 0830 | | | | | |
| DPT0042-10@010.0 | | 0853 | | | (H) | 0910 | | | | | |
| -018.0 | | 0904 | | | | 0915 | | | | | |
| -028.0 | | 0918 | | | | 0930 | | | | | |
| -038.0 | | 0932 | | | | 0940 | | | | | |
| -043.0 | | 0958 | | | | 0958 | | | | | |
| -048.0 | | 1014 | | | | 1025 | | | | | |
| -063.0 | | 1034 | | | | 1050 | | | | | |
| DPT0043-010.0 | | 1156 | | | | 1225 | | | | | |
| -018.0 | | 1212 | | | | ↓ | | | | | |
| -028.0 | | 1226 | | | | 1256 | | | | | |
| -038.0 | | 1240 | | | | ↓ | | | | | |
| -043.0 | ↓ | 1310 | | ↓ | ✓ | 1355 | | ↓ | ↓ | ↓ | |

Page 46 of 48

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 8/6/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KBL

CLIENT NAME: Geosyntec
PROJECT NAME & ADDRESS: CRHE KSC, FL
SAMPLERS
CONTACT PERSON
BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0043-038.0-20090806 | 8/6/09 | 1324 | | ✓ | 8/6/09 | 1355 | | W | 2 | ✓ | | | | | |
| -063.0 | | 1512 | | | | 1530 | | | | | | | | | |
| DPT0044-033.0 | | 1600 | | | | 1615 | | | | | | | | | |
| -038.0 | | 1618 | | | | 1629 | | | | | | | | | |
| -043.0 | | 1632 | | | | 1646 | | | | | | | | | |
| -048.0 | | 1650 | | | | 1705 | | | | | | | | | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* Hub Kelly | Date / Time 8/6/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KBI

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRITE KSC, FL

SAMPLERS:

CONTACT PERSON: ALEX RIVERA

BATCH # (Lab Use Only):

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRITE-DPT0041-028.0-20090805 | 8/5/09 | 1542 | | ✓ | 8/5/09 | 1715 | | W | 2 | ✓ | | | | |
| -0380 | | 1601 | | | | | | | | | | | | |

PRESERVATION
C Chilled
H HCL
Ot Other (see Remarks)

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) Neal Kelly | Date / Time 8/5/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

***Telephone* (352) 472-5830**
***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

February 5, 2010

Jill Johnson
GeoSyntec Consultants
9511 Holsberry Lane, Suite C
Pensacola, FL 32534

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 09-275**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from January 25 to February 2, 2010. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

KB Labs, Inc.
25132 SW 1st Ave
Newberry, FL 32669
Phone: 352-472-5830
Fax: 352-472-5832
Email: info@kbmobilelabs.com

# PROJECT NARRATIVE

## Project Scope

From January 25 to February 3, 2010, a total of 181 water samples were analyzed for GeoSyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB3: FDOH NELAP Certification Number E82816

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0

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ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

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# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. Changes for sample ID CRHE-DPT0046-038.0-20100125 reported:
   vinyl chloride <1.0 changed to 10.0ug/L.
   t-1,2-dichlprothene <1.0 changed to 1.8 ug/L.
   c-1,2-dichloroethene <1.0 changed to 6.7 ug/L.

3. Changes for sample ID CRHE-DPT0053-028.0-20100127 reported:
   vinyl chloride <1.0 changed to 90.9ug/L.
   c-1,2-dichloroethene <1.0 changed to 2.3ug/L.

4. Changes for sample ID CRHE-DPT0073-038.0-20100203 reported:
   c-1,2-dichloroethene 1.6 changed to <1.0ug/L.
   trichloroethene <1.0 changed to 1.6ug/L.

5. Sample ID CRHE-DPT0050-038.0-20100126 has an "L" qualifier for vinyl chloride indicating the concentration exceeded Calibration range.

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6. Sample ID CRHE-DPT0052-028.0-20100127 has an “L” qualifier for vinyl chloride indicating the concentration exceeded Calibration range.

7. Sample ID CRHE-DPT0055-038.0-20100127 has an “L” qualifier for vinyl chloride indicating the concentration exceeded Calibration range.

8. Freon 113 was detected in a couple of samples as a TIC.

| | |
|---|---|
| CRHE-DPT0069-010.0 | 1080 ug/L |
| CRHE-DPT0069-018.0 | 20 ug/ |

9. Compound 1,1-dichlorethane was also detected as a TIC during the project. As per client, values have been reported along with J estimation DQ.

10. During first week of project work, GCMS had some instrumental difficulties maintaining calibration tune. Client was notified. Samples possibly affected for vinyl chloride were reran on 1/28 after instrument tune was fixed.

11. All references to CHRE were changed to CRHE, the correct NASA KSC Site Location ID. Samples on COC are labeled CRHE.

12. Client had site ID’s DPT04XX changed to DPT00XX. Noted on the COCs.

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CCS 20 | 01/25/10 | 101 | 105 | 98 | 102 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/25/10 | 101 | 100 | 96 | 96 | Pass | Pass | Pass | Pass |
| BLANK | 01/25/10 | 105 | 94 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-018.0 | 01/25/10 | 104 | 100 | 96 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-028.0 | 01/25/10 | 104 | 92 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-038.0 | 01/25/10 | 103 | 104 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-044.0 | 01/25/10 | 102 | 93 | 96 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-018.0 MS | 01/25/10 | 101 | 88 | 99 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-018.0 MSD | 01/25/10 | 104 | 90 | 98 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-048.0 | 01/25/10 | 108 | 96 | 92 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-058.0 | 01/25/10 | 106 | 97 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-018.0 | 01/25/10 | 103 | 88 | 96 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-028.0 | 01/25/10 | 105 | 93 | 96 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-038.0 | 01/25/10 | 106 | 93 | 96 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-043.0 | 01/25/10 | 103 | 90 | 96 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-048.0 | 01/25/10 | 99 | 98 | 109 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-058.0 | 01/25/10 | 108 | 99 | 94 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-010.0 | 01/25/10 | 106 | 92 | 92 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-010.0 | 01/25/10 | 148 | 128 | 96 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0047-010.0 | 01/25/10 | 108 | 97 | 95 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0047-018.0 | 01/25/10 | 135 | 107 | 93 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0047-028.0 | 01/25/10 | 184 | 107 | 94 | 85 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0047-038.0 | 01/25/10 | 116 | 109 | 94 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0047-043.0 | 01/25/10 | 99 | 105 | 174 | 83 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0047-048.0 | 01/25/10 | 98 | 109 | 173 | 83 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0047-058.0 | 01/25/10 | 199 | 173 | 94 | 85 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0046-058.0 MS | 01/25/10 | 96 | 110 | 93 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-058.0 MSD | 01/25/10 | 114 | 124 | 93 | 88 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/25/10 | 101 | 108 | 96 | 88 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/26/10 | 81 | 80 | 108 | 101 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/26/10 | 99 | 85 | 93 | 99 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/26/10 | 104 | 104 | 76 | 90 | Pass | Pass | Pass | Pass |
| BLANK | 01/26/10 | 102 | 103 | 92 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0048-010.0 | 01/26/10 | 73 | 106 | 96 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0048-018.0 | 01/26/10 | 102 | 104 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0048-028.0 | 01/26/10 | 114 | 112 | 93 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0048-038.0 1:10 | 01/26/10 | 106 | 104 | 91 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0048-043.0 | 01/26/10 | 106 | 98 | 92 | 83 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0048-048.0 | 01/26/10 | 114 | 99 | 92 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0048-058.0 | 01/26/10 | 102 | 100 | 100 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-028.0 | 01/26/10 | 108 | 96 | 90 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-038.0 | 01/26/10 | 106 | 95 | 93 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-043.0 | 01/26/10 | 107 | 98 | 91 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-048.0 | 01/26/10 | 104 | 97 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-058.0 | 01/26/10 | 183 | 116 | 92 | 83 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0050-010.0 | 01/26/10 | 103 | 101 | 99 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0050-018.0 | 01/26/10 | 213 | 123 | 91 | 81 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0050-028.0 | 01/26/10 | 111 | 95 | 93 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0050-038.0 | 01/26/10 | 200 | 121 | 93 | 83 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0050-043.0 | 01/26/10 | 103 | 98 | 98 | 170 | Pass | Pass | Pass | > UCL |
| CRHE-DPT0050-048.0 | 01/26/10 | 106 | 99 | 92 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0050-058.0 | 01/26/10 | 123 | 122 | 91 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0048-038.0 | 01/26/10 | 98 | 108 | 99 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0050-038.0 1:10 | 01/26/10 | 221 | 125 | 90 | 84 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0051-028.0 | 01/26/10 | 126 | 129 | 89 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0051-038.0 | 01/26/10 | 124 | 120 | 89 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0051-043.0 | 01/26/10 | 112 | 98 | 90 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-058.0 MS | 01/26/10 | 122 | 125 | 92 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-058.0 MSD | 01/26/10 | 109 | 114 | 165 | 85 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0049-058.0 MS | 01/26/10 | 124 | 124 | 92 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-058.0 MSD | 01/26/10 | 101 | 108 | 103 | 86 | Pass | Pass | Pass | Pass |
| RSTD | 01/26/10 | 137 | 125 | 92 | 89 | Pass | Pass | Pass | Pass |
| RSTD | 01/26/10 | 102 | 92 | 100 | 99 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/26/10 | 115 | 117 | 90 | 88 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/27/10 | 103 | 99 | 94 | 81 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/27/10 | 106 | 100 | 95 | 89 | Pass | Pass | Pass | Pass |
| BLANK | 01/27/10 | 111 | 102 | 90 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0051-048.0 | 01/27/10 | 122 | 96 | 93 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0051-058.0 | 01/27/10 | 104 | 104 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0052-028.0 | 01/27/10 | 121 | 124 | 89 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0052-038.0 | 01/27/10 | 106 | 94 | 208 | 84 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0052-043.0 | 01/27/10 | 103 | 96 | 199 | 85 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0052-048.0 | 01/27/10 | 102 | 104 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0052-058.0 | 01/27/10 | 124 | 133 | 90 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0052-063.0 | 01/27/10 | 102 | 99 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0053-028.0 | 01/27/10 | 124 | 124 | 91 | 83 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0053-038.0 | 01/27/10 | 216 | 124 | 90 | 81 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0053-043.0 | 01/27/10 | 105 | 93 | 182 | 84 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0053-048.0 | 01/27/10 | 237 | 146 | 91 | 82 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0053-058.0 | 01/27/10 | 101 | 100 | 100 | 172 | Pass | Pass | Pass | > UCL |
| CRHE-DPT0051-048.0 MS | 01/27/10 | 103 | 96 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0051-048.0 MSD | 01/27/10 | 122 | 123 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0051-048.0 MSD | 01/27/10 | 232 | 158 | 93 | 87 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0054-028.0 | 01/27/10 | 121 | 119 | 92 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0054-038.0 | 01/27/10 | 126 | 123 | 90 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0054-043.0 | 01/27/10 | 108 | 93 | 98 | 167 | Pass | Pass | Pass | > UCL |
| CRHE-DPT0054-048.0 | 01/27/10 | 124 | 122 | 91 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0054-058.0 | 01/27/10 | 105 | 93 | 192 | 81 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0054-063.0 | 01/27/10 | 129 | 118 | 91 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-028.0 | 01/27/10 | 163 | 125 | 91 | 82 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0055-038.0 | 01/27/10 | 124 | 124 | 92 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-043.0 | 01/27/10 | 109 | 99 | 89 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-048.0 | 01/27/10 | 124 | 134 | 90 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-058.0 | 01/27/10 | 107 | 98 | 97 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-063.0 | 01/27/10 | 124 | 138 | 88 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0052-028.0 1:10 | 01/27/10 | 238 | 136 | 90 | 83 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0053-038.0 | 01/27/10 | 129 | 136 | 88 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0054-058.0 MS | 01/27/10 | 102 | 91 | 98 | 173 | Pass | Pass | Pass | > UCL |
| CRHE-DPT0054-058.0 MSD | 01/27/10 | 128 | 145 | 90 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0054-058.0 MSD | 01/27/10 | 106 | 105 | 97 | 107 | Pass | Pass | Pass | Pass |
| VSTD 20 | 01/27/10 | 125 | 148 | 90 | 86 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/28/10 | 102 | 85 | 98 | 100 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/28/10 | 105 | 104 | 102 | 96 | Pass | Pass | Pass | Pass |
| BLANK | 01/28/10 | 128 | 147 | 88 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-010.0 | 01/28/10 | 108 | 96 | 989 | 82 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0056-018.0 | 01/28/10 | 262 | 182 | 89 | 82 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0056-028.0 | 01/28/10 | 104 | 94 | 98 | 116 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-038.0 | 01/28/10 | 128 | 136 | 90 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-043.0 | 01/28/10 | 109 | 95 | 90 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-048.0 | 01/28/10 | 108 | 96 | 192 | 82 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0056-058.0 | 01/28/10 | 237 | 196 | 91 | 82 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0057-028.0 | 01/28/10 | 110 | 92 | 92 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-038.0 | 01/28/10 | 108 | 91 | 194 | 84 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0057-043.0 | 01/28/10 | 116 | 97 | 90 | 82 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

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## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0057-048.0 | 01/28/10 | 133 | 140 | 89 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-058.0 | 01/28/10 | 123 | 134 | 89 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-018.0 | 01/28/10 | 129 | 134 | 90 | 65 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0057-048.0 | 01/28/10 | 106 | 103 | 141 | 82 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0058-028.0 | 01/28/10 | 129 | 134 | 90 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0058-038.0 | 01/28/10 | 127 | 135 | 90 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-018.0 | 01/28/10 | 129 | 134 | 90 | 65 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0058-043.0 | 01/28/10 | 131 | 136 | 90 | 73 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-010.0 MS | 01/28/10 | 95 | 36 | 109 | 173 | Pass | < LCL | Pass | > UCL |
| CRHE-DPT0058-048.0 | 01/28/10 | 99 | 101 | 96 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0058-058.0 | 01/28/10 | 99 | 99 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0058-063.0 | 01/28/10 | 104 | 104 | 100 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0059-028.0 | 01/28/10 | 102 | 108 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-058.0 MS | 01/28/10 | 95 | 107 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-058.0 MSD | 01/28/10 | 97 | 113 | 101 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0059-038.0 | 01/28/10 | 96 | 113 | 98 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0059-043.0 | 01/28/10 | 96 | 116 | 97 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0059-048.0 | 01/28/10 | 94 | 114 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0059-058.0 | 01/28/10 | 95 | 113 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0060-028.0 | 01/28/10 | 95 | 114 | 99 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0060-038.0 | 01/28/10 | 95 | 119 | 100 | 107 | Pass | Pass | Pass | Pass |
| VSTD 20 | 01/28/10 | 92 | 125 | 100 | 100 | Pass | Pass | Pass | Pass |
| RSTD 20 | 01/28/10 | 94 | 114 | 101 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-028.0 | 01/28/10 | 95 | 111 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-038.0 | 01/28/10 | 92 | 116 | 101 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-043.0 | 01/28/10 | 94 | 113 | 100 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-048.0 | 01/28/10 | 95 | 119 | 100 | 106 | Pass | Pass | Pass | Pass |
| BLANK | 01/28/10 | 99 | 123 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0052-038.0 | 01/28/10 | 96 | 121 | 101 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0052-043.0 | 01/28/10 | 98 | 124 | 102 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0058-058.0 MS | 01/28/10 | 93 | 136 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0058-058.0 MSD | 01/28/10 | 95 | 134 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-038.0 | 01/28/10 | 96 | 116 | 101 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-043.0 | 01/29/10 | 96 | 122 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-048.0 | 01/29/10 | 99 | 122 | 103 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-038.0 | 01/29/10 | 98 | 126 | 102 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0060-038.0 1:10 | 01/29/10 | 99 | 128 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-043.0 | 01/29/10 | 98 | 121 | 103 | 112 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

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## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CCS 20 | 01/29/10 | 92 | 126 | 101 | 100 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/29/10 | 92 | 127 | 100 | 101 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/29/10 | 89 | 126 | 101 | 99 | Pass | Pass | Pass | Pass |
| BLANK | 01/29/10 | 96 | 118 | 101 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0060-043.0 1:5 | 01/29/10 | 92 | 107 | 101 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-038.0 1:10 | 01/29/10 | 97 | 120 | 103 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-028.0 | 01/29/10 | 95 | 114 | 104 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-038.0 | 01/29/10 | 98 | 122 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-028.0 MS | 01/29/10 | 88 | 121 | 102 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-028.0 MSD | 01/29/10 | 90 | 117 | 102 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-043.0 | 01/29/10 | 94 | 116 | 102 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-048.0 | 01/29/10 | 95 | 119 | 103 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-058.0 | 01/29/10 | 96 | 120 | 103 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-063.0 | 01/29/10 | 96 | 120 | 104 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0062-010.0 | 01/29/10 | 95 | 122 | 103 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0062-018.0 | 01/29/10 | 96 | 123 | 103 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0062-028.0 | 01/29/10 | 94 | 118 | 103 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0062-038.0 | 01/29/10 | 97 | 121 | 104 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0062-043.0 | 01/29/10 | 95 | 120 | 103 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0062-048.0 | 01/29/10 | 92 | 118 | 104 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0062-058.0 | 01/29/10 | 95 | 122 | 104 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0063-028.0 | 01/29/10 | 94 | 119 | 102 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0063-038.0 | 01/29/10 | 93 | 111 | 105 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0063-043.0 | 01/29/10 | 92 | 112 | 104 | 112 | Pass | Pass | Pass | Pass |
| CRHE-DPT0063-048.0 | 01/29/10 | 93 | 115 | 104 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0063-058.0 | 01/29/10 | 97 | 117 | 104 | 107 | Pass | Pass | Pass | Pass |
| VSTD 20 | 01/29/10 | 89 | 127 | 101 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/01/10 | 93 | 103 | 101 | 98 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/01/10 | 89 | 107 | 102 | 98 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/01/10 | 94 | 121 | 102 | 99 | Pass | Pass | Pass | Pass |
| BLANK | 02/01/10 | 95 | 115 | 104 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-028.0 | 02/01/10 | 94 | 109 | 104 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-038.0 | 02/01/10 | 96 | 112 | 103 | 112 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-043.0 | 02/01/10 | 97 | 113 | 104 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-048.0 | 02/01/10 | 97 | 114 | 104 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-058.0 | 02/01/10 | 93 | 109 | 106 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-063.0 | 02/01/10 | 97 | 115 | 106 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0065-028.0 | 02/01/10 | 97 | 115 | 104 | 113 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0065-038.0 | 02/01/10 | 94 | 113 | 105 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0065-043.0 | 02/01/10 | 97 | 117 | 103 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0065-048.0 | 02/01/10 | 94 | 117 | 104 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0065-058.0 | 02/01/10 | 95 | 114 | 105 | 112 | Pass | Pass | Pass | Pass |
| CRHE-DPT0065-063.0 | 02/01/10 | 95 | 118 | 105 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-028.0 MS | 02/01/10 | 87 | 119 | 104 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-028.0 MSD | 02/01/10 | 92 | 114 | 103 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0066-038.0 | 02/01/10 | 95 | 110 | 106 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0066-028.0 | 02/01/10 | 96 | 112 | 105 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0066-043.0 | 02/01/10 | 92 | 114 | 105 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0066-048.0 | 02/01/10 | 94 | 119 | 103 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0066-058.0 | 02/01/10 | 94 | 115 | 104 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-010.0 | 02/01/10 | 96 | 119 | 105 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-018.0 | 02/01/10 | 97 | 122 | 104 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-028.0 | 02/01/10 | 98 | 119 | 103 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-038.0 | 02/01/10 | 97 | 121 | 102 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-038.0 1:10 | 02/01/10 | 94 | 117 | 106 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-043.0 | 02/01/10 | 98 | 126 | 101 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-048.0 | 02/01/10 | 96 | 124 | 103 | 112 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-058.0 | 02/01/10 | 98 | 126 | 103 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0066-038.0 1:10 | 02/01/10 | 98 | 121 | 104 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0066-028.0 1:5 | 02/01/10 | 97 | 125 | 103 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0065-063.0 MS | 02/01/10 | 96 | 133 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0065-063.0 MSD | 02/01/10 | 96 | 126 | 103 | 101 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/01/10 | 97 | 131 | 102 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/02/10 | 99 | 118 | 100 | 104 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/02/10 | 100 | 121 | 100 | 102 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/02/10 | 97 | 112 | 99 | 103 | Pass | Pass | Pass | Pass |
| BLANK | 02/02/10 | 100 | 117 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-043.0 1:5 | 02/02/10 | 100 | 118 | 102 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0068-028.0 | 02/02/10 | 100 | 118 | 101 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0068-038.0 | 02/02/10 | 99 | 116 | 101 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0068-043.0 | 02/02/10 | 100 | 117 | 102 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0068-048.0 | 02/02/10 | 100 | 117 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0068-058.0 | 02/02/10 | 102 | 119 | 101 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-010.0 1:20 | 02/02/10 | 100 | 122 | 101 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-018.0 | 02/02/10 | 100 | 120 | 101 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-028.0 | 02/02/10 | 100 | 121 | 101 | 109 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0068-028.0 MS | 02/02/10 | 95 | 121 | 103 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0068-028.0 MSD | 02/02/10 | 97 | 118 | 102 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-038.0 | 02/02/10 | 93 | 105 | 100 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-043.0 | 02/02/10 | 102 | 118 | 101 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-048.0 | 02/02/10 | 100 | 118 | 101 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-058.0 | 02/02/10 | 93 | 109 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-028.0 | 02/02/10 | 99 | 118 | 101 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-038.0 | 02/02/10 | 100 | 116 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-043.0 1:10 | 02/02/10 | 101 | 121 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-048.0 | 02/02/10 | 98 | 114 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-058.0 | 02/02/10 | 100 | 119 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-028.0 | 02/02/10 | 99 | 115 | 102 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-038.0 | 02/02/10 | 98 | 115 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-043.0 | 02/02/10 | 98 | 116 | 103 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-048.0 | 02/02/10 | 100 | 117 | 103 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-058.0 | 02/02/10 | 98 | 114 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-010.0 | 02/02/10 | 98 | 119 | 101 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-058.0 MS | 02/02/10 | 98 | 127 | 101 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-058.0 MSD | 02/02/10 | 100 | 108 | 100 | 104 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/02/10 | 100 | 118 | 101 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/03/10 | 102 | 111 | 98 | 103 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/03/10 | 100 | 105 | 98 | 104 | Pass | Pass | Pass | Pass |
| BLANK | 02/03/10 | 106 | 117 | 97 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-028.0 | 02/03/10 | 98 | 104 | 101 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-038.0 1:1000 | 02/03/10 | 101 | 111 | 99 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-043.0 1:20 | 02/03/10 | 100 | 112 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-048.0 | 02/03/10 | 101 | 113 | 99 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-058.0 1:5 | 02/03/10 | 99 | 110 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-063.0 | 02/03/10 | 102 | 112 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-028.0 | 02/03/10 | 102 | 114 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-038.0 | 02/03/10 | 101 | 113 | 100 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-043.0 | 02/03/10 | 102 | 113 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-048.0 | 02/03/10 | 101 | 112 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-058.0 | 02/03/10 | 102 | 113 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-038.0 1:5000 | 02/03/10 | 103 | 117 | 99 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0074-028.0 | 02/03/10 | 92 | 101 | 100 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0074-038.0 1:500 | 02/03/10 | 99 | 110 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0074-043.0 1:100 | 02/03/10 | 102 | 109 | 99 | 104 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0074-048.0 | 02/03/10 | 103 | 116 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0074-058.0 | 02/03/10 | 101 | 108 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0074-063.0 | 02/03/10 | 100 | 110 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0074-010.0 | 02/03/10 | 100 | 104 | 100 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0074-018.0 | 02/03/10 | 98 | 107 | 104 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-010.0 | 02/03/10 | 101 | 108 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-018.0 | 02/03/10 | 102 | 111 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-010.0 | 02/03/10 | 100 | 114 | 102 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-018.0 | 02/03/10 | 100 | 108 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-048.0 MS | 02/03/10 | 100 | 112 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-048.0 MSD | 02/03/10 | 100 | 109 | 98 | 99 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/03/10 | 97 | 104 | 98 | 102 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-275 |
| **Onsite Dates:** 1/25/10-2/3/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0045-018.0 **Date of Analysis:** 1/25/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 114 | 102 | 12 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 85 | 100 | 16 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 80 | 118 | 39 | Pass | Pass | > RPDL |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 97 | 100 | 3 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 108 | 108 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 117 | 119 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0046-058.0 **Date of Analysis:** 1/25/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 41 | 72 | 54 | Pass | Pass | > RPDL |
| 1,1-Dichloroethene | 45 | 144 | 20 | 105 | 206 | 65 | Pass | > UCL | > RPDL |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 111 | 212 | 63 | Pass | > UCL | > RPDL |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 108 | 99 | 9 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 109 | 109 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 125 | 123 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0049-058.0 **Date of Analysis:** 1/26/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 25 | 26 | 5 | < LCL | < LCL | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 99 | 105 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 105 | 113 | 8 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 111 | 117 | 6 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 111 | 113 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 116 | 125 | 8 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0051-048.0 **Date of Analysis:** 1/27/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 28 | 76 | 93 | < LCL | Pass | > RPDL |
| 1,1-Dichloroethene | 45 | 144 | 20 | 115 | 217 | 61 | Pass | > UCL | > RPDL |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 116 | 227 | 65 | Pass | > UCL | > RPDL |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 114 | 129 | 13 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 106 | 114 | 7 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 129 | 125 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-275 |
| **Onsite Dates:** 1/25/10-2/3/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT0054-058.0 **Date of Analysis:** 1/27/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 23 | 27 | 16 | < LCL | < LCL | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 92 | 97 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 96 | 98 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 99 | 100 | 1 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 97 | 99 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 105 | 104 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0057-058.0 **Date of Analysis:** 1/28/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 99 | 105 | 6 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 95 | 105 | 10 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 103 | 110 | 6 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 103 | 108 | 4 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 102 | 106 | 4 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 99 | 100 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0058-058.0 **Date of Analysis:** 1/28/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 95 | 104 | 9 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 142 | 127 | 11 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 148 | 139 | 7 | > UCL | > UCL | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 107 | 104 | 2 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 104 | 101 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 89 | 87 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0061-028.0 **Date of Analysis:** 1/29/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 80 | 101 | 23 | Pass | Pass | > RPDL |
| 1,1-Dichloroethene | 45 | 144 | 20 | 114 | 115 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 118 | 120 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 88 | 97 | 10 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 85 | 95 | 11 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 78 | 85 | 8 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-275 |
| **Onsite Dates:** 1/25/10-2/3/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT0064-028.0 **Date of Analysis:** 2/1/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 98 | 117 | 18 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 125 | 128 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 127 | 129 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 101 | 111 | 9 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 97 | 106 | 9 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 91 | 95 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0065-063.0 **Date of Analysis:** 2/1/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 84 | 97 | 14 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 115 | 117 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 122 | 121 | 0 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 103 | 104 | 1 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 101 | 104 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 88 | 95 | 8 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0068-028.0 **Date of Analysis:** 2/2/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 86 | 88 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 115 | 109 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 115 | 112 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 107 | 109 | 1 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 104 | 105 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 96 | 98 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0070-058.0 **Date of Analysis:** 2/2/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 85 | 91 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 109 | 106 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 115 | 111 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 109 | 109 | 0 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 107 | 105 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 97 | 97 | 0 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-275 |
| **Onsite Dates:** 1/25/10-2/3/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT0073-048.0 **Date of Analysis:** 2/3/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 86 | 88 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 99 | 93 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 107 | 101 | 6 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 109 | 107 | 2 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 108 | 106 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 102 | 101 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-275 |
| **Onsite Dates:** 1/25/10-2/3/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 — **Date of Analysis:** 1/25/2010
LCS 2 — 1/26/2010
LCS 3 — 1/26/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 28 | to | 161 | 107 | 69 | 37 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 43 | to | 156 | 87 | 184 | 126 | Pass | > UCL | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 80 | 177 | 130 | Pass | > UCL | Pass |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 93 | 97 | 127 | Pass | Pass | Pass |
| Trichloroethene | 47 | to | 164 | 105 | 110 | 69 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | to | 151 | 114 | 105 | 119 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 — **Date of Analysis:** 1/26/2010
LCS 5 — 1/27/2010
LCS 6 — 1/28/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | LCS#6 | LCS#4 | LCS#5 | LCS#6 |
| Vinyl Chloride | 28 | to | 161 | 27 | 29 | 26 | < LCL | Pass | < LCL |
| 1,1-Dichloroethene | 43 | to | 156 | 94 | 104 | 75 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 99 | 111 | 102 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 105 | 110 | 104 | Pass | Pass | Pass |
| Trichloroethene | 47 | to | 164 | 109 | 108 | 106 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | to | 151 | 112 | 125 | 117 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 7 — **Date of Analysis:** 1/28/2010
LCS 8 — 1/29/2010
LCS 9 — 2/1/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#7 | LCS#8 | LCS#9 | LCS#7 | LCS#8 | LCS#9 |
| Vinyl Chloride | 28 | to | 161 | 98 | 100 | 105 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 43 | to | 156 | 124 | 128 | 127 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 124 | 131 | 129 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 104 | 106 | 106 | Pass | Pass | Pass |
| Trichloroethene | 47 | to | 164 | 102 | 102 | 101 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | to | 151 | 94 | 94 | 93 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-275 |
| **Onsite Dates:** 1/25/10-2/3/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

| **Samples:** | LCS 10<br>LCS 11 | | | **Date of Analysis:** | 2/2/2010<br>2/3/2010 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Spike Compounds** | **Control Limits** | | | **Percent Recoveries** | | | **Control Limit Checks** | | |
| | **Lower** | | **Upper** | **LCS#10** | **LCS#11** | | **LCS#10** | **LCS#11** | |
| Vinyl Chloride | 28 | to | 161 | 92 | 90 | | Pass | Pass | |
| 1,1-Dichloroethene | 43 | to | 156 | 109 | 97 | | Pass | Pass | |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 113 | 100 | | Pass | Pass | |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 108 | 108 | | Pass | Pass | |
| Trichloroethene | 47 | to | 164 | 105 | 105 | | Pass | Pass | |
| Tetrachloroethene | 60 | to | 151 | 97 | 102 | | Pass | Pass | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0045-018.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0045-028.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **2.0** | <1.0 | <1.0 | NA |
| CRHE-DPT0045-038.0-20100125 | 1/25/10 | Water | 1 | **5.0** | <1.0 | **1.6** | **13.6** | <1.0 | <1.0 | NA |
| CRHE-DPT0045-044.0-20100125 | 1/25/10 | Water | 1 | **5.5** | <1.0 | **1.6** | **19.0** | <1.0 | **5.1** | NA |
| CRHE-DPT0045-048.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0045-058.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0046-018.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0046-028.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0046-038.0-20100125 | 1/25/10 | Water | 1 | **10.0** | <1.0 | **1.8** | **6.7** | <1.0 | <1.0 | NA |
| CRHE-DPT0046-043.0-20100125 | 1/25/10 | Water | 1 | **4.4** | <1.0 | **3.4** | **9.5** | <1.0 | <1.0 | NA |
| CRHE-DPT0046-048.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0046-058.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0046-010.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0045-010.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0047-010.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0047-018.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0047-028.0-20100125 | 1/25/10 | Water | 1 | **12.2** | <1.0 | <1.0 | **4.0** | <1.0 | <1.0 | NA |
| CRHE-DPT0047-038.0-20100125 | 1/25/10 | Water | 1 | **28.1** | <1.0 | **5.1** | **21.2** | <1.0 | <1.0 | NA |
| CRHE-DPT0047-043.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.8** | <1.0 | <1.0 | NA |
| CRHE-DPT0047-048.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0047-058.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0048-010.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0048-018.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0048-028.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | **4.9** | **3.5** | <1.0 | <1.0 | NA |
| CRHE-DPT0048-038.0-20100126 | 1/26/10 | Water | 1 | **2.4** | **14.4** | <1.0 | **2.6** | <1.0 | <1.0 | **120 J** |
| CRHE-DPT0048-043.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0048-048.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0048-058.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0049-028.0-20100126 | 1/26/10 | Water | 1 | **3.8** | <1.0 | **17.9** | **1.9** | <1.0 | <1.0 | NA |
| CRHE-DPT0049-038.0-20100126 | 1/26/10 | Water | 1 | **3.4** | <1.0 | <1.0 | **3.1** | <1.0 | <1.0 | NA |
| CRHE-DPT0049-043.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.0** | <1.0 | <1.0 | NA |
| CRHE-DPT0049-048.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0049-058.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0050-010.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0050-018.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0050-028.0-20100126 | 1/26/10 | Water | 1 | **62.1** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0050-038.0-20100126 | 1/26/10 | Water | 1,10 | **1100 L** | <1.0 | **39.1** | **6.5** | <1.0 | <1.0 | NA |
| CRHE-DPT0050-043.0-20100126 | 1/26/10 | Water | 1 | **3.3** | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 | NA |
| CRHE-DPT0050-048.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0050-058.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0051-028.0-20100126 | 1/26/10 | Water | 1 | **7.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0051-038.0-20100126 | 1/26/10 | Water | 1 | **20.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0051-043.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0051-048.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0051-058.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0052-028.0-20100127 | 1/27/10 | Water | 1 | **130 L** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0052-038.0-20100127 | 1/28/10 | Water | 1 | **100** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0052-043.0-20100127 | 1/28/10 | Water | 1 | **40.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0052-048.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0052-058.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0052-063.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0053-028.0-20100127 | 1/27/10 | Water | 1 | **90.9** | <1.0 | <1.0 | **2.3** | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0053-038.0-20100127 | 1/27/10 | Water | 1 | **2.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0053-043.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0053-048.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0053-058.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0054-028.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0054-038.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0054-043.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0054-048.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0054-058.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0054-063.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0055-028.0-20100127 | 1/28/10 | Water | 1 | **4.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0055-038.0-20100127 | 1/28/10 | Water | 1 | **150 L** | <1.0 | <1.0 | **1.0** | <1.0 | <1.0 | NA |
| CRHE-DPT0055-043.0-20100127 | 1/28/10 | Water | 1 | **38.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0055-048.0-20100127 | 1/28/10 | Water | 1 | **12.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0055-058.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0055-063.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0056-010.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0056-018.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.0** | <1.0 | <1.0 | NA |
| CRHE-DPT0056-028.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0056-038.0-20100128 | 1/29/10 | Water | 1 | **7.3** | <1.0 | <1.0 | **7.6** | <1.0 | <1.0 | **22 J** |
| CRHE-DPT0056-043.0-20100128 | 1/29/10 | Water | 1 | **25.1** | <1.0 | **2.1** | **8.4** | <1.0 | <1.0 | **79 J** |
| CRHE-DPT0056-048.0-20100128 | 1/28/10 | Water | 1 | **1.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0056-058.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0057-028.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0057-038.0-20100128 | 1/28/10 | Water | 1, 10 | **280** | <1.0 | <1.0 | **1.5** | <1.0 | <1.0 | NA |
| CRHE-DPT0057-043.0-20100128 | 1/29/10 | Water | 1 | **71.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0057-048.0-20100128 | 1/29/10 | Water | 1 | **15.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0057-058.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0058-028.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0058-038.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0058-043.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0058-048.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0058-058.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0058-063.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0059-028.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0059-038.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0059-043.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0059-048.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0059-058.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0060-028.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0060-038.0-20100128 | 1/28/10 | Water | 1, 10 | **22.3** | <1.0 | **3.8** | **140** | <1.0 | <1.0 | NA |
| CRHE-DPT0060-043.0-20100129 | 1/29/10 | Water | 5 | **130** | <5.0 | **12** | **120** | <5.0 | <5.0 | **72 J** |
| CRHE-DPT0061-028.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0061-038.0-20100129 | 1/29/10 | Water | 1 | **7.9** | <1.0 | <1.0 | **57.3** | <1.0 | <1.0 | NA |
| CRHE-DPT0061-043.0-20100129 | 1/29/10 | Water | 1 | **4.4** | <1.0 | <1.0 | **3.4** | <1.0 | <1.0 | NA |
| CRHE-DPT0061-048.0-20100129 | 1/29/10 | Water | 1 | **7.3** | <1.0 | <1.0 | **1.3** | <1.0 | <1.0 | **18 J** |
| CRHE-DPT0061-058.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0061-063.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0062-010.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0062-018.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0062-028.0-20100129 | 1/29/10 | Water | 1 | **7.6** | <1.0 | <1.0 | **2.8** | <1.0 | <1.0 | NA |
| CRHE-DPT0062-038.0-20100129 | 1/29/10 | Water | 1 | **3.8** | <1.0 | **4.8** | **45.1** | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0062-043.0-20100129 | 1/29/10 | Water | 1 | **13.8** | <1.0 | **4.9** | **50.5** | <1.0 | <1.0 | **27 J** |
| CRHE-DPT0062-048.0-20100129 | 1/29/10 | Water | 1 | **3.3** | <1.0 | <1.0 | **3.7** | <1.0 | <1.0 | NA |
| CRHE-DPT0062-058.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0063-028.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0063-038.0-20100129 | 1/29/10 | Water | 1 | **1.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0063-043.0-20100129 | 1/29/10 | Water | 1 | **12.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0063-048.0-20100129 | 1/29/10 | Water | 1 | **5.7** | <1.0 | <1.0 | **1.9** | <1.0 | <1.0 | NA |
| CRHE-DPT0063-058.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0064-028.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0064-038.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.1** | <1.0 | <1.0 | NA |
| CRHE-DPT0064-043.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **2.9** | <1.0 | <1.0 | NA |
| CRHE-DPT0064-048.0-20100201 | 2/1/10 | Water | 1 | **1.4** | <1.0 | <1.0 | **4.6** | <1.0 | <1.0 | NA |
| CRHE-DPT0064-058.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0064-063.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0065-028.0-20100201 | 2/1/10 | Water | 1 | **1.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0065-038.0-20100201 | 2/1/10 | Water | 1 | **55.7** | <1.0 | <1.0 | **110** | <1.0 | <1.0 | NA |
| CRHE-DPT0065-043.0-20100201 | 2/1/10 | Water | 1 | **36.9** | <1.0 | <1.0 | **86.6** | <1.0 | <1.0 | NA |
| CRHE-DPT0065-048.0-20100201 | 2/1/10 | Water | 1 | **34.5** | <1.0 | **1.2** | **32.1** | <1.0 | <1.0 | **27 J** |
| CRHE-DPT0065-058.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0065-063.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0066-028.0-20100201 | 2/1/10 | Water | 1, 5 | **120** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0066-038.0-20100201 | 2/1/10 | Water | 1, 10 | **220** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0066-043.0-20100201 | 2/1/10 | Water | 1 | **110** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0066-048.0-20100201 | 2/1/10 | Water | 1 | **10.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0066-058.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0067-010.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0067-018.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0067-028.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0067-038.0-20100201 | 2/1/10 | Water | 1, 10 | **420** | <1.0 | **9.3** | **3.3** | <1.0 | <1.0 | NA |
| CRHE-DPT0067-043.0-20100201 | 2/1/10 | Water | 1, 5 | **200** | <1.0 | **9.0** | **10.5** | <1.0 | <1.0 | NA |
| CRHE-DPT0067-048.0-20100201 | 2/1/10 | Water | 1 | **5.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0067-058.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0068-028.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **2.6** | <1.0 | <1.0 | NA |
| CRHE-DPT0068-038.0-20100202 | 2/2/10 | Water | 1 | **6.1** | <1.0 | <1.0 | **4.4** | <1.0 | <1.0 | NA |
| CRHE-DPT0068-043.0-20100202 | 2/2/10 | Water | 1 | **13.3** | <1.0 | <1.0 | **2.3** | <1.0 | <1.0 | NA |
| CRHE-DPT0068-048.0-20100202 | 2/2/10 | Water | 1 | **5.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0068-058.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0069-010.0-20100202 | 2/2/10 | Water | 1 | <1.0 | **2.8** | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0069-018.0-20100202 | 2/2/10 | Water | 1 | **3.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0069-028.0-20100202 | 2/2/10 | Water | 1 | **3.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0069-038.0-20100202 | 2/2/10 | Water | 1 | **82.2** | <1.0 | <1.0 | **7.5** | <1.0 | <1.0 | NA |
| CRHE-DPT0069-043.0-20100202 | 2/2/10 | Water | 1 | **110 L** | <1.0 | <1.0 | **14.8** | <1.0 | <1.0 | NA |
| CRHE-DPT0069-048.0-20100202 | 2/2/10 | Water | 1 | **31.6** | <1.0 | <1.0 | **3.8** | <1.0 | <1.0 | NA |
| CRHE-DPT0069-058.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0070-028.0-20100202 | 2/2/10 | Water | 1 | <1.0 | **2.9** | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0070-038.0-20100202 | 2/2/10 | Water | 1 | **5.4** | **15.6** | <1.0 | <1.0 | <1.0 | <1.0 | **25 J** |
| CRHE-DPT0070-043.0-20100202 | 2/2/10 | Water | 10 | **37** | **26** | <10 | <10 | <10 | <10 | **210 J** |
| CRHE-DPT0070-048.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0070-058.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0071-028.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0071-038.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **3.1** | **1.4** | <1.0 | NA |
| CRHE-DPT0071-043.0-20100202 | 2/2/10 | Water | 1 | **14.6** | <1.0 | <1.0 | **2.7** | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0071-048.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0071-058.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0072-028.0-20100203 | 2/3/10 | Water | 1 | **1.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0072-038.0-20100203 | 2/3/10 | Water | 1000, 5000 | **4600** | <1000 | <1000 | **48000** | **160000** | <1000 | NA |
| CRHE-DPT0072-043.0-20100203 | 2/3/10 | Water | 20 | **54** | <20 | <20 | **570** | **1300** | <20 | NA |
| CRHE-DPT0072-048.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **4.7** | **24.0** | <1.0 | NA |
| CRHE-DPT0072-058.0-20100203 | 2/3/10 | Water | 5 | **4 J** | <5.0 | <5.0 | **100** | **210** | <5.0 | NA |
| CRHE-DPT0072-063.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **15.8** | **43.8** | <1.0 | NA |
| CRHE-DPT0073-028.0-20100203 | 2/3/10 | Water | 1 | **2.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0073-038.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **1.6** | <1.0 | NA |
| CRHE-DPT0073-043.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0073-048.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0073-058.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0074-028.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0074-038.0-20100203 | 2/3/10 | Water | 500 | **7200** | <500 | <500 | **18000** | **8100** | <500 | NA |
| CRHE-DPT0074-043.0-20100203 | 2/3/10 | Water | 100 | **1300** | <100 | <100 | **4000** | **2900** | <100 | NA |
| CRHE-DPT0074-048.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **3.6** | **4.2** | <1.0 | NA |
| CRHE-DPT0074-058.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **2.9** | **2.5** | <1.0 | NA |
| CRHE-DPT0074-063.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **2.0** | **1.7** | <1.0 | NA |
| CRHE-DPT0074-010.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0074-018.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0073-010.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0073-018.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0072-010.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0072-018.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☐ 25132 SW 1st Avenue
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TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KS3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE NASA KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER KS3+D/25/10 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0045-018.0 | 1/25/10 | 0900 | | | 1/25/10 | 0928 | | GW | 2 | ✓ | |
| 028.0 | | 0910 | | | | 0928 | | | | | |
| 038.0 | | 0921 | | | | 0953 | | | | | |
| 048.0 | | 0940 | | | | 0953 | | | | | |
| 048.0 | | 0957 | | | | 1033 | | | | | |
| 058.0 | | 1010 | | | | 1030 | | | | | |
| DPT0046-018.0 | | 1150 | | | | 1209 | | | | | |
| 028.0 | | 1115 | | | | 1200 | | | | | |
| 038.0 | | 1120 | | | | 1240 | | | | | |
| 048.0 | | 1235 | | | | 1240 | | | | | |
| 048.0 | | 1250 | | | | 1320 | | | | | |
| 058.0 | | 1310 | | | | 1320 | | | | | |
| 010.0 | | 1340 | | | | 1405 | | | | | |
| DPT0045-010.0 | | 1400 | | | | 1405 | | | | | |
| DPT0047-010.0 | | 1415 | | | | 1434 | | | | | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| | | | 1/25/10 |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time |

**Remarks and Observations**
Client requested change of all sample IDs to 'D' in the second digit of DPT, ie DPT0445 instead of DPT0045 SH

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
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**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CTRE NASA KSC FL

SAMPLERS:

CONTACT PERSON:

BATCH # (Lab Use Only):

| SAMPLE FIELD ID \ NUMBER KB3+012510 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT047-018.0 | 1/25/10 | 1425 | | | 1/25/10 | 1434 | | GW | 2 | ✓ | |
| 028.0 | | 1440 | | | | 1455 | | | | | |
| 038.0 | | 1450 | | | | 1455 | | | | | |
| 043.0 | | 1525 | | | | 1536 | | | | | |
| DPT0447-048.0 | | 1540 | | | | 1605 | | | | | |
| " 058.0 | | 1600 | | | | 1605 | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 1/25/10 | **Remarks and Observations**<br>all DPT047s should be changed to DPT0447 by client |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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**MOBILE UNIT #** 1CB3

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CAPE XNASA KSCFL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3 #012610 | | | | | | | | | | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS | PRESERVATION: C Chilled, H HCL, Ot Other (see Remarks) |
| DPT044B - 010.0 | 1/26/10 | 0800 | | | 1/26/10 | 0830 | | GW | 2 | ✓ | |
| 018.0 | | 0810 | | | | 0830 | | | | | |
| 028.0 | | 0825 | | | | 0900 | | | | | |
| 038.0 | | 0845 | | | | 0900 | | | | | |
| 043.0 | | 0900 | | | | 0934 | | | | | |
| 048.0 | | 0915 | | | | 0934 | | | | | |
| 058.0 | | 0940 | | | | 1018 | | | | | |
| DPT044B - 02F.0 | | 1005 | | | | 1018 | | | | | |
| 03F.0 | | 1015 | | | | 1040 | | | | | |
| 043.0 | | 1045 | | | | 1108 | | | | | |
| 048.0 | | 1100 | | | | 1108 | | | | | |
| 058.0 | | 1115 | | | | 1130 | | | | | |
| DPT0452 - 010.0 | | 1240 | | | | 1240 | | | | | |
| 018.0 | | 1225 | | | | 1240 | | | | | |
| 028.0 | | 1235 | | | | 1305 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 1/26/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE NASA KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3 + 01/26/10 | | | | | | | | | | | |
| DPT0450 - 038.0 | 1/26/10 | 1300 | | | 1/26/10 | 1305 | | GW | 2 | ✓ | |
| 043.0 | | 1315 | | | | 1355 | | | | | |
| 048.0 | | 1330 | | | | ↓ | | | | | |
| 058.0 | | 1345 | | | | | | | | | |
| DPT0451 - 025.0 | | 1430 | | | | 1500 | | | | | |
| 038.0 | | 1445 | | | | 1500 | | | | | |
| 043.0 | ↓ | 1455 | | | ↓ | 1515 | | ↓ | ↓ | ↓ | |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | 1/26/10 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec
PROJECT NAME & ADDRESS: CTR2 NASA KSC, FL
SAMPLERS
CONTACT PERSON
BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3X012710 | | | | | | | | | | | |
| DPT0451-048.0 | 1/21/10 | 0755 | | | 1/22/10 | 0830 | | GW | 2 | ✓ | |
| " -058.0 | | 0815 | | | | 0830 | | | | | |
| DPT0452-028.0 | | 0850 | | | | 0910 | | | | | |
| 038.0 | | 0900 | | | | 0910 | | | | | |
| 043.0 | | 0920 | | | | 0940 | | | | | |
| 048.0 | | 0935 | | | | 0940 | | | | | |
| 058.0 | | 0955 | | | | 1020 | | | | | |
| 063.0 | | 1010 | | | | 1020 | | | | | |
| DPT0453-028.0 | | 1045 | | | | 1108 | | | | | |
| 038.0 | | 1100 | | | | 1108 | | | | | |
| 048.0 | | 1120 | | | | 1140 | | | | | |
| 048.0 | | 1135 | | | | 1140 | | | | | |
| 058.0 | | 1225 | | | | 1235 | | | | | |
| DPT0454-028.0 | | 1305 | | | | 1325 | | | | | |
| " 038.0 | | 1320 | | | | 1325 | | | | | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | 1/22/10 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CTRE NASA KSC FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER KB3*012710 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0454-043.0 | 1/27/10 | 1335 | | | 1/27/10 | 1400 | | GW | 2 | ✓ | |
| 046.0 | | 1355 | | | | 1400 | | | | | |
| 058.0 | | 1410 | | | | 1440 | | | | | |
| 063.0 | | 1430 | | | | 1440 | | | | | |
| DPT0455-028.0 | / | 1525 | | | | 1535 | | | | | |
| 038.0 | | 1530 | | | | 1535 | | | | | |
| 043.0 | | 1545 | | | | 1615 | | | | | |
| 048.0 | | 1600 | | | | 1615 | | | | | |
| 058.0 | | 1620 | | | | 1655 | | | | | |
| 063.0 | | 1645 | | | | 1655 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 1/27/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CTRE NASA KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER KB3*012810 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0457-010.0 | 1/28/10 | 0800 | | | 1/28/10 | 0815 | | GW | 2 | ✓ | |
| 018.0 | | 0810 | | | | 0815 | | | | | |
| 028.0 | | 0825 | | | | 0840 | | | | | |
| 038.0 | | 0835 | | | | 0840 | | | | | |
| 043.0 | | 0850 | | | | 0915 | | | | | |
| 048.0 | | 0910 | | | | 0915 | | | | | |
| 058.0 | | 0945 | | | | 0953 | | | | | |
| DPT0457-028.0 | | 1010 | | | | 1034 | | | | | |
| 038.0 | | 1025 | | | | 1034 | | | | | |
| 043.0 | | 1045 | | | | 1110 | | | | | |
| 048.0 | | 1100 | | | | 1110 | | | | | |
| 058.0 | | 1120 | | | | 1130 | | | | | |
| DPT0458-028.0 | | 1225 | | | | 1245 | | | | | |
| -038.0 | | 1240 | | | | 1245 | | | | | |
| -043.0 | | 1255 | | | | 1320 | | | | | |

| | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time |

1/28/10

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services


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TEL (919) 678-0030


**MOBILE UNIT #** 1653

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CH2E MASA ICSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KG3 * 01/28/10 | | | | | | | | | | | |
| DPT 0458 – 048.0 | 1/28/10 | 1310 | | | 1/28/10 | 1320 | | GW | 6 | ✓ | |
| 053.0 | | 1330 | | | | 1400 | | | | | |
| 063.0 | | 1350 | | | | 1400 | | | | | |
| DPT 0459 – 028.0 | | 1435 | | | | 1455 | | | | | |
| 038.0 | | 1450 | | | | 1455 | | | | | |
| 043.0 | | 1505 | | | | 1550 | | | | | |
| 048.0 | | 1520 | | | | ↓ | | | | | |
| 058.0 | | 1540 | | | | ↓ | | | | | |
| DPT 0460 028.0 | | 1615 | | | | 1650 | | | | | |
| 11 038.0 | ↓ | 1640 | | | ↓ | 1650 | | ↓ | ↓ | ↓ | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 1/28/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | | Received by: *(Signature)* | | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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**MOBILE UNIT #** K93

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CTRE NASA KSC FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| K93+0129 10 | | | | | | | | | | | |
| DPT 04C0 - 043.0 | 4/29/10 | 0730 | | | 4/29/10 | 0745 | | GW | 1 | ✓ | |
| DPT 0461 - 028.0 | | 0815 | | | | 0830 | | | | | |
| 038.0 | | 0825 | | | | 0830 | | | | | |
| 043.0 | | 0845 | | | | 0915 | | | | | |
| 048.0 | | 0900 | | | | 0915 | | | | | |
| 058.0 | | 0930 | | | | 0940 | | | | | |
| 063.0 | | 0950 | | | | 1000 | | | | | |
| DPT 046L - 010.0 | | 1020 | | | | 1035 | | | | | |
| 018.0 | | 1030 | | | | 1035 | | | | | |
| 028.0 | | 1040 | | | | 1055 | | | | | |
| 038.0 | | 1050 | | | | 1055 | | | | | |
| 043.0 | | 1120 | | | | 1130 | | | | | |
| 048.0 | | 1145 | | | | 1206 | | | | | |
| 058.0 | | 1200 | | | | 1206 | | | | | |
| DPT 0463 - 028.0 | | 1305 | | | | 1330 | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | 4/29/10 |
| Relinquished by: (Signature) | | Received by: (Signature) | |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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**MOBILE UNIT #** K83

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE NASA KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID \ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| K83* 012910 | | | | | | | | | | | |
| DPT0463-038.0 | 1/29/10 | 1320 | | | 1/29/10 | 1330 | | GW | 2 | ✓ | |
| -043.0 | ↓ | 1340 | | | ↓ | 1343 | | ↓ | ↓ | ↓ | |
| -048.0 | | 1358 | | | | 1358 | | | | | |
| 058.0 | | 1415 | | | | 1416 | | | | | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | 1/29/10 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec | PROJECT NAME & ADDRESS: CHRE NASA KSC, FL

SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only)

**PRESERVATION**: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3-020110 | | | | | | | | | | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS | |
| DPT0464-038.0 | 2/1/10 | 0810 | | | 2/1/10 | 0815 | | GW | 2 | | |
| 038.0 | | 0826 | | | | 0830 | | | | | |
| 043.0 | | 0844 | | | | 0849 | | | | | |
| 048.0 | | 0902 | | | | 0906 | | | | | |
| 058.0 | | 0922 | | | | 0945 | | | | | |
| 063.0 | | 0938 | | | | 0945 | | | | | |
| DPT0065-028.0 | | 1023 | | | | 1043 | | | | | |
| 038.0 | | 1038 | | | | 1043 | | | | | |
| 043.0 | | 1051 | | | | 1112 | | | | | |
| 048.0 | | 1109 | | | | 1112 | | | | | |
| 058.0 | | 1117 | | | | 1154 | | | | | |
| 063.0 | | 1143 | | | | 1154 | | | | | |
| DPT0066-028.0 | | 1315 | | | | 1325 | | | | | switch sample ID # 38.0 / 28.0 |
| 038.0 | | 1300 | | | | 1325 | | | | | |
| 043.0 | | 1332 | | | | 1354 | | | | | |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 2/1/10 | not DPT0464 changed to DPT0064 by client. RJF |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB-3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE NASA ICSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3X020110 | | | | | | | | | | | |
| DPT0066-048.0 | 2/1/10 | 1349 | | | 2/1/10 | 1354 | | GW | 2 | ✓ | |
| " 058.0 | | 1407 | | | | 1419 | | | | | |
| DPT0067-018.0 | | 1445 | | | | 1450 | | | | | |
| 028.0 | | 1513 | | | | 1515 | | | | | |
| 038.0 | | 1525 | | | | 1527 | | | | | |
| 043.0 | | 1537 | | | | 1541 | | | | | |
| 048.0 | | 1553 | | | | 1555 | | | | | |
| 058.0 | ✓ | 1610 | | | ✓ | 1615 | | ✓ | ✓ | ✓ | |
| | | 1630 | | | | 1635 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 2/1/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHE NASA KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3 * 020210 | | | | | | | | | | | |
| DPT0068 - 028.0 | 2/2/10 | 0800 | | | 2/2/10 | 0805 | | GW | 2 | ✓ | |
| 038.0 | | 0812 | | | | 0816 | | | | | |
| 043.0 | | 0828 | | | | 0830 | | | | | |
| 048.0 | | 0845 | | | | 0852 | | | | | |
| 058.0 | | 0900 | | | | 0910 | | | | | |
| DPT0069 - 010.0 | | 0927 | | | | 0930 | | | | | |
| 018.0 | | 0951 | | | | 0953 | | | | | |
| 028.0 | | 1003 | | | | 1004 | | | | | |
| 038.0 | | 1240 | | | | 1245 | | | | | |
| 043.0 | | 1257 | | | | 1300 | | | | | |
| 048.0 | | 1313 | | | | 1315 | | | | | |
| 058.0 | | 1330 | | | | 1335 | | | | | |
| DPT0070 - 028.0 | | 1412 | | | | 1420 | | | | | |
| 038.0 | | 1423 | | | | 1426 | | | | | |
| 043.0 | | 1437 | | | | 1440 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 2/2/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (919) 678-0030

**MOBILE UNIT #** K53

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CH2E NAS JAX FSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER K53+0202/0 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0070-048.0 | 2/2/10 | 1457 | | | 2/2/10 | 1455 | | GW | 2 | | |
| " 058.0 | ↓ | 1507 | | | ↓ | 1514 | | ↓ | ↓ | ↓ | |
| DPT0071-028.0 | | 1535 | | | | 1537 | | | | | |
| 038.0 | | 1557 | | | | 1600 | | | | | |
| 043.0 | | 1611 | | | | 1615 | | | | | |
| 048.0 | | 1624 | | | | 1628 | | | | | |
| 058.0 | | 1640 | | | | 1647 | | | | | |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | 2/2/10 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** 1483

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE MASA ISC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3*0203/0 | | | | | | | | | | | |
| PT0072-028.0 | 2/3/10 | 0747 | | | 2/3/10 | 0800 | | GW | 2 | ✓ | |
| -038.0 | | 0804 | | | | 0810 | | | | | |
| 043.0 | | 0819 | | | | 0840 | | | | | |
| 048.0 | | 0833 | | | | 0840 | | | | | |
| 058.0 | | 0850 | | | | 0914 | | | | | |
| 063.0 | | 0906 | | | | 0914 | | | | | |
| PT0073-028.0 | | 0943 | | | | 0944 | | | | | |
| 038.0 | | 0959 | | | | 1015 | | | | | |
| 043.0 | | 1010 | | | | 1015 | | | | | |
| 048.0 | | 1025 | | | | 1048 | | | | | |
| 058.0 | | 1041 | | | | 1045 | | | | | |
| PT0074-028.0 | | 1115 | | | | 1225 | | | | | |
| 038.0 | | 1125 | | | | 1225 | | | | | |
| 043.0 | | 1226 | | | | 1247 | | | | | |
| 048.0 | | 1242 | | | | 1247 | | | | | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | 2/3/10 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CH2E NASA KSC FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3 7020310 | | | | | | | | | | | |
| DATG074 – 058.0 | 2/3/10 | 1259 | | | 2/3/10 | 1305 | | GW | 2 | ✓ | |
| " 063.0 | ↓ | 1315 | | | ↓ | 1315 | | ↓ | ↓ | ↓ | |
| DPT074 – 010.0 | | 1341 | | | | 1347 | | | | | |
| " 018.0 | | 1350 | | | | 1354 | | | | | |
| DPT 073/100 | | 1411 | | | | 1420 | | | | | |
| " 018.0 | | 1417 | | | | 1420 | | | | | |
| DPT072 – 010.0 | | 1433 | | | | 1500 | | | | | |
| " 018.0 | ↓ | 1445 | | | ↓ | 1509 | | ↓ | ↓ | ↓ | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 2/3/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

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***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

March 3, 2010

Jill Johnson
GeoSyntec Consultants
9511 Holsberry Lane, Suite A
Pensacola, FL 32534

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 10-37**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from February 22 to March 2, 2010. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

*KB Labs, Inc.*
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*Email: info@kbmobilelabs.com*

# PROJECT NARRATIVE

## Project Scope

From February 22 to March 2, 2010, a total of 150 water samples were analyzed for GeoSyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB1: FDOH NELAP Certification Number E82815

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0

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ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

---

# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. Sample ID CRHE-DPT0089-043.0 reported trichloroethene 5200 changed to 520ug/L.

3. As per client request, all diluted samples with values between the EL and MDL are reported and identified with FDEP Data Qualifier "I".

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-37 |
| **On-site Dates**: 2/22/10-3/2/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| VSTD 20 | 02/22/10 | 90 | 82 | 99 | 88 | Pass | Pass | Pass | Pass |
| RSTD 20 | 02/22/10 | 84 | 89 | 94 | 89 | Pass | Pass | Pass | Pass |
| BLANK | 02/22/10 | 94 | 97 | 93 | 84 | Pass | Pass | Pass | Pass |
| BLANK | 02/22/10 | 95 | 94 | 95 | 91 | Pass | Pass | Pass | Pass |
| RSTD 20 | 02/22/10 | 98 | 83 | 96 | 90 | Pass | Pass | Pass | Pass |
| BLANK | 02/22/10 | 90 | 92 | 100 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-018.0 | 02/22/10 | 104 | 94 | 93 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-028.0 | 02/22/10 | 95 | 91 | 96 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-038.0 | 02/22/10 | 95 | 90 | 97 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-043.0 | 02/22/10 | 94 | 90 | 95 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-048.0 | 02/22/10 | 96 | 91 | 96 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-058.0 | 02/22/10 | 96 | 88 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-018.0 MS | 02/22/10 | 94 | 81 | 97 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-018.0 MSD | 02/22/10 | 91 | 79 | 97 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0076-018.0 | 02/22/10 | 98 | 88 | 95 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0076-028.0 | 02/22/10 | 94 | 94 | 95 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0076-038.0 | 02/22/10 | 109 | 94 | 97 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0076-043.0 | 02/22/10 | 101 | 95 | 96 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0076-048.0 | 02/22/10 | 100 | 97 | 94 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0076-058.0 | 02/22/10 | 101 | 95 | 94 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-018.0 | 02/22/10 | 96 | 93 | 93 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-028.0 | 02/22/10 | 98 | 94 | 96 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-038.0 | 02/22/10 | 98 | 94 | 96 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-043.0 | 02/22/10 | 99 | 97 | 94 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-048.0 | 02/22/10 | 103 | 95 | 91 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-058.0 | 02/22/10 | 101 | 96 | 92 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-018.0 | 02/22/10 | 100 | 92 | 94 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-028.0 | 02/22/10 | 101 | 91 | 98 | 87 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/22/10 | 93 | 83 | 95 | 87 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/23/10 | 92 | 79 | 95 | 85 | Pass | Pass | Pass | Pass |
| RSTD 20 | 02/23/10 | 88 | 84 | 96 | 87 | Pass | Pass | Pass | Pass |
| BLANK | 02/23/10 | 106 | 97 | 95 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-058.0 MS | 02/23/10 | 94 | 82 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-058.0 MSD | 02/23/10 | 90 | 80 | 96 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-038.0 | 02/23/10 | 97 | 84 | 96 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-043.0 | 02/23/10 | 98 | 87 | 92 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-048.0 | 02/23/10 | 98 | 87 | 91 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-058.0 | 02/23/10 | 96 | 79 | 95 | 83 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-37 |
| **On-site Dates**: 2/22/10-3/2/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0079-018.0 | 02/23/10 | 99 | 83 | 93 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-058.0 MS | 02/23/10 | 89 | 79 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-058.0 MSD | 02/23/10 | 92 | 78 | 96 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0079-028.0 | 02/23/10 | 110 | 98 | 92 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0079-038.0 | 02/23/10 | 96 | 93 | 90 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0079-038.0 1:5 | 02/23/10 | 93 | 90 | 94 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0079-048.0 | 02/23/10 | 101 | 94 | 92 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0079-043.0 | 02/23/10 | 105 | 96 | 93 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0079-058.0 | 02/23/10 | 97 | 94 | 92 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-018.0 | 02/23/10 | 100 | 91 | 90 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-028.0 | 02/23/10 | 102 | 92 | 93 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-038.0 | 02/23/10 | 97 | 88 | 91 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-038.0 1:100 | 02/23/10 | 101 | 91 | 91 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-043.0 | 02/23/10 | 84 | 89 | 93 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-043.0 1:100 | 02/23/10 | 103 | 92 | 93 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-048.0 | 02/23/10 | 101 | 90 | 91 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-058.0 | 02/23/10 | 104 | 92 | 92 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0081-028.0 | 02/23/10 | 101 | 89 | 93 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0081-038.0 | 02/23/10 | 98 | 86 | 94 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0081-043.0 | 02/23/10 | 99 | 83 | 91 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0081-048.0 | 02/23/10 | 104 | 90 | 92 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0081-058.0 | 02/23/10 | 104 | 90 | 91 | 82 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/23/10 | 93 | 78 | 92 | 85 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/24/10 | 88 | 75 | 96 | 84 | Pass | Pass | Pass | Pass |
| RSTD 20 | 02/24/10 | 93 | 79 | 96 | 83 | Pass | Pass | Pass | Pass |
| BLANK | 02/24/10 | 99 | 84 | 98 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-010.0 | 02/24/10 | 98 | 86 | 92 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-018.0 | 02/24/10 | 102 | 82 | 95 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-028.0 | 02/24/10 | 98 | 84 | 92 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-033.0 | 02/24/10 | 103 | 85 | 92 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-038.0 | 02/24/10 | 102 | 85 | 92 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-043.0 | 02/24/10 | 102 | 85 | 93 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-048.0 | 02/24/10 | 104 | 87 | 91 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-010.0 MS | 02/24/10 | 94 | 75 | 94 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-010.0 MSD | 02/24/10 | 93 | 76 | 96 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0083-010.0 | 02/24/10 | 100 | 86 | 94 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0083-018.0 | 02/24/10 | 98 | 86 | 92 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0083-028.0 | 02/24/10 | 103 | 88 | 90 | 79 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-37 |
| **On-site Dates**: 2/22/10-3/2/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0083-033.0 | 02/24/10 | 101 | 87 | 92 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0083-038.0 | 02/24/10 | 98 | 88 | 94 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0083-043.0 | 02/24/10 | 100 | 84 | 91 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0083-048.0 | 02/24/10 | 100 | 86 | 90 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-010.0 | 02/24/10 | 101 | 88 | 90 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-018.0 | 02/24/10 | 98 | 84 | 87 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-028.0 | 02/24/10 | 101 | 82 | 91 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-033.0 | 02/24/10 | 98 | 83 | 89 | 79 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-038.0 | 02/24/10 | 99 | 80 | 91 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-043.0 | 02/24/10 | 97 | 80 | 90 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-048.0 | 02/24/10 | 103 | 83 | 90 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-018.0 MS | 02/24/10 | 93 | 77 | 90 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-018.0 MSD | 02/24/10 | 91 | 72 | 91 | 84 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/24/10 | 95 | 79 | 93 | 90 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/25/10 | 90 | 81 | 92 | 79 | Pass | Pass | Pass | Pass |
| RSTD 20 | 02/25/10 | 93 | 80 | 91 | 83 | Pass | Pass | Pass | Pass |
| BLANK | 02/25/10 | 100 | 82 | 94 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-018.0 | 02/25/10 | 93 | 78 | 88 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-010.0 | 02/25/10 | 98 | 82 | 92 | 79 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-028.0 | 02/25/10 | 107 | 88 | 92 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-033.0 | 02/25/10 | 98 | 81 | 90 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-038.0 | 02/25/10 | 100 | 81 | 91 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-043.0 | 02/25/10 | 100 | 79 | 90 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-048.0 | 02/25/10 | 95 | 81 | 90 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-010.0 1:100 | 02/25/10 | 103 | 84 | 89 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-018.0 1:50 | 02/25/10 | 89 | 74 | 88 | 79 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-010.0 MS | 02/25/10 | 93 | 72 | 91 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-010.0 MSD | 02/25/10 | 93 | 81 | 92 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-028.0 1:5 | 02/25/10 | 98 | 82 | 94 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-033.0 1:100 | 02/25/10 | 100 | 82 | 90 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-038.0 | 02/25/10 | 104 | 88 | 88 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-043.0 | 02/25/10 | 101 | 91 | 84 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-048.0 | 02/25/10 | 108 | 92 | 55 | 75 | Pass | Pass | < LCL | Pass |
| CRHE-DPT0086-033.0 | 02/25/10 | 101 | 90 | 87 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0087-010.0 | 02/25/10 | 97 | 82 | 91 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0087-018.0 | 02/25/10 | 98 | 83 | 89 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0087-028.0 | 02/25/10 | 101 | 84 | 89 | 73 | Pass | Pass | Pass | Pass |
| CRHE-DPT0087-033.0 | 02/25/10 | 102 | 83 | 87 | 79 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-37 |
| **On-site Dates**: 2/22/10-3/2/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0087-038.0 | 02/25/10 | 98 | 78 | 91 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0087-043.0 | 02/25/10 | 97 | 77 | 92 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0087-048.0 | 02/25/10 | 101 | 80 | 90 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0088-010.0 | 02/25/10 | 100 | 79 | 88 | 77 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/25/10 | 94 | 75 | 88 | 77 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/26/10 | 94 | 82 | 90 | 77 | Pass | Pass | Pass | Pass |
| RSTD 20 | 02/26/10 | 93 | 78 | 88 | 76 | Pass | Pass | Pass | Pass |
| BLANK | 02/26/10 | 101 | 84 | 90 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0088-018.0 | 02/26/10 | 99 | 83 | 88 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0088-028.0 | 02/26/10 | 99 | 80 | 90 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0088-033.0 | 02/26/10 | 99 | 80 | 89 | 74 | Pass | Pass | Pass | Pass |
| CRHE-DPT0088-038.0 1:500 | 02/26/10 | 99 | 85 | 86 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0088-043.0 1:200 | 02/26/10 | 97 | 80 | 85 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0088-048.0 | 02/26/10 | 99 | 80 | 89 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-010.0 | 02/26/10 | 101 | 80 | 90 | 79 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-018.0 | 02/26/10 | 100 | 82 | 89 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-028.0 | 02/26/10 | 101 | 80 | 89 | 74 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-033.0 | 02/26/10 | 104 | 82 | 88 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-038.0 | 02/26/10 | 99 | 81 | 86 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-043.0 1:200 | 02/26/10 | 95 | 79 | 87 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-048.0 | 02/26/10 | 101 | 84 | 88 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0090-010.0 | 02/26/10 | 100 | 81 | 86 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0090-018.0 | 02/26/10 | 101 | 84 | 85 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0090-028.0 | 02/26/10 | 102 | 87 | 86 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0090-033.0 | 02/26/10 | 97 | 86 | 89 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0090-038.0 | 02/26/10 | 98 | 82 | 89 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0090-043.0 | 02/26/10 | 102 | 81 | 89 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0090-048.0 | 02/26/10 | 100 | 82 | 92 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-038.0 1:5 | 02/26/10 | 103 | 84 | 87 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-014.0 1:100 | 02/26/10 | 98 | 81 | 90 | 73 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-023.0 1:20 | 02/26/10 | 97 | 84 | 88 | 71 | Pass | Pass | Pass | < LCL |
| VSTD 20 | 02/26/10 | 94 | 75 | 88 | 76 | Pass | Pass | Pass | Pass |
| VSTD 20 | 03/01/10 | 91 | 76 | 92 | 75 | Pass | Pass | Pass | Pass |
| RSTD 20 | 03/01/10 | 89 | 77 | 92 | 74 | Pass | Pass | Pass | Pass |
| BLANK | 03/01/10 | 95 | 81 | 92 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-010.0 | 03/01/10 | 92 | 79 | 91 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-018.0 | 03/01/10 | 95 | 78 | 89 | 74 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-028.0 | 03/01/10 | 96 | 82 | 90 | 74 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-37 |
| **On-site Dates**: 2/22/10-3/2/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0091-033.0 | 03/01/10 | 95 | 81 | 92 | 73 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-018.0 MS | 03/01/10 | 92 | 79 | 91 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-018.0 MSD | 03/01/10 | 88 | 76 | 93 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-038.0 | 03/01/10 | 94 | 77 | 94 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-043.0 | 03/01/10 | 96 | 80 | 90 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-048.0 | 03/01/10 | 93 | 83 | 86 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0092-010.0 | 03/01/10 | 104 | 87 | 88 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0092-014.0 1:50 | 03/01/10 | 100 | 92 | 86 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0092-018.0 1:1000 | 03/01/10 | 97 | 87 | 90 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0092-028.0 1:5 | 03/01/10 | 92 | 79 | 88 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0092-033.0 1:200 | 03/01/10 | 102 | 90 | 90 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0092-038.0 1:100 | 03/01/10 | 98 | 87 | 88 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0092-043.0 | 03/01/10 | 102 | 87 | 86 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0092-048.0 | 03/01/10 | 97 | 86 | 88 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0093-010.0 | 03/01/10 | 100 | 88 | 88 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-014.0 | 03/01/10 | 98 | 84 | 88 | 73 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-018.0 | 03/01/10 | 101 | 84 | 90 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-028.0 | 03/01/10 | 101 | 88 | 85 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-033.0 | 03/01/10 | 102 | 83 | 89 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-038.0 | 03/01/10 | 99 | 83 | 89 | 74 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-043.0 | 03/01/10 | 105 | 86 | 90 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-048.0 | 03/01/10 | 101 | 86 | 88 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0094-010.0 | 03/01/10 | 103 | 89 | 87 | 73 | Pass | Pass | Pass | Pass |
| CRHE-DPT0094-018.0 | 03/01/10 | 102 | 92 | 86 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0094-028.0 | 03/01/10 | 102 | 92 | 86 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-028.0 MS | 03/01/10 | 99 | 85 | 85 | 73 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-028.0 MSD | 03/01/10 | 96 | 94 | 85 | 75 | Pass | Pass | Pass | Pass |
| VSTD 20 | 03/01/10 | 96 | 97 | 80 | 69 | Pass | Pass | Pass | < LCL |
| VSTD 20 | 03/02/10 | 95 | 86 | 82 | 76 | Pass | Pass | Pass | Pass |
| RSTD 20 | 03/02/10 | 97 | 81 | 89 | 70 | Pass | Pass | Pass | < LCL |
| BLANK | 03/02/10 | 88 | 89 | 89 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0094-033.0 | 03/02/10 | 98 | 85 | 86 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0094-038.0 | 03/02/10 | 97 | 78 | 83 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0094-043.0 | 03/02/10 | 99 | 83 | 87 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0094-048.0 | 03/02/10 | 99 | 79 | 86 | 69 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0095-010.0 | 03/02/10 | 98 | 78 | 87 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0095-018.0 | 03/02/10 | 101 | 78 | 88 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0095-028.0 | 03/02/10 | 96 | 78 | 86 | 71 | Pass | Pass | Pass | < LCL |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-37 |
| **On-site Dates**: 2/22/10-3/2/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0095-033.0 | 03/02/10 | 102 | 86 | 87 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0095-038.0 | 03/02/10 | 102 | 85 | 85 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0095-043.0 | 03/02/10 | 95 | 84 | 87 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0095-048.0 | 03/02/10 | 100 | 84 | 86 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0096-010.0 | 03/02/10 | 100 | 84 | 88 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0096-018.0 1:5 | 03/02/10 | 99 | 84 | 85 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0096-028.0 1:2000 | 03/02/10 | 103 | 90 | 84 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0096-033.0 1:500 | 03/02/10 | 99 | 89 | 85 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0096-038.0 | 03/02/10 | 96 | 85 | 88 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0096-038.0 1:20 | 03/02/10 | 99 | 85 | 84 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0096-043.0 | 03/02/10 | 101 | 86 | 86 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0096-048.0 | 03/02/10 | 103 | 84 | 86 | 70 | Pass | Pass | Pass | < LCL |
| VSTD 20 | 03/02/10 | 93 | 74 | 86 | 75 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-37 |
| **Onsite Dates:** 2/22/10-3/2/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0075-018.0 **Date of Analysis:** 2/22/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 105 | 100 | 4 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 81 | 79 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 83 | 83 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 82 | 80 | 3 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 85 | 89 | 4 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 94 | 95 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0077-058.0 **Date of Analysis:** 2/22/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 110 | 106 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 82 | 82 | 0 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 85 | 84 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 84 | 85 | 1 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 94 | 92 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 101 | 104 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0078-058.0 **Date of Analysis:** 2/23/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 104 | 104 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 78 | 78 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 79 | 82 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 77 | 78 | 2 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 86 | 89 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 93 | 97 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0082-010.0 **Date of Analysis:** 2/24/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 106 | 106 | 0 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 77 | 76 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 78 | 81 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 80 | 81 | 1 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 87 | 89 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 96 | 104 | 9 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-37 |
| **Onsite Dates:** 2/22/10-3/2/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT0084-018.0 **Date of Analysis:** 2/24/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 105 | 106 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 76 | 77 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 80 | 78 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 82 | 86 | 4 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 89 | 91 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 95 | 103 | 8 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0085-010.0 **Date of Analysis:** 2/25/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 106 | 107 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 78 | 79 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 80 | 81 | 0 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 82 | 80 | 3 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 91 | 95 | 5 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 94 | 104 | 10 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0091-018.0 **Date of Analysis:** 3/1/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 105 | 99 | 6 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 78 | 73 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 83 | 76 | 9 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 83 | 77 | 8 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 90 | 88 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 104 | 111 | 6 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0093-028.0 **Date of Analysis:** 3/1/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 99 | 93 | 6 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 70 | 69 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 72 | 70 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 77 | 73 | 6 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 86 | 82 | 5 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 101 | 96 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-37 |
| **Onsite Dates:** 2/22/10-3/2/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1, LCS 2, LCS 3 **Date of Analysis:** 2/22/2010, 2/23/2010, 2/24/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 28 | to | 161 | 61 | 111 | 111 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 43 | to | 156 | 65 | 80 | 75 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 67 | 84 | 78 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 76 | 82 | 78 | Pass | Pass | Pass |
| Trichloroethene | 47 | to | 164 | 80 | 91 | 89 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | to | 151 | 87 | 98 | 98 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4, LCS 5, LCS 6 **Date of Analysis:** 2/25/2010, 2/26/2010, 3/1/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | LCS#6 | LCS#4 | LCS#5 | LCS#6 |
| Vinyl Chloride | 28 | to | 161 | 110 | 113 | 106 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 43 | to | 156 | 77 | 78 | 71 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 78 | 82 | 74 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 78 | 82 | 75 | Pass | Pass | Pass |
| Trichloroethene | 47 | to | 164 | 87 | 91 | 82 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | to | 151 | 99 | 103 | 102 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 7 **Date of Analysis:** 3/2/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#7 | | | LCS#7 | | |
| Vinyl Chloride | 28 | to | 161 | 99 | | | Pass | | |
| 1,1-Dichloroethene | 43 | to | 156 | 73 | | | Pass | | |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 76 | | | Pass | | |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 82 | | | Pass | | |
| Trichloroethene | 47 | to | 164 | 89 | | | Pass | | |
| Tetrachloroethene | 60 | to | 151 | 112 | | | Pass | | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0075-018.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0075-028.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0075-038.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0075-043.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0075-048.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0075-058.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0076-018.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0076-028.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0076-038.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0076-043.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0076-048.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0076-058.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0077-018.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0077-028.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0077-038.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0077-043.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0077-048.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0077-058.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0078-018.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0078-028.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0078-038.0-20100223 | 2/23/10 | Water | 1 | **9.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0078-043.0-20100223 | 2/23/10 | Water | 1 | **5.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0078-048.0-20100223 | 2/23/10 | Water | 1 | **4.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0078-058.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0079-018.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0079-028.0-20100223 | 2/23/10 | Water | 1 | **3.2** | <1.0 | <1.0 | **6.7** | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0079-038.0-20100223 | 2/23/10 | Water | 1, 5 | **71.9** | <1.0 | **1.2** | **140** | <1.0 | <1.0 |
| CRHE-DPT0079-043.0-20100223 | 2/23/10 | Water | 1 | **2.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0079-048.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0079-058.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0080-018.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0080-028.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0080-038.0-20100223 | 2/23/10 | Water | 1, 100 | **1400** | <1.0 | **5.4** | **9.0** | <1.0 | <1.0 |
| CRHE-DPT0080-043.0-20100223 | 2/23/10 | Water | 1,100 | **2800** | <1.0 | **15.2** | **21.6** | <1.0 | <1.0 |
| CRHE-DPT0080-048.0-20100223 | 2/23/10 | Water | 1 | **75.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0080-058.0-20100223 | 2/23/10 | Water | 1 | **2.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0081-028.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0081-038.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0081-043.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0081-048.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0081-058.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0082-010.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0082-018.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0082-028.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0082-033.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0082-038.0-20100224 | 2/24/10 | Water | 1 | **2.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0082-043.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0082-048.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0083-010.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0083-018.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0083-028.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0083-033.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0083-038.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0083-043.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0083-048.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0084-010.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0084-018.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0084-028.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0084-033.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0084-038.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0084-043.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0084-048.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0085-010.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0085-018.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0085-028.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0085-033.0-20100225 | 2/25/10 | Water | 1 | **1.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0085-038.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0085-043.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0085-048.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0086-010.0-20100225 | 2/25/10 | Water | 100 | **560** | <100 | <100 | **1000** | <100 | <100 |
| CRHE-DPT0086-018.0-20100225 | 2/25/10 | Water | 50 | **680** | <50 | **56** | **5100** | <50 | <50 |
| CRHE-DPT0086-028.0-20100225 | 2/25/10 | Water | 5 | **55** | <5 | <5 | **96** | <5 | <5 |
| CRHE-DPT0086-033.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.4** | <1.0 | <1.0 |
| CRHE-DPT0086-038.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.1** | <1.0 | <1.0 |
| CRHE-DPT0086-043.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0086-048.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0087-010.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0087-018.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0087-028.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0087-033.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0087-038.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0087-043.0-20100225 | 2/25/10 | Water | 1 | **65.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0087-048.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0088-010.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0088-018.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0088-028.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0088-033.0-20100226 | 2/26/10 | Water | 1 | **16.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0088-038.0-20100226 | 2/26/10 | Water | 500 | **13000** | <500 | <500 | **14000** | **6000** | <500 |
| CRHE-DPT0088-043.0-20100226 | 2/26/10 | Water | 200 | **1500** | <200 | <200 | **4200** | **4800** | <200 |
| CRHE-DPT0088-048.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.3** | **1.3** | <1.0 |
| CRHE-DPT0089-010.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0089-018.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0089-028.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0089-033.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.3** | <1.0 | <1.0 |
| CRHE-DPT0089-038.0-20100226 | 2/26/10 | Water | 1, 5 | **180** | <1.0 | <1.0 | **7.8** | <1.0 | <1.0 |
| CRHE-DPT0089-043.0-20100226 | 2/26/10 | Water | 200 | **4800** | <200 | <200 | **6200** | **520** | <200 |
| CRHE-DPT0089-048.0-20100226 | 2/26/10 | Water | 1 | **37.1** | <1.0 | **1.2** | **15.7** | **1.1** | <1.0 |
| CRHE-DPT0090-010.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0090-018.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0090-028.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0090-033.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0090-038.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0090-043.0-20100226 | 2/26/10 | Water | 1 | **7.5** | <1.0 | **2.2** | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0090-048.0-20100226 | 2/26/10 | Water | 1 | **3.0** | <1.0 | **1.4** | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0086-014.0-20100226 | 2/26/10 | Water | 100 | **620** | <100 | <100 | **3300** | <100 | <100 |
| CRHE-DPT0086-023.0-20100226 | 2/26/10 | Water | 20 | **480** | <20 | <20 | **770** | <20 | <20 |
| CRHE-DPT0091-010.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0091-018.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0091-028.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0091-033.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0091-038.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0091-043.0-20100301 | 3/1/10 | Water | 1 | **100** | <1.0 | **1.1** | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0091-048.0-20100301 | 3/1/10 | Water | 1 | **11.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0092-010.0-20100301 | 3/1/10 | Water | 1 | **4.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0092-014.0-20100301 | 3/1/10 | Water | 50 | **1200** | <50 | **74** | **2400** | <50 | <50 |
| CRHE-DPT0092-018.0-20100301 | 3/1/10 | Water | 1000 | **2600** | <1000 | **900 I** | **22000** | **3000** | <1000 |
| CRHE-DPT0092-028.0-20100301 | 3/1/10 | Water | 5 | **540** | <5 | **18** | **130** | <5 | <5 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0092-033.0-20100301 | 3/1/10 | Water | 200 | **1000** | <200 | <200 | **5100** | **3800** | <200 |
| CRHE-DPT0092-038.0-20100301 | 3/1/10 | Water | 100 | **970** | <100 | <100 | **3600** | **4900** | <100 |
| CRHE-DPT0092-043.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **2.8** | **2.3** | <1.0 |
| CRHE-DPT0092-048.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-010.0-20100301 | 3/1/10 | Water | 1 | **2.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-014.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-018.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-028.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-033.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-038.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-043.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-048.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0094-010.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0094-018.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0094-028.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0094-033.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0094-038.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0094-043.0-20100302 | 3/2/10 | Water | 1 | **33.2** | <1.0 | **2.0** | **22.8** | **4.7** | <1.0 |
| CRHE-DPT0094-048.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0095-010.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0095-018.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0095-028.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0095-033.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0095-038.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0095-043.0-20100302 | 3/2/10 | Water | 1 | **2.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0095-048.0-20100302 | 3/2/10 | Water | 1 | **13.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0096-010.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0096-018.0-20100302 | 3/2/10 | Water | 5 | **510** | <5 | **5.0** | **93.0** | <5 | <5 |
| CRHE-DPT0096-028.0-20100302 | 3/2/10 | Water | 2000 | **7700** | <2000 | <2000 | **34000** | <2000 | <2000 |
| CRHE-DPT0096-033.0-20100302 | 3/2/10 | Water | 500 | **12000** | <500 | <500 | **14000** | <500 | <500 |
| CRHE-DPT0096-038.0-20100302 | 3/2/10 | Water | 1, 20 | **490** | <1.0 | <1.0 | **12.1** | <1.0 | <1.0 |
| CRHE-DPT0096-043.0-20100302 | 3/2/10 | Water | 1 | **1.5** | <1.0 | <1.0 | **3.8** | <1.0 | <1.0 |
| CRHE-DPT0096-048.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.6** | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec | PROJECT NAME & ADDRESS: CHRE KSC, FL

SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES |
|---|---|---|---|---|---|---|---|---|---|---|
| KB1-K022210 | | | | | | | | | | |
| DPT0075-018.0 | 2/22/10 | 0843 | | | 2/22/10 | 0855 | | GW | 2 | ✓ |
| 028.0 | | 0855 | | | | 0900 | | | | |
| 038.0 | | 0913 | | | | 0920 | | | | |
| 043.0 | | 0930 | | | | 0942 | | | | |
| 048.0 | | 0950 | | | | 0957 | | | | |
| 058.0 | | 1010 | | | | 1015 | | | | |
| DPT0076-018.0 | | 1103 | | | | 1108 | | | | |
| 028.0 | | 1116 | | | | 1120 | | | | |
| 038.0 | | 1207 | | | | 1300 | | | | |
| 043.0 | | 1227 | | | | ↓ | | | | |
| 048.0 | | 1242 | | | | ↓ | | | | |
| 058.0 | | 1300 | | | | 1310 | | | | |
| DPT0077-018.0 | | 1341 | | | | 1420 | | | | |
| 028.0 | | 1355 | | | | ↓ | | | | |
| 038.0 | | 1410 | | | | ↓ | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

**COMMENT / SAMPLE PRE FIX**

| | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | 2/24/10 |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KSL

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CTRE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KSL-022210 | | | | | | | | | | | | | | | |
| DPT0027-043.0 | 2/22/10 | 1427 | | | 2/22/10 | 1455 | | GW | 2 | ✓ | | | | | |
| 048.0 | ↓ | 1444 | | | ↓ | 1515 | | ↓ | ↓ | ↓ | | | | | |
| 058.0 | ↓ | 1502 | | | ↓ | 1530 | | ↓ | ↓ | ↓ | | | | | |
| DPT0028-018.0 | 2/22/10 | 1638 | | | 2/22/10 | 1710 | | GW | 2 | ✓ | | | | | |
| 020.0 | ↓ | 1640 | | | ↓ | 1710 | | ↓ | ↓ | ↓ | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 2/22/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** ICS1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CTRE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ICS1*022310 | | | | | | | | | | | |
| DPT0078 - 038.0 | 2/23/10 | 0828 | | | 2/23/10 | 0915 | | GW | 2 | ✓ | |
| 043.0 | | 0854 | | | | 0915 | | | | | |
| 048.0 | | 0917 | | | 1 | 1005 | | | | | |
| 058.0 | | 0943 | | | | 1005 | | | | | |
| DPT0079 - 018.0 | | 1040 | | | | 1055 | | | | | |
| 028.0 | | 1057 | | | | 1235 | | | | | |
| 038.0 | | 1121 | | | | ↓ | | | | | |
| 048.0 | | 1243 | | | | | | | | | |
| 043.0 | | 1323 | | | | 1340 | | | | | |
| 038.0 | | 1301 | | | | 1340 | | | | | |
| DPT0080 - 018.0 | | 1355 | | | | 1430 | | | | | |
| 028.0 | | 1416 | | | | 1430 | | | | | |
| 038.0 | | 1459 | | | | 1540 | | | | | |
| 043.0 | | 1523 | | | | 1540 | | | | | |
| DPT0081 - 028.0 | | 1535 | | | | 1545 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 2/23/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KB1-102310 | | | | | | | | | | | | | | |
| DPT0081-038.0 | 4/23/10 | 1550 | | | 4/23/10 | 1600 | | GW | 2 | ✓ | | | | |
| ↓ 043.0 | | 1605 | | | | 1612 | | | | | | | | |
| DPT0080-048.0 | | 1545 | | | | 1630 | | | | | | | | |
| ↓ -058.0 | | 1609 | | | | 1630 | | | | | | | | |
| DPT0081-048.0 | | 1620 | | | | 1635 | | | | | | | | |
| ↓ 058.0 | | 1640 | | | | 1652 | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>4/23/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec | PROJECT NAME & ADDRESS: CHRE KSC, FL

SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB1K0224/0 | | | | | | | | | | | |
| DPT082 - 010.0 | 7/24/10 | 0808 | | | 7/24/10 | 0815 | | GW | 2 | ✓ | |
| -018.0 | | 0819 | | | | 0840 | | | | | |
| 028.0 | | 0831 | | | | 0840 | | | | | |
| 033.0 | | 0846 | | | | 0915 | | | | | |
| 038.0 | | 0908 | | | | 0915 | | | | | |
| 043.0 | | 0924 | | | | 1005 | | | | | |
| 048.0 | | 0953 | | | | 1005 | | | | | |
| DPT083 - 010.0 | | 1151 | | | | 1140 | | | | | |
| 018.0 | | 1201 | | | | 1240 | | | | | |
| 028.0 | | 1213 | | | | 1235 | | | | | |
| 033.0 | | 1226 | | | | 1235 | | | | | |
| 038.0 | | 1242 | | | | 1255 | | | | | |
| 043.0 | | 1309 | | | | 1350 | | | | | |
| 048.0 | | 1326 | | | | 1350 | | | | | |
| DPT084 - 010.0 | | 1416 | | | | 1430 | | | | | |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 7/24/10 | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE KSC FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB1+022410 | | | | | | | | | | | |
| DFT0084-018.0 | 2/24/10 | 1427 | | | 2/24/10 | 1550 | | GW | 2 | ✓ | |
| 022.0 | ↓ | 1440 | | | ↓ | 1505 | | ↓ | ↓ | ↓ | |
| 033.0 | | 1454 | | | | 1525 | | | | | |
| 038.0 | | 1522 | | | | 1550 | | | | | |
| 043.0 | | 1538 | | | | 1530 | | | | | |
| 048.0 | | 1557 | | | | 1615 | | | | | |

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|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>2/24/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KS1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHCE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER KS1 K022510 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0085-018.0 | 2/25/10 | 0832 | | | 2/25/10 | 0845 | | GW | 2 | ✓ | |
| 010.0 | | 0821 | | | | 0845 | | | | | |
| 028.0 | | 0845 | | | | 0920 | | | | | |
| 033.0 | | 0910 | | | | 0920 | | | | | |
| 038.0 | | 0926 | | | | 0955 | | | | | |
| 043.0 | | 0945 | | | | 0955 | | | | | |
| 048.0 | | 1004 | | | | 1027 | | | | | |
| DPT0086-010.0 | | 1039 | | | | 1105 | | | | | |
| 018.0 | | 1057 | | | | 1100 | | | | | |
| 028.0 | | 1136 | | | | 1222 | | | | | |
| 033.0 | | 1211 | | | | 1222 | | | | | |
| 038.0 | | 1228 | | | | 1255 | | | | | |
| 043.0 | | 1245 | | | | 1255 | | | | | |
| 048.0 | | 1303 | | | | 1315 | | | | | |
| DPT0087-010.0 | | 1406 | | | | 1410 | | | | | |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 2/25/10 | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KSJ

CLIENT NAME: Geosyntec
PROJECT NAME & ADDRESS: CHRE KSC, FL
SAMPLERS
CONTACT PERSON
BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KSJ 402570 | | | | | | | | | | | |
| DPT0087-018.0 | 2/25/10 | 1444 | | | 4/25/10 | 1508 | | GW | 2 | ✓ | |
| -028.0 | | 1457 | | | | 1528 | | | | | |
| -033.0 | | 1511 | | | | 1535 | | | | | |
| -038.0 | | 1527 | | | | 1535 | | | | | |
| -043.0 | | 1547 | | | | 1620 | | | | | |
| 048.0 | | 1606 | | | | 1620 | | | | | |
| DPT0088-010.0 | | 1255 | | | | 1705 | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

**COMMENT / SAMPLE PRE FIX**

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 2/25/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | | Received by: *(Signature)* | | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** K61

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER K61#022610 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT008 - 018.0 | 2/26/10 | 0750 | | | 2/26/10 | 0900 | | GW | 2 | ✓ | | | | |
| 028.0 | | 0806 | | | | 0820 | | | | | | | | |
| 033.0 | | 0824 | | | | 0830 | | | | | | | | |
| 038.0 | | 0841 | | | | 0850 | | | | | | | | |
| 043.0 | | 0900 | | | | 0910 | | | | | | | | |
| 048.0 | | 0935 | | | | 0945 | | | | | | | | |
| DPT0089 - 010.0 | | 1006 | | | | 1015 | | | | | | | | |
| 018.0 | | 1018 | | | | 1025 | | | | | | | | |
| 028.0 | | 1032 | | | | 1045 | | | | | | | | |
| 033.0 | | 1048 | | | | 1100 | | | | | | | | |
| 038.0 | | 1105 | | | | 1115 | | | | | | | | |
| 043.0 | | 1212 | | | | 1225 | | | | | | | | |
| 048.0 | | 1230 | | | | 1240 | | | | | | | | |
| DPT0090 - 010.0 | | 1302 | | | | 1315 | | | | | | | | |
| 018.0 | | 1315 | | | | 1325 | | | | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 2/26/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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TEL (919) 678-0030


**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CH2E KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER KB1#02610 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT009 0-028.0 | 2/26/10 | 1334 | | | 2/26/10 | 1345 | | GW | 2 | ✓ | |
| -033.0 | " | 1352 | | | | 1400 | | | | | |
| 038.0 | | 1428 | | | | 1440 | | | | | |
| 043.0 | | 1446 | | | | 1500 | | | | | |
| 048.0 | | 1504 | | | | 1524 | | | | | |
| DPT 006 014.0 | | 1536 | | | | 1548 | | | | | |
| 023.0 | | 1548 | | | | 1600 | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 2/26/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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FAX (352) 472-5832

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Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE KSG, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB1*030110 | | | | | | | | | | | |
| DPT0091-010.0 | 3/1/10 | 0806 | | | 3/1/10 | 0825 | | GW | 2 | ✓ | |
| 018.0 | | 0818 | | | | 0825 | | | | | |
| 028.0 | | 0828 | | | | 0850 | | | | | |
| 033.0 | | 0844 | | | | 0850 | | | | | |
| 038.0 | | 0942 | | | | 1005 | | | | | |
| 043.0 | | 0958 | | | | 1005 | | | | | |
| 048.0 | | 1025 | | | | 1034 | | | | | |
| DPT0092-010.0 | | 1050 | | | | 1110 | | | | | |
| 014.0 | | 1100 | | | | 1110 | | | | | |
| 018.0 | | 1110 | | | | 1130 | | | | | |
| 028.0 | | 1124 | | | | 1130 | | | | | |
| 033.0 | | 1207 | | | | 1240 | | | | | |
| 038.0 | | 1233 | | | | 1240 | | | | | |
| 043.0 | | 1249 | | | | 1315 | | | | | |
| 048.0 | | 1306 | | | | 1315 | | | | | |

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|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>3/1/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS:

SAMPLERS:

CONTACT PERSON:

BATCH # (Lab Use Only):

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB1*030110 | | | | | | | | | | | |
| DPT0093-010.0 | 3/1/10 | 1334 | | | 3/1/10 | 1350 | | GW | 2 | ✓ | |
| 014.0 | | 1344 | | | | 1350 | | | | | |
| 018.0 | | 1355 | | | | 1405 | | | | | |
| 028.0 | | 1419 | | | | 1440 | | | | | |
| 033.0 | | 1433 | | | | 1440 | | | | | |
| 038.0 | | 1449 | | | | 1511 | | | | | |
| 043.0 | | 1504 | | | | 1511 | | | | | |
| 048.0 | | 1521 | | | | 1540 | | | | | |
| DPT0094-010.0 | | 1555 | | | | 1607 | | | | | |
| 018.0 | | 1614 | | | | 1635 | | | | | |
| 028.0 | | 1628 | | | | 1635 | | | | | |

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|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>3/1/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** K81

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRL ICE, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0094-033.0 | 3/2/10 | 0745 | | | 3/2/10 | 0830 | | GW | 2 | ✓ | |
| 038.0 | | 0846 | | | | 0930 | | | | | |
| 043.0 | | 0903 | | | | 0930 | | | | | |
| 048.0 | | 0920 | | | | 0940 | | | | | |
| DPT0095-010.0 | | 1017 | | | | 1025 | | | | | |
| 018.0 | | 1028 | | | | 1050 | | | | | |
| 028.0 | | 1041 | | | | 1050 | | | | | |
| 033.0 | | 1055 | | | | 1120 | | | | | |
| 038.0 | | 1110 | | | | 1120 | | | | | |
| 043.0 | | 1125 | | | | 1135 | | | | | |
| 048.0 | | 1217 | | | | 1225 | | | | | |
| DPT0096-010.0 | | 1301 | | | | 1310 | | | | | |
| 018.0 | | 1313 | | | | 1330 | | | | | |
| 028.0 | | 1326 | | | | 1350 | | | | | |
| 033.0 | | 1341 | | | | 1350 | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 3/2/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** K31

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE 155, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MTOO96-038.0 | 3/2/10 | 1401 | | | 3/2/10 | 1410 | | GW | 2 | ✓ | | | | |
| 043.0 | ↓ | 1418 | | | ↓ | 1425 | | ↓ | ↓ | ↓ | | | | |
| 048.0 | ↓ | 1435 | | | ↓ | 1446 | | ↓ | ↓ | ↓ | | | | |
| | | | | | | | | | | | | | | |
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IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 3/2/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

***Telephone* (352) 472-5830**
***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

June 28, 2010

Jill Johnson
GeoSyntec Consultants
9511 Holsberry Lane, Suite C
Pensacola, FL 32534

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 10-137**

Dear Ms.Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from June 14 to 124, 2010. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

KB Labs, Inc.
25132 SW 1st Ave
Newberry, FL 32669
Phone: 352-472-5830
Fax: 352-472-5832
Email: info@kbmobilelabs.com

# PROJECT NARRATIVE

## Project Scope

From June 14 to 24, 2010, a total of 152 water samples were analyzed for GeoSyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB1: FDOH NELAP Certification Number E82815

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0

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ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

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# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. Changes for sample ID CRHE-DPT0097-010.0-20100614 reported:
   t-1,2-dichloroethene 28.8 changed to <1.0ug/L.
   c-1,2-dichloroethene <1.0 changed to 28.8ug/L.

3. Sample ID CRHE-DPT100-038.9-20100615 reported c-1, 2-dichloroethene 5900 changed to 59000 ug/L.

4. As per NASA client request for diluted samples between the lab RL and MDL are reported with FDEP Data Qualifier "I" some results were changed from the Field Report to the Final Report to reflect this requirement.

5. As per Geosyntec, the VC and TCE reporting limit on diluted samples with non-detects were lowered to KB Labs MDL and reported with FDEP Data Qualifier "I".

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**:GeoSystem Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu,Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:**10-137 |
| **On-site Dates**: 6/14/10-6/24/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| BFB | 06/14/10 | 108 | 110 | 97 | 94 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/14/10 | 103 | 104 | 99 | 101 | Pass | Pass | Pass | Pass |
| RSTD 20 | 06/14/10 | 85 | 102 | 98 | 97 | Pass | Pass | Pass | Pass |
| BLANK | 06/14/10 | 110 | 112 | 100 | 92 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/14/10 | 105 | 114 | 94 | 95 | Pass | Pass | Pass | Pass |
| METHOD BLANK | 06/14/10 | 114 | 123 | 92 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-010.0-20100614 | 06/14/10 | 107 | 120 | 93 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-014.0-20100614 | 06/14/10 | 110 | 123 | 92 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-018.0-20100614 | 06/14/10 | 106 | 118 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-023.0-20100614 | 06/14/10 | 111 | 123 | 94 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-028.0-20100614 | 06/14/10 | 108 | 126 | 93 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-033.0-20100614 | 06/14/10 | 103 | 122 | 95 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-038.0-20100614 | 06/14/10 | 112 | 123 | 91 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-043.0-20100614 | 06/14/10 | 112 | 119 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-048.0-20100614 | 06/14/10 | 116 | 122 | 93 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-010.0-20100614 | 06/14/10 | 112 | 119 | 95 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-014.0-20100614 | 06/14/10 | 118 | 121 | 95 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-018.0-20100614 | 06/14/10 | 112 | 116 | 94 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-023.0-20100614 | 06/14/10 | 112 | 118 | 95 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-028.0-20100614 | 06/14/10 | 109 | 114 | 94 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-033.0-20100614 | 06/14/10 | 115 | 122 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-038.0-20100614 | 06/14/10 | 113 | 119 | 94 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-043.0-20100614 | 06/14/10 | 112 | 117 | 95 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-048.0-20100614 | 06/14/10 | 112 | 117 | 95 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-010.0-20100614 | 06/14/10 | 109 | 114 | 94 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-014.0-20100614 | 06/14/10 | 112 | 118 | 98 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-010.0-20100614MS | 06/14/10 | 106 | 108 | 96 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-010.0-20100614MSD | 06/14/10 | 102 | 105 | 97 | 96 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/14/10 | 105 | 107 | 98 | 97 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/15/10 | 104 | 102 | 96 | 95 | Pass | Pass | Pass | Pass |
| RSTD 20 | 06/15/10 | 107 | 106 | 97 | 93 | Pass | Pass | Pass | Pass |
| BLANK | 06/15/10 | 112 | 115 | 96 | 90 | Pass | Pass | Pass | Pass |
| METHOD BLANK | 06/15/10 | 114 | 124 | 92 | 91 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/15/10 | 110 | 117 | 92 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-010.0-20100615 | 06/15/10 | 114 | 120 | 92 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-014.0-20100615 | 06/15/10 | 113 | 125 | 91 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-018.0-20100615 | 06/15/10 | 117 | 121 | 94 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-023.0-20100615 | 06/15/10 | 118 | 123 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-028.0-20100615 | 06/15/10 | 194 | 209 | 93 | 91 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT099-033.0-20100615 | 06/15/10 | 116 | 120 | 92 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-038.0-20100616 | 06/16/10 | 117 | 122 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-043.0-20100616 | 06/16/10 | 116 | 117 | 91 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-048.0-20100616 | 06/16/10 | 118 | 120 | 91 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-010.0-20100616 | 06/16/10 | 116 | 120 | 93 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-014.0-20100616 | 06/16/10 | 117 | 120 | 94 | 90 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**:GeoSystem Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu,Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:**10-137 |
| **On-site Dates**: 6/14/10-6/24/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT100-018.0-20100616 | 06/16/10 | 117 | 117 | 93 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-023.0-20100616 | 06/16/10 | 118 | 120 | 95 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-028.0-20100616 | 06/16/10 | 117 | 120 | 91 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-033.0-20100616 | 06/16/10 | 117 | 121 | 91 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-038.0-20100616 | 06/16/10 | 113 | 115 | 94 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-043.0-20100616 | 06/16/10 | 111 | 111 | 92 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-048.0-20100616 | 06/16/10 | 114 | 115 | 93 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-010.0-20100616 | 06/16/10 | 118 | 117 | 94 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-014.0-20100616 | 06/16/10 | 113 | 112 | 93 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-018.0-20100616 | 06/16/10 | 113 | 111 | 93 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-023.0-20100616 | 06/16/10 | 115 | 113 | 90 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-010.0-20100616MS | 06/16/10 | 110 | 106 | 94 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-010.0-20100616MSD | 06/16/10 | 106 | 98 | 95 | 98 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/16/10 | 102 | 95 | 97 | 96 | Pass | Pass | Pass | Pass |
| RSTD 20 | 06/16/10 | 105 | 96 | 97 | 97 | Pass | Pass | Pass | Pass |
| BLANK | 06/16/10 | 111 | 109 | 91 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-038.0-20100616 | 06/16/10 | 113 | 108 | 93 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-028.0-20100616 | 06/16/10 | 115 | 106 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-023.0-20100616 | 06/16/10 | 114 | 113 | 90 | 91 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/16/10 | 110 | 108 | 86 | 91 | Pass | Pass | Pass | Pass |
| BLANK | 06/16/10 | 109 | 114 | 92 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-028.0-20100616 | 06/16/10 | 111 | 119 | 89 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-033.0-20100616 | 06/16/10 | 109 | 113 | 92 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-038.0-20100616 | 06/16/10 | 110 | 114 | 95 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-043.0-20100616 | 06/16/10 | 115 | 120 | 91 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-048.0-20100616 | 06/16/10 | 4 | 116 | 91 | 87 | < LCL | Pass | Pass | Pass |
| CRHE-DPT102-010.0-20100616 | 06/16/10 | 109 | 116 | 91 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-014.0-20100616 | 06/16/10 | 111 | 116 | 93 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-018.0-20100616 | 06/16/10 | 112 | 118 | 92 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-023.0-20100616 | 06/16/10 | 111 | 120 | 91 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-028.0-20100616 | 06/16/10 | 110 | 117 | 92 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-033.0-20100616 | 06/16/10 | 109 | 115 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-038.0-20100616 | 06/16/10 | 111 | 118 | 93 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-043.0-20100617 | 06/17/10 | 113 | 117 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-048.0-20100617 | 06/17/10 | 109 | 113 | 92 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-010.0-20100617 | 06/17/10 | 109 | 115 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-014.0-20100617 | 06/17/10 | 114 | 117 | 92 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-018.0-20100617 | 06/17/10 | 109 | 111 | 92 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-023.0-20100617 | 06/17/10 | 110 | 110 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-028.0-20100617 | 06/17/10 | 109 | 112 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-033.0-20100617 | 06/17/10 | 114 | 115 | 95 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-038.0-20100617 | 06/17/10 | 111 | 115 | 93 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-043.0-20100617 | 06/17/10 | 108 | 110 | 95 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-048.0-20100617 | 06/17/10 | 111 | 116 | 94 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-010.0-20100617 | 06/17/10 | 114 | 117 | 94 | 94 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**:GeoSystem Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu,Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:**10-137 |
| **On-site Dates**: 6/14/10-6/24/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT104-014.0-20100617 | 06/17/10 | 111 | 111 | 96 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-018.0-20100617 | 06/17/10 | 112 | 115 | 90 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-023.0-20100617 | 06/17/10 | 108 | 108 | 96 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-028.0-20100617 | 06/17/10 | 110 | 113 | 93 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-033.0-20100617 | 06/17/10 | 110 | 113 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-038.0-20100617 | 06/17/10 | 112 | 115 | 93 | 95 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/17/10 | 107 | 111 | 93 | 97 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/17/10 | 107 | 111 | 93 | 97 | Pass | Pass | Pass | Pass |
| RSTD 20 | 06/17/10 | 101 | 99 | 99 | 97 | Pass | Pass | Pass | Pass |
| BLANK | 06/17/10 | 111 | 110 | 95 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-028.0-20100617 | 06/17/10 | 110 | 115 | 91 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-038.0-20100617 | 06/17/10 | 110 | 116 | 91 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-018.0-20100617MS | 06/17/10 | 106 | 108 | 90 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-018.0-20100617MSD | 06/17/10 | 102 | 103 | 91 | 92 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/17/10 | 106 | 105 | 91 | 93 | Pass | Pass | Pass | Pass |
| METHOD BLANK | 06/17/10 | 110 | 112 | 93 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-043.0-20100617 | 06/17/10 | 110 | 117 | 92 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-048.0-20100617 | 06/17/10 | 111 | 116 | 91 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-010.0-20100617 | 06/17/10 | 109 | 109 | 92 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-014.0-20100617 | 06/17/10 | 111 | 110 | 93 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-018.0-20100617 | 06/17/10 | 110 | 109 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-023.0-20100617 | 06/17/10 | 110 | 112 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-028.0-20100617 | 06/17/10 | 113 | 114 | 90 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-033.0-20100617 | 06/17/10 | 110 | 112 | 92 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-038.0-20100617 | 06/17/10 | 110 | 112 | 90 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-043.0-20100617 | 06/17/10 | 112 | 114 | 93 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-048.0-20100617 | 06/17/10 | 112 | 110 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT010.0-20100618 | 06/18/10 | 113 | 113 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT014.0-20100618 | 06/18/10 | 114 | 110 | 93 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT018.0-20100618 | 06/18/10 | 113 | 112 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT023.0-20100618 | 06/18/10 | 110 | 108 | 91 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT028.0-20100618 | 06/18/10 | 113 | 111 | 93 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT033.0-20100618 | 06/18/10 | 114 | 114 | 93 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT038.0-20100618 | 06/18/10 | 113 | 113 | 94 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT043.0-20100618 | 06/18/10 | 114 | 114 | 94 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT048.0-20100618 | 06/18/10 | 111 | 111 | 94 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT048.0-20100618MS | 06/18/10 | 104 | 100 | 96 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT048.0-20100618MSD | 06/18/10 | 105 | 101 | 95 | 99 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/18/10 | 101 | 95 | 96 | 98 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/18/10 | 101 | 100 | 98 | 100 | Pass | Pass | Pass | Pass |
| RSTD 20 | 06/18/10 | 102 | 103 | 95 | 98 | Pass | Pass | Pass | Pass |
| BLANK | 06/18/10 | 107 | 110 | 91 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT107-010.0-20100618 | 06/18/10 | 112 | 118 | 94 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT107-018.0-20200618 | 06/18/10 | 111 | 115 | 93 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT107-028.0-20100618 | 06/18/10 | 113 | 114 | 91 | 92 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**:GeoSystem Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu,Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:**10-137 |
| **On-site Dates**: 6/14/10-6/24/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT107-033.0-20100618 | 06/18/10 | 109 | 109 | 91 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT107-038.9-20100618 | 06/18/10 | 111 | 111 | 93 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT107-043.0-20100618 | 06/18/10 | 116 | 114 | 90 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT107-048.0-20100618 | 06/18/10 | 114 | 113 | 91 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-010.0-20100618 | 06/18/10 | 114 | 114 | 91 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-018.0-20101618 | 06/18/10 | 112 | 112 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-028.0-10100618 | 06/18/10 | 116 | 118 | 90 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-033.0-10100618 | 06/18/10 | 111 | 112 | 90 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-038.0-10100618 | 06/18/10 | 116 | 116 | 89 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-043.0-10100618 | 06/18/10 | 113 | 115 | 91 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-048.0-10100618 | 06/18/10 | 111 | 113 | 90 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-058.0-10100618 | 06/18/10 | 113 | 117 | 89 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-058.0-10100618MS | 06/18/10 | 109 | 103 | 91 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-058.0-10100618MSD | 06/18/10 | 105 | 104 | 93 | 91 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/18/10 | 107 | 103 | 92 | 92 | Pass | Pass | Pass | Pass |
| CCS | 06/21/10 | 106 | 111 | 94 | 92 | Pass | Pass | Pass | Pass |
| LCS | 06/21/10 | 95 | 113 | 93 | 92 | Pass | Pass | Pass | Pass |
| METHOD BLANK | 06/21/10 | 114 | 122 | 94 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT109-010.0-20100621 | 06/21/10 | 113 | 118 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT109-018.0-20100621 | 06/21/10 | 112 | 119 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT109-028.0-20100621 | 06/21/10 | 110 | 118 | 94 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT109-033.0-20100621 | 06/21/10 | 112 | 118 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT109-038.0-20100621 | 06/21/10 | 110 | 116 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT109-043.0-20100621 | 06/21/10 | 114 | 118 | 91 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT109-048.0-20100621 | 06/21/10 | 109 | 116 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT110-033.0-20100621 | 06/21/10 | 111 | 117 | 94 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT110-038.0-20100621 | 06/21/10 | 94 | 113 | 94 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT110-043.0-20100621 | 06/21/10 | 109 | 112 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT110-048.0-20100621 | 06/21/10 | 114 | 120 | 96 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT111-010.0-20100621 | 06/21/10 | 112 | 118 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT111-018.0-20100621 | 06/21/10 | 110 | 114 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT111-028.0-20100621 | 06/21/10 | 113 | 114 | 92 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT111-033.0-20100621 | 06/21/10 | 113 | 114 | 94 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT111-038.0-20100621 | 06/21/10 | 114 | 115 | 93 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT111-043.0-20100621 | 06/21/10 | 112 | 111 | 96 | 89 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**:GeoSystem Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu,Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:**10-137 |
| **On-site Dates**: 6/14/10-6/24/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT111-048.0-20100621 | 06/21/10 | 110 | 110 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT111-058.0-20100621 | 06/21/10 | 114 | 112 | 93 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-010.0-20100621 | 06/21/10 | 113 | 110 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-018.0-20100621 | 06/21/10 | 114 | 111 | 92 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-028.0-20100621 | 06/21/10 | 114 | 112 | 92 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-033.0-20100621 | 06/21/10 | 108 | 108 | 98 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-038.0-20100621 | 06/21/10 | 108 | 105 | 96 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-043.0-20100621 | 06/21/10 | 101 | 108 | 96 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-048.0-20100621 | 06/21/10 | 111 | 106 | 99 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-048.0-20100621MS | 06/21/10 | 103 | 96 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-048.0-20100621MSD | 06/21/10 | 103 | 96 | 96 | 95 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/21/10 | 99 | 90 | 98 | 94 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/23/10 | 94 | 99 | 96 | 101 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/23/10 | 103 | 105 | 94 | 85 | Pass | Pass | Pass | Pass |
| METHOD BLANK | 06/23/10 | 110 | 112 | 94 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT113-010.0-20100623 | 06/23/10 | 110 | 113 | 94 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT113-018.0-20100623 | 06/23/10 | 109 | 113 | 93 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT113-028.0-20100623 | 06/23/10 | 113 | 117 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT113-033.0-20100623 | 06/23/10 | 110 | 116 | 92 | 90 | Pass | Pass | Pass | Pass |
| METHOD BLANK RERUN | 06/23/10 | 110 | 118 | 93 | 91 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/23/10 | 104 | 104 | 95 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT113-038.0-20100623 | 06/23/10 | 111 | 117 | 93 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT113-043.0-20100623 | 06/23/10 | 110 | 116 | 94 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT113-048.0-20100623 | 06/23/10 | 114 | 120 | 90 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT114-010.0-20100623 | 06/23/10 | 110 | 117 | 95 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT114-018.0-20100623 | 06/23/10 | 113 | 115 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT114-028.0-20100623 | 06/23/10 | 113 | 117 | 93 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT114-033.0-20100623 | 06/23/10 | 111 | 115 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT114-038.0-20100623 | 06/23/10 | 109 | 111 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT114-043.0-20100623 | 06/23/10 | 107 | 111 | 92 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT114-048.0-20100623 | 06/23/10 | 111 | 110 | 95 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-010.0-20100623 | 06/23/10 | 110 | 108 | 93 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-018.0-20100623 | 06/23/10 | 108 | 105 | 96 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-028.0-20100623 | 06/23/10 | 111 | 106 | 98 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-033.0-20100623 | 06/23/10 | 112 | 105 | 97 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-038.0-20100623 | 06/23/10 | 108 | 104 | 96 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-043.0-20100623 | 06/23/10 | 112 | 105 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-048.0-20100623 | 06/23/10 | 110 | 103 | 97 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-048.0-20100623MS | 06/23/10 | 102 | 94 | 98 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-048.0-20100623MSD | 06/23/10 | 101 | 90 | 98 | 94 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/23/10 | 100 | 90 | 98 | 94 | Pass | Pass | Pass | Pass |

**Comments:** Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data.

***Surrogate Compounds:**
S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-137 |
| **Onsite Dates:** 6/14/10-6/24/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT099-010.0 **Date of Analysis:** 6/15/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 91 | 99 | 9 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 90 | 99 | 9 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 97 | 105 | 8 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 82 | 89 | 9 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 84 | 98 | 15 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 80 | 89 | 11 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT101-010.0 **Date of Analysis:** 6/16/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 108 | 109 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 103 | 106 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 117 | 125 | 6 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 100 | 101 | 1 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 95 | 96 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 89 | 93 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT104-018.8 **Date of Analysis:** 6/17/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 75 | 66 | 12 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 84 | 74 | 12 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 92 | 83 | 10 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 90 | 83 | 8 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 94 | 84 | 12 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 88 | 84 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT106-048.0 **Date of Analysis:** 6/18/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 95 | 98 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 94 | 97 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 98 | 102 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 89 | 95 | 6 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 90 | 93 | 4 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 90 | 90 | 0 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-137 |
| **Onsite Dates:** 6/14/10-6/24/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT108-058.0 **Date of Analysis:** 6/18/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 101 | 95 | 5 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 94 | 91 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 100 | 98 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 93 | 93 | 0 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 91 | 91 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 88 | 91 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT112-048.0 **Date of Analysis:** 6/22/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 100 | 105 | 4 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 92 | 96 | 4 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 97 | 101 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 82 | 91 | 10 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 89 | 96 | 8 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 85 | 90 | 6 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT115-048.0 **Date of Analysis:** 6/24/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 109 | 104 | 4 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 97 | 95 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 102 | 102 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 91 | 90 | 2 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 93 | 79 | 16 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 91 | 93 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-137 |
| **Onsite Dates:** 6/14/10-6/24/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 — **Date of Analysis:** 6/14/2010
LCS 2 — 6/15/2010
LCS 3 — 6/16/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 28 | to | 161 | 95 | 100 | 110 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 43 | to | 156 | 98 | 99 | 107 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 99 | 108 | 117 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 84 | 91 | 102 | Pass | Pass | Pass |
| Trichloroethene | 47 | to | 164 | 105 | 89 | 98 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | to | 151 | 94 | 91 | 102 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 — **Date of Analysis:** 6/17/2010
LCS 5 — 6/18/2010
LCS 6 — 6/21/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | LCS#6 | LCS#4 | LCS#5 | LCS#6 |
| Vinyl Chloride | 28 | to | 161 | 96 | 97 | 87 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 43 | to | 156 | 94 | 96 | 83 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 98 | 95 | 87 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 92 | 95 | 76 | Pass | Pass | Pass |
| Trichloroethene | 47 | to | 164 | 88 | 90 | 96 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | to | 151 | 89 | 93 | 76 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 7 — **Date of Analysis:** 6/21/2010
LCS 8 — 6/23/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#7 | LCS#8 | | LCS#7 | LCS#8 | |
| Vinyl Chloride | 28 | to | 161 | 106 | 152 | | Pass | Pass | |
| 1,1-Dichloroethene | 43 | to | 156 | 95 | 154 | | Pass | Pass | |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 102 | 147 | | Pass | > UCL | |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 93 | 143 | | Pass | Pass | |
| Trichloroethene | 47 | to | 164 | 91 | 111 | | Pass | Pass | |
| Tetrachloroethene | 60 | to | 151 | 92 | 94 | | Pass | Pass | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

Project Number : 10-137

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.24** | **0.29** | **0.28** | **0.27** | **0.29** | **0.3** |
| CRHE-DPT0097-010.0-20100614 | 6/14/10 | Water | 1,10 | **160** | <1.0 | <1.0 | **28.8** | <1.0 | <1.0 |
| CRHE-DPT0097-014.0-20100614 | 6/14/10 | Water | 20,50 | **1500** | <20 | **72** | **3100** | <5.8 I | <20 |
| CRHE-DPT0097-018.0-20100614 | 6/14/10 | Water | 200 | **1000** | <200 | **520** | **16000** | <58 I | <200 |
| CRHE-DPT0097-023.0-20100614 | 6/14/10 | Water | 1000 | **1500** | <1000 | **2100** | **52000** | **3800** | <1000 |
| CRHE-DPT0097-028.0-20100614 | 6/14/10 | Water | 100 | **1400** | <100 | **110** | **3200** | <29 I | <100 |
| CRHE-DPT0097-033.0-20100614 | 6/15/10 | Water | 5 | **1.6 I** | <5.0 | <5.0 | **4.6 I** | <1.4 I | <5.0 |
| CRHE-DPT0097-038.0-20100614 | 6/15/10 | Water | 1 | **1.6** | <1.0 | <1.0 | **8.9** | <1.0 | <1.0 |
| CRHE-DPT0097-043.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.4** | <1.0 | <1.0 |
| CRHE-DPT0097-048.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **8.6** | <1.0 | <1.0 |
| CRHE-DPT0098-010.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0098-014.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0098-018.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0098-023.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0098-028.0-20100614 | 6/15/10 | Water | 2 | **7.6** | <2.0 | <2.0 | <2.0 | <1.0 I | <2.0 |
| CRHE-DPT0098-033.0-20100614 | 6/15/10 | Water | 100 | **320** | <100 | **120** | **1000** | **580** | <100 |
| CRHE-DPT0098-038.0-20100614 | 6/15/10 | Water | 2000 | **13000** | <2000 | **700 I** | **49000** | **36000** | <2000 |
| CRHE-DPT0098-043.0-20100614 | 6/15/10 | Water | 20 | **64** | <20 | **5.4 I** | **220** | **23** | <20 |
| CRHE-DPT0098-048.0-20100614 | 6/15/10 | Water | 10 | **6.4 I** | <10 | <10 | **19** | **16** | <10 |
| CRHE-DPT0099-010.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0099-014.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0099-018.0-20100615 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.0** | <1.0 | <1.0 |
| CRHE-DPT0099-023.0-20100615 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0099-028.0-20100615 | 6/15/10 | Water | 5 | **180** | <5.0 | **8.8** | **32** | <1.4 I | <5.0 |
| CRHE-DPT0099-033.0-20100615 | 6/15/10 | Water | 200 | **13000** | <200 | **82 I** | **6500** | <200 | <200 |
| CRHE-DPT0099-038.0-20100615 | 6/16/10 | Water | 10, 200 | **4900** | <10 | **11** | **370** | <2.9 I | <10 |
| CRHE-DPT0099-043.0-20100615 | 6/16/10 | Water | 1 | **1.9** | <1.0 | <1.0 | **1.5** | <1.0 | <1.0 |
| CRHE-DPT0099-048.0-20100615 | 6/16/10 | Water | 1 | **2.6** | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 |
| CRHE-DPT0100-010.0-20100615 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0100-014.0-20100615 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0100-018.0-20100615 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-137

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.24** | **0.29** | **0.28** | **0.27** | **0.29** | **0.3** |
| CRHE-DPT0100-023.0-20100615 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0100-028.0-20100615 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0100-033.0-20100615 | 6/16/10 | Water | 1000 | **7400** | <1000 | **620 I** | **31000** | **21000** | <1000 |
| CRHE-DPT0100-038.0-20100615 | 6/16/10 | Water | 2000 | **17000** | <2000 | **780 I** | **59000** | **32000** | <2000 |
| CRHE-DPT0100-043.0-20100615 | 6/16/10 | Water | 5 | **72** | <5.0 | **6.6** | **380** | **210** | <5.0 |
| CRHE-DPT0100-048.0-20100615 | 6/16/10 | Water | 1 | **5.4** | <1.0 | <1.0 | **28.0** | **19.5** | <1.0 |
| CRHE-DPT0101-010.0-20100615 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0101-014.0-20100615 | 6/16/10 | Water | 1 | **1.6** | <1.0 | <1.0 | **1.1** | <1.0 | <1.0 |
| CRHE-DPT0101-018.0-20100615 | 6/16/10 | Water | 1 | **8.8** | <1.0 | <1.0 | **1.0** | <1.0 | <1.0 |
| CRHE-DPT0101-023.0-20100615 | 6/16/10 | Water | 1 | **30.1** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0101-028.0-20100615 | 6/16/10 | Water | 1,10 | **260** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0101-033.0-20100615 | 6/16/10 | Water | 10 | **120** | <10 | <10 | <10 | <2.9 I | <10 |
| CRHE-DPT0101-038.0-20100615 | 6/16/10 | Water | 1 | **12.1** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0101-043.0-20100615 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0101-048.0-20100615 | 6/16/10 | Water | 1 | **3.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-010.0-20100616 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-014.0-20100616 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-018.0-20100616 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-023.0-20100616 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-028.0-20100616 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-033.0-20100616 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-038.0-20100616 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-043.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-048.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0103-010.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0103-014.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0103-018.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0103-023.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0103-028.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0103-033.0-20100616 | 6/17/10 | Water | 2 | **13** | <2.0 | <2.0 | <2.0 | <1.0 I | <2.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-137

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.24** | **0.29** | **0.28** | **0.27** | **0.29** | **0.3** |
| CRHE-DPT0103-038.0-20100616 | 6/17/10 | Water | 200 | **4000** | <200 | **160 I** | **8700** | **2900** | <200 |
| CRHE-DPT0103-043.0-20100616 | 6/17/10 | Water | 100 | **690** | <100 | **57 I** | **2200** | **1300** | <100 |
| CRHE-DPT0103-048.0-20100616 | 6/17/10 | Water | 5 | <1.2 I | <5.0 | <5.0 | **3.0 I** | **2.4 I** | <5.0 |
| CRHE-DPT0104-010.0-20100616 | 6/17/10 | Water | 5 | <1.2 I | <5.0 | <5.0 | <5.0 | <1.4 I | <5.0 |
| CRHE-DPT0104-014.0-20100616 | 6/17/10 | Water | 5 | <1.2 I | <5.0 | <5.0 | <5.0 | <1.4 I | <5.0 |
| CRHE-DPT0104-018.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0104-023.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0104-028.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0104-033.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0104-038.0-20100616 | 6/17/10 | Water | 1,10 | **530** | <1.0 | **1.8** | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0104-043.0-20100617 | 6/17/10 | Water | 10 | **790** | <10 | <10 | **61** | <2.8 I | <10 |
| CRHE-DPT0104-048.0-20100617 | 6/17/10 | Water | 1 | **1.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-010.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-014.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-018.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-023.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-028.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-033.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-038.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-043.0-20100617 | 6/17/10 | Water | 1 | **1.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-048.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-010.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-014.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-018.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-023.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-028.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-033.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-038.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-043.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-048.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-137

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.24** | **0.29** | **0.28** | **0.27** | **0.29** | **0.3** |
| CRHE-DPT0107-010.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0107-018.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0107-028.0-20100618 | 6/18/10 | Water | 1 | **21.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0107-033.0-20100618 | 6/18/10 | Water | 1 | **15.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0107-038.0-20100618 | 6/18/10 | Water | 1 | **3.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0107-043.0-20100618 | 6/18/10 | Water | 1 | **1.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0107-048.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-010.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-018.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-028.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-033.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-038.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-043.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-048.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-058.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0109-010.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0109-018.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0109-028.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0109-033.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0109-038.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0109-043.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0109-048.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0110-033.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0110-038.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0110-043.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0110-048.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0111-010.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0111-018.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0111-028.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0111-033.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-137

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.24** | **0.29** | **0.28** | **0.27** | **0.29** | **0.3** |
| CRHE-DPT0111-038.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0111-043.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0111-048.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0111-058.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0112-010.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0112-018.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0112-028.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0112-033.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0112-038.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0112-043.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0112-048.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0113-010.0-20100622 | 6/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0113-018.0-20100622 | 6/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0113-028.0-20100622 | 6/23/10 | Water | 1 | **2.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0113-033.0-20100622 | 6/23/10 | Water | 1 | **6.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0113-038.0-20100622 | 6/23/10 | Water | 1 | **3.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0113-043.0-20100622 | 6/23/10 | Water | 1 | **2.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0113-048.0-20100622 | 6/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0114-010.0-20100622 | 6/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0114-018.0-20100622 | 6/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0114-028.0-20100622 | 6/23/10 | Water | 1 | **3.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0114-033.0-20100622 | 6/23/10 | Water | 1 | **1.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0114-038.0-20100622 | 6/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0114-043.0-20100622 | 6/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0114-048.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0115-010.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0115-018.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0115-028.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0115-033.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0115-038.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-137

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.24** | **0.29** | **0.28** | **0.27** | **0.29** | **0.3** |
| CRHE-DPT0115-043.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0115-048.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

MOBILE UNIT #

| CLIENT NAME | PROJECT NAME & ADDRESS | | |

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #**

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CAFE - KSC

SAMPLERS

CONTACT PERSON: Jan Burkus

BATCH # (Lab Use Only)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT098-38.0 2010 | 0614 | 1535 | | ✓ | 0614 | | | W | 2 | ✓ | |
| -43.0 | | 1557 | | | | | | | | | |
| -48.0 | | 1624 | | | | | | | | | |
| DPT099-10.0 | | 1825 | | | | | | | | | |
| -14.0 | | 1837 | | | | | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/14/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #**

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CRTE KSC |
| **SAMPLERS** | **CONTACT PERSON** |
| ✓ | Jan Barfus |

**BATCH # (Lab Use Only)**

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FHE DPT099-18.0 2010 | 0615 | 0751 | | ✓ | 6/15/10 | 1245 | | W | 2 | ✓ | |
| -23.0 | | 0805 | | | | | | | | | |
| -28.0 | | 0821 | | | | | | | | | |
| -33.0 | | 0847 | | | | | | | | | |
| -38.0 | | 0912 | | | | | | | | | |
| -43.0 | | 0931 | | | | | | | | | |
| -48.0 | | 0952 | | | | ✓ | | | | | |
| DPT100-10.0 | | 1047 | | | | 1755 | | | | | |
| 14.0 | | 1057 | | | | | | | | | |
| 18.0 | | 1110 | | | | | | | | | |
| 23.0 | | 1120 | | | | | | | | | |
| 28.0 | | 1136 | | | | | | | | | |
| 33.0 | | 1150 | | | | | | | | | |
| 38.0 | | 1313 | | | | | | | | | |
| 43.0 | ✓ | 1332 | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/15/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030


**MOBILE UNIT #**

CLIENT NAME: Ecosystec

PROJECT NAME & ADDRESS: CRHE KSC

SAMPLERS:

CONTACT PERSON: Jan Bartus

BATCH # (Lab Use Only):

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT100-48.0 2010 | 0615 | 1354 | | ✓ | 6/15/10 | 1755 | | W | 2 | ✓ | |
| DPT101-10.0 | | 1529 | | | | | | | | | |
| -14.0 | | 1538 | | | | | | | | | |
| -18.0 | | 1548 | | | | | | | | | |
| -23.0 | | 1600 | | | | | | | | | |
| -28.0 | | 1613 | | | | | | | | | |
| -33.0 | | 1628 | | | | | | | | | |
| -38.0 | | 1646 | | | | | | | | | |
| -43.0 | | 1705 | | | | | | | | | |
| -48.0 | | 1724 | | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/15/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KBI

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC

SAMPLERS: ✓

CONTACT PERSON: Jay Barfus

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0102-010.0-20100616 | 6/16/10 | 0813 | | ✓ | 6/16/10 | 1733 | | W | 2 | ✓ | |
| -014.0 | | 0835 | | | | | | | | | |
| -018.0 | | 0850 | | | | | | | | | |
| -023.0 | | 0900 | | | | | | | | | |
| -028 | | 0917 | | | | | | | | | |
| -033 | | 0937 | | | | | | | | | |
| -038 | | 1000 | | | | | | | | | |
| -043 | | 1018 | | | | | | | | | |
| -048 | | 1040 | | | | | | | | | |
| DPT103-010 | | 1130 | | | | | | | | | |
| -014 | | 1136 | | | | | | | | | |
| -018 | | 1149 | | | | | | | | | |
| -023 | | 1200 | | | | | | | | | |
| -028 | | 1216 | | | | | | | | | |
| -033 | | 1331 | | | | | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/16/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #**

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CAFE KSC

SAMPLERS: /

CONTACT PERSON: Jan Bartus

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0103-038.0 2010 | 6/16 | 1346 | | ✓ | 6/16/10 | 1733 | | W | 2 | ✓ | |
| -043.0 | | 1410 | | | | | | | | | |
| -048.0 | | 1505 | | | | | | | | | |
| DPT01M-010 | | 1548 | | | | | | | | | |
| -014 | | 1600 | | | | | | | | | |
| -018 | | 1614 | | | | | | | | | |
| -023 | | 1626 | | | | | | | | | |
| -028 | | 1639 | | | | | | | | | |
| -033 | | 1653 | | | | | | | | | |
| -038 ✓ | | 1708 | | | | | | | | | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time<br>6/16/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #**

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CLHE KSC

SAMPLERS

CONTACT PERSON: Jan Banks

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CLHE DPT0104-0430 2010 | 6/17 | 0809 | | ✓ | 06/17/10 | 1750 | | W | 2 | ✓ | |
| 048.0 | | 0834 | | | | | | | | | |
| DPT0105-010.0 | | 0913 | | | | | | | | | |
| -014.0 | | 0933 | | | | | | | | | |
| -018.0 | | 0948 | | | | | | | | | |
| -023.0 | | 1000 | | | | | | | | | |
| -028.0 | | 1016 | | | | | | | | | |
| -033.0 | | 1030 | | | | | | | | | |
| -038.0 | | 1056 | | | | | | | | | |
| -043.0 | | 1116 | | | | | | | | | |
| -048.0 | | 1135 | | | | | | | | | |
| DPT0106-010.0 | | 1320 | | | | | | | | | |
| -014.0 | | 1329 | | | | | | | | | |
| -018.0 | | 1341 | | | | | | | | | |
| -023.0 | | 1407 | | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/17/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #**

CLIENT NAME: Geo Syntec

PROJECT NAME & ADDRESS: CRTF KSC

SAMPLERS

CONTACT PERSON: Jan Banks

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRTF DPT2106-028.0 2010 | 0617 | 1603 | | ✓ | 6/17/10 | 1750 | | W | 2 | ✓ | |
| -033.0 | | 1617 | | | | | | | | | |
| -038.0 | | 1648 | | | | | | | | | |
| -043.0 | | 1705 | | | | | | | | | |
| -048.0 | | 1725 | | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/17/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CHRE

SAMPLERS

CONTACT PERSON: JAN Barfus

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE-DDT0107-010.0-2010 | 0618 | 0852 | | | 6/18/10 | 0930 | | W | 2 | | |
| -018.0 | | 0904 | | | | | | | | | |
| -028.0 | | 0919 | | | | ↓ | | | | | |
| -033.0 | | 0934 | | | | 1100 | | | | | |
| -038.0 | | 1007 | | | | | | | | | |
| -043.0 | | 1022 | | | | | | | | | |
| -048.0 | | 1041 | | | | ↓ | | | | | |
| DFT0108-010.0 | | 1133 | | | | 1213 | | | | | |
| -018.0 | | 1144 | | | | | | | | | |
| -028.0 | | 1156 | | | | | | | | | |
| -033.0 | | 1210 | | | | ↓ | | | | | |
| -038.0 | | 1227 | | | | 1306 | | | | | |
| -043.0 | | 1244 | | | | ↓ | | | | | |
| -048.0 | | 1334 | | | | 1405 | | | | | |
| -058.0 | ↓ | 1354 | | | ↓ | ↓ | | ↓ | ↓ | ↓ | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | | | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | [signature] | 6/18/10 1405 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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FAX (352) 472-5832

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KBI

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE ; KSC

SAMPLERS:

CONTACT PERSON: Jan Barnes

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0109-010.0 2010 | 6/2 | 0718 | | ✓ | 6/21/10 | 1800 | | W | ✓ | ✓ | |
| 18 | | 0733 | | | | | | | | | |
| 28 | | 0747 | | | | | | | | | |
| 33 | | 0802 | | | | | | | | | |
| 38 | | 0823 | | | | | | | | | |
| 43 | | 0844 | | | | | | | | | |
| 48 | | 0905 | | | | | | | | | |
| DPT0110-033.0 | | 1014 | | | | | | | | | |
| 38 | | 1030 | | | | | | | | | |
| 43 | | 1050 | | | | | | | | | |
| 48 | | 1107 | | | | | | | | | |
| DPT0111-010.0 | | 1150 | | | | | | | | | |
| 18 | | 1200 | | | | | | | | | |
| 28 | | 1213 | | | | | | | | | |
| 33 | | 1227 | | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 6/21/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030


**MOBILE UNIT #** 1651

CLIENT NAME: GeoSynTec

PROJECT NAME & ADDRESS: CCAFS, KSC

SAMPLERS

CONTACT PERSON: Jan Burks

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0111-038.0 2010 | 0610 | 1321 | | ✓ | 6/7/10 | 1800 | | W | 2 | 1 | |
| -043 | | 1351 | | | | | | | | | |
| -048 | | 1416 | | | | | | | | | |
| -058 | | 1448 | | | | | | | | | |
| DPT0112-010 | | 1547 | | | | | | | | | |
| 18 | | 1556 | | | | | | | | | |
| 28 | | 1610 | | | | | | | | | |
| 33 | | 1627 | | | | | | | 1 | | * one bottle about half mud |
| 38 | | 1656 | | | | | | | 2 | | |
| 43 | | 1715 | | | | | | | | | |
| 48 | | 1731 | | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 6/7/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CRHE

SAMPLERS:

CONTACT PERSON: Jan Bartus

BATCH # (Lab Use Only):

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE | | | | | | | | | | | |
| DPT013-010.0-20100622 | | 0813 | | ✓ | 6/22/10 | 1800 | | W | 2 | ✓ | |
| 018.0 | | 0823 | | | | | | | | | |
| 028.0 | | 0834 | | | | | | | | | |
| 033.0 | | 0850 | | | | | | | | | |
| 038.0 | | 0924 | | | | | | | | | |
| 043.0 | | 0945 | | | | | | | | | |
| 048.0 | | 1016 | | | | | | | | | |
| DPT014-010.0 | | 1055 ~~1105~~ | | | | | | | | | |
| 018.0 | | 1105 1117 | | | | | | | | | |
| 028.0 | | 1117 1122 | | | | | | | | | |
| 033.0 | | 1122 ~~1205~~ | | | | | | | | | |
| 038.0 | | 1205 ~~1220~~ | | | | | | | | | |
| 043.0 | | 1220 ~~1337~~ | | | | | | | | | |
| 048.0 | 6/22/10 | 1337 ~~1425~~ | | ✓ | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/22/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** 1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRA CHRE

SAMPLERS:

CONTACT PERSON: Jan Barkus

BATCH # (Lab Use Only):

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE | | | | | | | | | | | |
| DPT0115-010.0-20100622 | 6/22/10 | 1425 | | ✓ | 6/22/10 | 1800 | | W | 2 | ✓ | |
| 018.0 | | 1438 | | | | | | | | | |
| ~~023.0~~ | | ~~1447~~ | | | | | | | | | |
| 028.0 | | ~~1506~~ 1447 | | | | | | | | | |
| 033.0 | | ~~1534~~ 1506 | | | | | | | | | |
| 038.0 | 6/23/10 | ~~1552~~ 1534 | | | | | | | | | |
| 043.0 | | 1552 | | | | | | | | | |
| 048.0 | | 1607 | | ↓ | | | | ↓ | ↓ | ↓ | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/24/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

***Telephone* (352) 472-5830**
***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

August 13, 2010

Jill Johnson
GeoSyntec Consultants
9511 Holsberry Lane, Suite A
Pensacola, FL 32534

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 10-169**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from August 2 to 12, 2010. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

KB Labs, Inc.
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# PROJECT NARRATIVE

## Project Scope

From August 2 to 12, 2010, a total of 180 water samples were analyzed for GeoSyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB3: FDOH NELAP Certification Number E82816

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0

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ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

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# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. Sample ID CRHE-DPT0117-048.0-20100802 reported vinyl chloride <1.0 changed to 4.7ug/L.

3. Sample IDCRHE-DPT0126-018.0-20100805 reported c-1, 2-dichloroethene <1.0 changed to 2.1ug/L.

4. Sample ID CRHE-IDW178747-20100806 has an "L" qualifier for c-1, 2-dichloroethene indicating the concentration exceeded Calibration range.

5. Sample ID CRHE-DPT0135-038.0-20100810 has an "L" qualifier for vinyl chloride indicating the Concentration exceeded Calibration range.

6. Changes for sample ID CRHE-DPT0134-043.0-20100810 reported: vinyl chloride 790 changed to 200ug/L.

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t-1,2-dichloroethene 38 I changed to 43 I.
c-1,2-dichloroethene 2800 changed to 1500ug/L.
trichloroethene 50 changed to 1500ug/L.

7. Sample ID CRHE-DPT0136-043.0-20100810 reported c-1, 2-dichloroethene 1.8 changed to <1.0ug/L.

8. Sample ID CRHE-DPT0136-043.0-20100810 should be CRHE-DPT0136-048.0-20100810.

9. As per NASA Client request for diluted samples between the lab RL and MDL are reported with FDEP Data Qualifier “I” some results were changed from the field Report to the Final Report to reflect this requirement.

10. Because the presence of high level freon compounds and to prevent damage to the analytical instrument, several samples were diluted without any target compounds being identified:

    CRHE-DPT116-018.0-20100802
    CRHE-DPT116-028.0-20100802
    CRHE-DPT116-033.0-20100802
    CRHE-DPT117-038.0-20100802

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-169 |
| **On-site Dates**: 8/2/10-8/6/10, 8/9/10-8/12/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| VSTD 20 | 08/02/10 | 103 | 114 | 105 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 08/02/10 | 108 | 119 | 101 | 98 | Pass | Pass | Pass | Pass |
| RSTD 20 | 08/02/10 | 96 | 88 | 113 | 103 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0116-010.0 | 08/02/10 | 108 | 95 | 95 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0116-018.0 1:100 | 08/02/10 | 103 | 92 | 98 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0116-028.0 1:100 | 08/02/10 | 104 | 97 | 100 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0116-033.0 1:50 | 08/02/10 | 112 | 98 | 102 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0116-038.0 | 08/02/10 | 100 | 99 | 101 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0116-043.0 | 08/02/10 | 113 | 98 | 102 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0116-048.0 | 08/02/10 | 103 | 84 | 95 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0117-018.0 | 08/02/10 | 106 | 97 | 101 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0117-010.0 | 08/02/10 | 112 | 111 | 105 | 100 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/02/10 | 101 | 95 | 106 | 101 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/03/10 | 105 | 125 | 102 | 99 | Pass | Pass | Pass | Pass |
| BLANK | 08/03/10 | 113 | 124 | 102 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0117-028.0 | 08/03/10 | 108 | 120 | 102 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0117-033.0 | 08/03/10 | 87 | 103 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0117-038.0 1:20 | 08/03/10 | 111 | 129 | 103 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0117-043.0 | 08/03/10 | 112 | 128 | 103 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0117-048.0 | 08/03/10 | 112 | 132 | 103 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0118-010.0 | 08/03/10 | 114 | 133 | 103 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0118-018.0 | 08/03/10 | 114 | 133 | 103 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0118-028.0 | 08/03/10 | 116 | 140 | 102 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0118-033.0 | 08/03/10 | 68 | 81 | 97 | 99 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0118-038.0 1:5 | 08/03/10 | 113 | 141 | 102 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0118-043.0 | 08/03/10 | 119 | 146 | 101 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0118-048.0 | 08/03/10 | 120 | 144 | 101 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-010.0 | 08/03/10 | 116 | 140 | 102 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-014.0 | 08/03/10 | 116 | 134 | 104 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-018.0 | 08/03/10 | 119 | 146 | 99 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-023.0 | 08/03/10 | 118 | 149 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-028.0 | 08/03/10 | 120 | 150 | 100 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-033.0 | 08/03/10 | 69 | 94 | 93 | 103 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0119-038.0 | 08/03/10 | 120 | 148 | 101 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-043.0 | 08/03/10 | 120 | 150 | 100 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-048.0 | 08/03/10 | 120 | 153 | 100 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0120-010.0 | 08/03/10 | 119 | 147 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0120-014.0 | 08/03/10 | 120 | 146 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0120-018.0 1:10 | 08/03/10 | 72 | 96 | 93 | 100 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0120-023.0 1:100 | 08/03/10 | 120 | 152 | 99 | 95 | Pass | > UCL | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

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## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-169 |
| **On-site Dates**: 8/2/10-8/6/10, 8/9/10-8/12/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0120-028.0 1:2 | 08/03/10 | 120 | 157 | 99 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0120-033.0 | 08/03/10 | 122 | 151 | 98 | 96 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0120-038.0 | 08/03/10 | 119 | 148 | 99 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0120-043.0 | 08/03/10 | 122 | 158 | 99 | 95 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0120-048.0 | 08/03/10 | 121 | 154 | 101 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-010.0 | 08/03/10 | 122 | 150 | 99 | 96 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0121-014.0 | 08/03/10 | 120 | 151 | 101 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-018.0 | 08/03/10 | 118 | 153 | 101 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0120-048.0 MSD | 08/03/10 | 111 | 151 | 104 | 98 | Pass | > UCL | Pass | Pass |
| LCS | 08/03/10 | 112 | 156 | 103 | 96 | Pass | > UCL | Pass | Pass |
| CCS 20 | 08/03/10 | 107 | 151 | 104 | 95 | Pass | > UCL | Pass | Pass |
| VSTD 20 | 08/04/10 | 97 | 113 | 104 | 98 | Pass | Pass | Pass | Pass |
| LCS | 08/04/10 | 103 | 130 | 104 | 97 | Pass | Pass | Pass | Pass |
| BLANK | 08/04/10 | 110 | 120 | 104 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0121-023.0 | 08/04/10 | 116 | 132 | 101 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0119-033.0 1:5 | 08/04/10 | 117 | 140 | 101 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-028.0 | 08/04/10 | 113 | 135 | 102 | 101 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-033.0 | 08/04/10 | 112 | 136 | 103 | 100 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-038.0 1:100 | 08/04/10 | 114 | 139 | 102 | 103 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-043.0 1:50 | 08/04/10 | 115 | 145 | 100 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-048.0 | 08/04/10 | 116 | 148 | 101 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-010.0 | 08/04/10 | 117 | 144 | 101 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-014.0 | 08/04/10 | 118 | 148 | 100 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-018.0 | 08/04/10 | 119 | 153 | 100 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-023.0 | 08/04/10 | 116 | 148 | 101 | 100 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-028.0 | 08/04/10 | 121 | 152 | 98 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-033.0 | 08/04/10 | 118 | 150 | 102 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-038.0 1:100 | 08/04/10 | 119 | 156 | 100 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-043.0 1:100 | 08/04/10 | 118 | 154 | 99 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-048.0 | 08/04/10 | 117 | 149 | 101 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-010.0 MS | 08/04/10 | 110 | 150 | 103 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-010.0 MSD | 08/04/10 | 107 | 145 | 104 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-023.0 MS | 08/04/10 | 108 | 148 | 103 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-023.0 MSD | 08/04/10 | 109 | 149 | 104 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-010.0 | 08/04/10 | 116 | 146 | 103 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-014.0 | 08/04/10 | 114 | 149 | 101 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-018.0 | 08/04/10 | 116 | 145 | 102 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-023.0 | 08/04/10 | 108 | 138 | 101 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-028.0 | 08/04/10 | 116 | 149 | 100 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-033.0 | 08/04/10 | 119 | 151 | 100 | 97 | Pass | > UCL | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

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## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-169 |
| **On-site Dates**: 8/2/10-8/6/10, 8/9/10-8/12/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0123-038.0 | 08/04/10 | 118 | 149 | 100 | 96 | Pass | > UCL | Pass | Pass |
| CCS 20 | 08/04/10 | 113 | 160 | 102 | 97 | Pass | > UCL | Pass | Pass |
| VSTD 20 | 08/05/10 | 105 | 131 | 105 | 97 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/05/10 | 108 | 138 | 103 | 96 | Pass | > UCL | Pass | Pass |
| BLANK | 08/05/10 | 114 | 130 | 104 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0123-038.0 MS | 08/05/10 | 104 | 134 | 104 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-038.0 MSD | 08/05/10 | 106 | 137 | 103 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-043.0 | 08/05/10 | 81 | 103 | 98 | 102 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0123-048.0 | 08/05/10 | 112 | 134 | 103 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-043.0 | 08/05/10 | 109 | 129 | 105 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0124-010.0 | 08/05/10 | 116 | 141 | 102 | 100 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-014.0 | 08/05/10 | 115 | 143 | 102 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-018.0 1:5 | 08/05/10 | 112 | 140 | 102 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-023.0 1:50 | 08/05/10 | 114 | 142 | 101 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-028.0 | 08/05/10 | 110 | 134 | 105 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-033.0 | 08/05/10 | 114 | 148 | 102 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-038.0 1:5 | 08/05/10 | 117 | 148 | 102 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-043.0 | 08/05/10 | 119 | 147 | 103 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-048.0 | 08/05/10 | 115 | 149 | 101 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-018.0 1:100 | 08/05/10 | 117 | 149 | 100 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0125-010.0 | 08/05/10 | 109 | 133 | 102 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0125-018.0 | 08/05/10 | 119 | 151 | 100 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0125-028.0 | 08/05/10 | 118 | 145 | 99 | 101 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0125-033.0 | 08/05/10 | 116 | 150 | 102 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0125-038.0 | 08/05/10 | 118 | 146 | 99 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0125-043.0 1:20 | 08/05/10 | 117 | 144 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0125-048.0 | 08/05/10 | 117 | 149 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-010.0 | 08/05/10 | 78 | 98 | 97 | 99 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0126-018.0 | 08/05/10 | 117 | 150 | 101 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-028.0 | 08/05/10 | 119 | 145 | 101 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-033.0 | 08/05/10 | 121 | 150 | 100 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-038.0 | 08/05/10 | 116 | 148 | 100 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-043.0 | 08/05/10 | 118 | 150 | 100 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-010.0 MS | 08/05/10 | 114 | 156 | 101 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-010.0 MSD | 08/05/10 | 114 | 156 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CCS 20 | 08/05/10 | 114 | 158 | 100 | 93 | Pass | > UCL | Pass | Pass |
| VSTD 20 | 08/06/10 | 104 | 131 | 102 | 99 | Pass | Pass | Pass | Pass |
| LCS | 08/06/10 | 108 | 136 | 100 | 98 | Pass | > UCL | Pass | Pass |
| BLANK | 08/06/10 | 114 | 130 | 102 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0126-048.0 | 08/06/10 | 113 | 129 | 100 | 98 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

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|---|---|---|
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| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-169 |
| **On-site Dates**: 8/2/10-8/6/10, 8/9/10-8/12/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0126-048.0 MS | 08/06/10 | 108 | 137 | 103 | 100 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-048.0 MSD | 08/06/10 | 109 | 143 | 101 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0127-033.0 | 08/06/10 | 113 | 138 | 102 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0127-038.0 | 08/06/10 | 116 | 138 | 100 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0127-043.0 1:100 | 08/06/10 | 96 | 113 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0127-048.0 1:5 | 08/06/10 | 111 | 142 | 101 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0128-033.0 | 08/06/10 | 116 | 142 | 100 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0128-038.0 | 08/06/10 | 117 | 142 | 101 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0128-043.0 | 08/06/10 | 118 | 144 | 101 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0128-048.0 | 08/06/10 | 115 | 146 | 100 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0129-010.0 | 08/06/10 | 119 | 146 | 100 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0129-018.0 | 08/06/10 | 114 | 138 | 101 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0129-028.0 | 08/06/10 | 118 | 147 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0129-033.0 | 08/06/10 | 118 | 144 | 101 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0129-038.0 | 08/06/10 | 102 | 122 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0129-043.0 1:100 | 08/06/10 | 117 | 142 | 100 | 100 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0129-048.0 1:10 | 08/06/10 | 114 | 140 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0130-033.0 | 08/06/10 | 117 | 143 | 99 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0130-038.0 | 08/06/10 | 64 | 81 | 93 | 95 | < LCL | Pass | Pass | Pass |
| CCS 20 | 08/06/10 | 112 | 154 | 100 | 95 | Pass | > UCL | Pass | Pass |
| VSTD 20 | 08/09/10 | 108 | 124 | 103 | 98 | Pass | Pass | Pass | Pass |
| BLANK | 08/09/10 | 112 | 128 | 103 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0130-043.0 | 08/09/10 | 111 | 128 | 103 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0130-048.0 | 08/09/10 | 111 | 127 | 103 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0130-038.0 1:20 | 08/09/10 | 114 | 138 | 101 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0130-043.0 1:10 | 08/09/10 | 113 | 134 | 103 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0131-033.0 1:20 | 08/09/10 | 112 | 137 | 102 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0131-038.0 1:50 | 08/09/10 | 115 | 134 | 102 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0131-043.0 1:50 | 08/09/10 | 114 | 138 | 102 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0131-048.0 1:100 | 08/09/10 | 72 | 84 | 97 | 98 | < LCL | Pass | Pass | Pass |
| CRHE-IDW178747-20100806 | 08/09/10 | 116 | 146 | 101 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0132-010.0 | 08/09/10 | 85 | 103 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0132-018.0 | 08/09/10 | 120 | 150 | 101 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0132-024.0 | 08/09/10 | 121 | 148 | 101 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0132-033.0 | 08/09/10 | 116 | 150 | 102 | 93 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0132-038.0 | 08/09/10 | 118 | 147 | 100 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0132-043.0 | 08/09/10 | 118 | 146 | 101 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0132-048.0 | 08/09/10 | 120 | 152 | 99 | 94 | Pass | > UCL | Pass | Pass |
| LCS | 08/09/10 | 112 | 147 | 101 | 95 | Pass | > UCL | Pass | Pass |
| VSTD 1 | 08/09/10 | 116 | 119 | 102 | 98 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-169 |
| **On-site Dates**: 8/2/10-8/6/10, 8/9/10-8/12/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| VSTD 5 | 08/09/10 | 109 | 120 | 99 | 95 | Pass | Pass | Pass | Pass |
| VSTD 10 | 08/09/10 | 80 | 110 | 98 | 98 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0133-010.0 | 08/09/10 | 109 | 114 | 101 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-014.0 | 08/09/10 | 106 | 110 | 100 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-018.0 1:20 | 08/09/10 | 116 | 131 | 98 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-023.0 1:500 | 08/09/10 | 114 | 131 | 98 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-028.0 1:200 | 08/09/10 | 114 | 132 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-033.0 1:20 | 08/09/10 | 114 | 131 | 97 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-038.0 1:50 | 08/09/10 | 110 | 129 | 98 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-043.0 | 08/09/10 | 110 | 126 | 98 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-048.0 | 08/09/10 | 108 | 124 | 99 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-010.0 | 08/09/10 | 108 | 118 | 100 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-014.0 | 08/09/10 | 112 | 120 | 100 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-018.0 | 08/09/10 | 109 | 117 | 100 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-023.0 | 08/09/10 | 104 | 116 | 101 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0132-048.0 MS | 08/09/10 | 100 | 119 | 101 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0132-048.0 MSD | 08/09/10 | 109 | 127 | 104 | 99 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/09/10 | 100 | 120 | 101 | 99 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/10/10 | 91 | 100 | 101 | 103 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/10/10 | 99 | 110 | 104 | 101 | Pass | Pass | Pass | Pass |
| BLANK | 08/10/10 | 104 | 108 | 104 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-028.0 | 08/10/10 | 106 | 112 | 102 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-033.0 1:20 | 08/10/10 | 107 | 115 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-038.0 1:5000 | 08/10/10 | 105 | 114 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-043.0 1:50 | 08/10/10 | 110 | 119 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-048.0 | 08/10/10 | 107 | 115 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-010.0 | 08/10/10 | 108 | 116 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-018.0 | 08/10/10 | 110 | 115 | 101 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-028.0 | 08/10/10 | 103 | 113 | 102 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-033.0 | 08/10/10 | 106 | 112 | 100 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-038.0 | 08/10/10 | 107 | 114 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-043.0 | 08/10/10 | 105 | 116 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-048.0 | 08/10/10 | 109 | 116 | 101 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-038.0 1:20 | 08/10/10 | 109 | 120 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0136-033.0 | 08/10/10 | 108 | 116 | 102 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0136-038.0 | 08/10/10 | 110 | 119 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0136-043.0 | 08/10/10 | 101 | 111 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0136-048.0 1:20 | 08/10/10 | 109 | 120 | 101 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0136-063.0 | 08/10/10 | 107 | 125 | 100 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0137-033.0 | 08/10/10 | 100 | 110 | 98 | 98 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-169 |
| **On-site Dates**: 8/2/10-8/6/10, 8/9/10-8/12/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0137-038.0 | 08/10/10 | 108 | 120 | 100 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0137-043.0 | 08/10/10 | 112 | 124 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0137-048.0 | 08/10/10 | 110 | 122 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0131-063.0 | 08/10/10 | 112 | 124 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-IDW178748-20100810 1:5 | 08/10/10 | 111 | 124 | 98 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0137-033.0 MS | 08/10/10 | 103 | 126 | 100 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0137-033.0 MSD | 08/10/10 | 103 | 128 | 99 | 95 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/10/10 | 105 | 129 | 100 | 96 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/11/10 | 92 | 102 | 101 | 104 | Pass | Pass | Pass | Pass |
| LCS | 08/11/10 | 96 | 106 | 103 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0137-043.0 MS | 08/11/10 | 103 | 117 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0137-043.0 MSD | 08/11/10 | 103 | 120 | 99 | 99 | Pass | Pass | Pass | Pass |
| BLANK | 08/11/10 | 108 | 117 | 100 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0138-010.0 | 08/11/10 | 109 | 116 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0138-018.0 | 08/11/10 | 109 | 120 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0138-028.0 | 08/11/10 | 109 | 117 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0138-033.0 | 08/11/10 | 108 | 116 | 100 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0138-038.0 | 08/11/10 | 113 | 127 | 97 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0138-043.0 | 08/11/10 | 111 | 122 | 98 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0138-048.0 | 08/11/10 | 110 | 120 | 99 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-010.0 | 08/11/10 | 98 | 108 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-018.0 | 08/11/10 | 112 | 121 | 98 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-033.0 | 08/11/10 | 86 | 94 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-038.0 1:10 | 08/11/10 | 113 | 125 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-043.0 1:100 | 08/11/10 | 115 | 128 | 97 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-048.0 1:200 | 08/11/10 | 116 | 128 | 97 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-028.0 | 08/11/10 | 114 | 124 | 96 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-010.0 | 08/11/10 | 97 | 108 | 94 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-014.0 | 08/11/10 | 113 | 125 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-018.0 | 08/11/10 | 113 | 123 | 96 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-023.0 | 08/11/10 | 112 | 123 | 95 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-028.0 | 08/11/10 | 115 | 126 | 95 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-033.0 | 08/11/10 | 118 | 123 | 95 | 95 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/11/10 | 100 | 110 | 97 | 91 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/12/10 | 109 | 120 | 98 | 95 | Pass | Pass | Pass | Pass |
| BLANK | 08/12/10 | 109 | 102 | 101 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-038.0 | 08/12/10 | 116 | 118 | 99 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-043.0 | 08/12/10 | 113 | 117 | 99 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-048.0 | 08/12/10 | 113 | 120 | 99 | 95 | Pass | Pass | Pass | Pass |
| CRHE-IDW183401-20100811 1:5 | 08/12/10 | 104 | 99 | 103 | 92 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-169 |
| **On-site Dates**: 8/2/10-8/6/10, 8/9/10-8/12/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0140-038.0 MS | 08/12/10 | 99 | 113 | 99 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-038.0 MSD | 08/12/10 | 98 | 111 | 99 | 95 | Pass | Pass | Pass | Pass |
| LCS | 08/12/10 | 107 | 119 | 100 | 94 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/12/10 | 103 | 107 | 101 | 95 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. 1,2-DCAD4 surrogate recovery drifted high during the day but would return to acceptable criteria for initial and daily CCS. Results were not affected as LCS and MS/MSD recoveries were in control even when 12DCAD4 recoveries were high. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-169 |
| **Onsite Dates:** 8/2/10-8/12/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0121-023.0 **Date of Analysis:** 8/4/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 97 | 98 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 107 | 106 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 111 | 111 | 0 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 127 | 129 | 1 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 105 | 106 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 106 | 107 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0122-010.0 **Date of Analysis:** 8/4/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 96 | 97 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 102 | 105 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 113 | 111 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 122 | 123 | 1 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 104 | 104 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 102 | 108 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0123-038.0 **Date of Analysis:** 8/4/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 98 | 95 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 107 | 105 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 111 | 109 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 125 | 121 | 3 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 101 | 99 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 103 | 99 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0126-010.0 **Date of Analysis:** 8/5/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 85 | 90 | 6 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 91 | 92 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 93 | 95 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 118 | 126 | 6 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 96 | 102 | 6 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 95 | 100 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-169 |
| **Onsite Dates:** 8/2/10-8/12/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT0126-048.0 **Date of Analysis:** 8/6/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 98 | 91 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 109 | 102 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 111 | 103 | 8 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 124 | 121 | 3 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 104 | 99 | 5 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 103 | 98 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0132-048.0 **Date of Analysis:** 8/9/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 95 | 85 | 10 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 103 | 87 | 17 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 110 | 110 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 106 | 104 | 2 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 103 | 81 | 23 | Pass | Pass | > RPDL |
| Tetrachloroethene | 50 | 132 | 20 | 105 | 79 | 28 | Pass | Pass | > RPDL |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0137-033.0 **Date of Analysis:** 8/10/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 100 | 92 | 8 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 103 | 102 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 109 | 104 | 5 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 114 | 111 | 2 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 106 | 106 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 104 | 107 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0137-043.0 **Date of Analysis:** 8/10/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 102 | 102 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 110 | 110 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 115 | 118 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 115 | 115 | 1 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 106 | 106 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 107 | 108 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-169 |
| **Onsite Dates:** 8/2/10-8/12/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT0140-038.0 **Date of Analysis:** 8/12/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 89 | 86 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 98 | 95 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 98 | 93 | 6 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 108 | 98 | 9 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 103 | 101 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 105 | 103 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-169 |
| **Onsite Dates:** 8/2/10-8/12/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 — **Date of Analysis:** 8/2/2010
LCS 2 — 8/3/2010
LCS 3 — 8/4/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 52 | to | 150 | 87 | 103 | 114 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 58 | to | 132 | 89 | 115 | 124 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 54 | to | 140 | 94 | 123 | 125 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | to | 126 | 107 | 132 | 132 | Pass | > UCL | > UCL |
| Trichloroethene | 68 | to | 119 | 98 | 110 | 110 | Pass | Pass | Pass |
| Tetrachloroethene | 58 | to | 127 | 109 | 105 | 114 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 — **Date of Analysis:** 8/5/2010
LCS 5 — 8/6/2010
LCS 6 — 8/9/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | LCS#6 | LCS#4 | LCS#5 | LCS#6 |
| Vinyl Chloride | 52 | to | 150 | 103 | 104 | 89 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 58 | to | 132 | 113 | 117 | 96 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 54 | to | 140 | 114 | 117 | 99 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | to | 126 | 126 | 129 | 121 | Pass | > UCL | Pass |
| Trichloroethene | 68 | to | 119 | 103 | 107 | 102 | Pass | Pass | Pass |
| Tetrachloroethene | 58 | to | 127 | 103 | 104 | 103 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 7 — **Date of Analysis:** 8/10/2010
LCS 8 — 8/11/2010
LCS 9 — 8/12/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#7 | LCS#8 | LCS#9 | LCS#7 | LCS#8 | LCS#9 |
| Vinyl Chloride | 52 | to | 150 | 103 | 103 | 93 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 58 | to | 132 | 109 | 113 | 102 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 54 | to | 140 | 113 | 113 | 107 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | to | 126 | 109 | 110 | 111 | Pass | Pass | Pass |
| Trichloroethene | 68 | to | 119 | 102 | 103 | 101 | Pass | Pass | Pass |
| Tetrachloroethene | 58 | to | 127 | 110 | 111 | 109 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

Project Number : 10-169

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| SampleI ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0116-010.0-20100802 | 8/2/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0116-018.0-20100802 | 8/2/10 | Water | 100 | <21 I | <100 | <100 | <28 I | <26 I | <18 I |
| CRHE-DPT0116-028.0-20100802 | 8/2/10 | Water | 100 | <21 I | <100 | <100 | <28 I | <26 I | <18 I |
| CRHE-DPT0116-033.0-20100802 | 8/2/10 | Water | 50 | <11 I | <50 | <50 | <14 I | <13 I | <9 I |
| CRHE-DPT0116-038.0-20100802 | 8/2/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0116-043.0-20100802 | 8/2/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0116-048.0-20100802 | 8/2/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0117-010.0-20100802 | 8/2/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0117-018.0-20100802 | 8/2/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0117-028.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0117-033.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0117-038.0-20100802 | 8/3/10 | Water | 20 | <6.4 I | <20 | <20 | <8.0 I | <6.6 I | <11 I |
| CRHE-DPT0117-043.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0117-048.0-20100802 | 8/3/10 | Water | 1 | **4.7** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0118-010.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0118-018.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | **1.0** | < 1.0 | < 1.0 |
| CRHE-DPT0118-028.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0118-033.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0118-038.0-20100802 | 8/3/10 | Water | 5 | <1.6 I | < 5.0 | < 5.0 | <2.0 I | <1.7 I | <2.6 I |
| CRHE-DPT0118-043.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0118-048.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0119-010.0-20100803 | 8/3/10 | Water | 1 | **1.5** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0119-014.0-20100803 | 8/3/10 | Water | 1 | **3.4** | < 1.0 | < 1.0 | **1.4** | < 1.0 | < 1.0 |
| CRHE-DPT0119-018.0-20100803 | 8/3/10 | Water | 1 | **4.9** | < 1.0 | < 1.0 | **1.2** | < 1.0 | < 1.0 |
| CRHE-DPT0119-023.0-20100803 | 8/3/10 | Water | 1 | **12.6** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0119-028.0-20100803 | 8/3/10 | Water | 1 | **37.1** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0119-033.0-20100803 | 8/3/10 | Water | 1,5 | **180** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0119-038.0-20100803 | 8/3/10 | Water | 1 | **8.7** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0119-043.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-169

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0119-048.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0120-010.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0120-014.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0120-018.0-20100803 | 8/3/10 | Water | 10 | **400** | <10 | <10 | **170** | <3.3 I | <5.2 I |
| CRHE-DPT0120-023.0-20100803 | 8/3/10 | Water | 100 | **4100** | <100 | **230** | **9300** | <33 I | <52 I |
| CRHE-DPT0120-028.0-20100803 | 8/3/10 | Water | 2 | **190** | <2.0 | <2.0 | **20** | < 1.0 I | <1.1 I |
| CRHE-DPT0120-033.0-20100803 | 8/3/10 | Water | 1 | **1.5** | < 1.0 | < 1.0 | **3.9** | < 1.0 | < 1.0 |
| CRHE-DPT0120-038.0-20100803 | 8/3/10 | Water | 1 | **1.8** | < 1.0 | < 1.0 | **12.1** | < 1.0 | < 1.0 |
| CRHE-DPT0120-043.0-20100803 | 8/3/10 | Water | 1 | **3.0** | < 1.0 | < 1.0 | **14.0** | < 1.0 | < 1.0 |
| CRHE-DPT0120-048.0-20100803 | 8/3/10 | Water | 1 | **5.6** | < 1.0 | < 1.0 | **29.0** | < 1.0 | < 1.0 |
| CRHE-DPT0121-010.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0121-014.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0121-018.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0121-023.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0121-028.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0121-033.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0121-038.0-20100804 | 8/4/10 | Water | 100 | **4900** | <100 | <100 | **6400** | <33 I | <52 I |
| CRHE-DPT0121-043.0-20100804 | 8/4/10 | Water | 50 | **1200** | <50 | **66** | **4900** | **1700** | <26 I |
| CRHE-DPT0121-048.0-20100804 | 8/4/10 | Water | 1 | **28.0** | < 1.0 | < 1.0 | **72.6** | **8.3** | < 1.0 |
| CRHE-DPT0122-010.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | **1.2** | < 1.0 | < 1.0 |
| CRHE-DPT0122-014.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0122-018.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0122-023.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0122-028.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0122-033.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0122-038.0-20100804 | 8/4/10 | Water | 100 | **2900** | <100 | <100 | **6400** | **120** | <52 I |
| CRHE-DPT0122-043.0-20100804 | 8/4/10 | Water | 100 | **1600** | <100 | **110** | **6800** | **2700** | <52 I |
| CRHE-DPT0122-048.0-20100804 | 8/4/10 | Water | 1 | **2.6** | < 1.0 | < 1.0 | **14.5** | **3.1** | < 1.0 |
| CRHE-DPT0123-010.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-169

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0123-014.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0123-018.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0123-023.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0123-028.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0123-033.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0123-038.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0123-043.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0123-048.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0124-010.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0124-014.0-20100805 | 8/5/10 | Water | 1 | **37.8** | < 1.0 | **1.9** | **87.2** | < 1.0 | < 1.0 |
| CRHE-DPT0124-018.0-20100805 | 8/5/10 | Water | 1,100 | **560** | < 1.0 | **6.6** | **3600** | < 1.0 | < 1.0 |
| CRHE-DPT0124-023.0-20100805 | 8/5/10 | Water | 50 | **3000** | <50 | <50 | **4500** | <17 I | <26 I |
| CRHE-DPT0124-028.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | **2.9** | < 1.0 | < 1.0 |
| CRHE-DPT0124-033.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | **1.1** | < 1.0 | < 1.0 |
| CRHE-DPT0124-038.0-20100805 | 8/5/10 | Water | 5 | **290** | <5.0 | **8.5** | **360** | <1.7 I | <2.6 I |
| CRHE-DPT0124-043.0-20100805 | 8/5/10 | Water | 1 | **1.2** | < 1.0 | < 1.0 | **2.2** | < 1.0 | < 1.0 |
| CRHE-DPT0124-048.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0125-010.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0125-018.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0125-028.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0125-033.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0125-038.0-20100805 | 8/5/10 | Water | 1 | **2.1** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0125-043.0-20100805 | 8/5/10 | Water | 20 | **1700** | <20 | **24** | **1300** | <6.6 I | <11 I |
| CRHE-DPT0125-048.0-20100805 | 8/5/10 | Water | 1 | **35.8** | < 1.0 | **1.7** | **7.0** | < 1.0 | < 1.0 |
| CRHE-DPT0126-010.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0126-018.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | **2.1** | < 1.0 | < 1.0 |
| CRHE-DPT0126-028.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0126-033.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0126-038.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-169

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0126-043.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0126-048.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0127-033.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0127-038.0-20100806 | 8/6/10 | Water | 1 | **1.7** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0127-043.0-20100806 | 8/6/10 | Water | 100 | **320** | <100 | **120** | **2700** | **2400** | <52 I |
| CRHE-DPT0127-048.0-20100806 | 8/6/10 | Water | 5 | **15** | <5.0 | **6.2** | **210** | **66** | <2.6 I |
| CRHE-DPT0128-033.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0128-038.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0128-043.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0128-048.0-20100806 | 8/6/10 | Water | 1 | **3.1** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0129-010.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0129-018.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0129-028.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0129-033.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0129-038.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0129-043.0-20100806 | 8/6/10 | Water | 100 | **3000** | <100 | **110** | **5900** | <33 I | <52 I |
| CRHE-DPT0129-048.0-20100806 | 8/6/10 | Water | 10 | **250** | <10 | **22** | **790** | **110** | <5.2 I |
| CRHE-DPT0130-033.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | **1.4** | **1.4** | < 1.0 | < 1.0 |
| CRHE-DPT0130-038.0-20100806 | 8/6/10 | Water | 1,20 | **770** | < 1.0 | **10.5** | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0130-043.0-20100806 | 8/9/10 | Water | 1,10 | **170** | < 1.0 | **3.6** | **1.6** | < 1.0 | < 1.0 |
| CRHE-DPT0130-048.0-20100806 | 8/9/10 | Water | 1 | **3.6** | < 1.0 | < 1.0 | **1.2** | < 1.0 | < 1.0 |
| CRHE-DPT0131-033.0-20100809 | 8/9/10 | Water | 20 | **1600** | <20 | **65** | **940** | <6.6 I | <11 I |
| CRHE-DPT0131-038.0-20100809 | 8/9/10 | Water | 50 | **760** | <50 | **71** | **2200** | <17 I | <26 I |
| CRHE-DPT0131-043.0-20100809 | 8/9/10 | Water | 50 | **320** | <50 | **84** | **3000** | **220** | <26 I |
| CRHE-DPT0131-048.0-20100809 | 8/9/10 | Water | 100 | **370** | <100 | <100 | **2200** | **630** | <52 I |
| CRHE-DPT0132-010.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | **1.4** | < 1.0 | < 1.0 |
| CRHE-DPT0132-018.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0132-024.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0132-033.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-169

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0132-038.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0132-043.0-20100809 | 8/9/10 | Water | 1 | **2.0** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0132-048.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0133-010.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | **1.6** |
| CRHE-DPT0133-014.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0133-018.0-20100809 | 8/9/10 | Water | 20 | **400** | <20 | **13 I** | **710** | <6.6 I | <11 I |
| CRHE-DPT0133-023.0-20100809 | 8/9/10 | Water | 500 | **1700** | <500 | **610** | **27000** | <170 I | <260 I |
| CRHE-DPT0133-028.0-20100809 | 8/9/10 | Water | 200 | **910** | <200 | **210** | **15000** | <66 I | <110 I |
| CRHE-DPT0133-033.0-20100809 | 8/9/10 | Water | 20 | **580** | <20 | **15 I** | **1100** | <6.6 I | <11 I |
| CRHE-DPT0133-038.0-20100809 | 8/9/10 | Water | 50 | **790** | <50 | **38 I** | **2800** | **50** | <26 I |
| CRHE-DPT0133-043.0-20100809 | 8/9/10 | Water | 1 | **4.0** | < 1.0 | < 1.0 | **12.9** | < 1.0 | < 1.0 |
| CRHE-DPT0133-048.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | **3.7** | < 1.0 | < 1.0 |
| CRHE-DPT0134-010.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0134-014.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0134-018.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0134-023.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0134-028.0-20100810 | 8/10/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0134-033.0-20100810 | 8/10/10 | Water | 20 | **200** | <20 | **73** | **500** | **94** | <11 I |
| CRHE-DPT0134-038.0-20100810 | 8/10/10 | Water | 5000 | **4200 I** | <5000 | <5000 | **39000** | **100000** | <2600 I |
| CRHE-DPT0134-043.0-20100810 | 8/10/10 | Water | 50 | **200** | <50 | **43 I** | **1500** | **1500** | <26 I |
| CRHE-DPT0134-048.0-20100810 | 8/10/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | **12.5** | **46.4** | < 1.0 |
| CRHE-DPT0135-010.0-20100810 | 8/10/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0135-018.0-20100810 | 8/10/10 | Water | 1 | **7.8** | < 1.0 | < 1.0 | **3.0** | < 1.0 | < 1.0 |
| CRHE-DPT0135-028.0-20100810 | 8/10/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0135-033.0-20100810 | 8/10/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0135-038.0-20100810 | 8/10/10 | Water | 1,20 | **2500 L** | < 1.0 | **73.6** | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0135-043.0-20100810 | 8/10/10 | Water | 1 | **72.4** | < 1.0 | **3.5** | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0135-048.0-20100810 | 8/10/10 | Water | 1 | **3.7** | < 1.0 | < 1.0 | **1.3** | < 1.0 | < 1.0 |
| CRHE-DPT0136-033.0-20100810 | 8/10/10 | Water | 1 | **1.7** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-169

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0136-038.0-20100810 | 8/10/10 | Water | 1 | **5.8** | < 1.0 | < 1.0 | **1.8** | < 1.0 | < 1.0 |
| CRHE-DPT0136-043.0-20100810 | 8/10/10 | Water | 1 | **2.1** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0136-048.0-20100810 | 8/10/10 | Water | 20 | **78** | <20 | **31** | **930** | **110** | <11 I |
| CRHE-DPT0136-063.0-20100810 | 8/10/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0137-033.0-20100810 | 8/10/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0137-038.0-20100810 | 8/10/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0137-043.0-20100810 | 8/10/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0137-048.0-20100810 | 8/10/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0131-063.0-20100810 | 8/10/10 | Water | 1 | **2.5** | < 1.0 | < 1.0 | **14.6** | **1.9** | < 1.0 |
| CRHE-DPT0138-010.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0138-018.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0138-028.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0138-033.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0138-038.0-20100811 | 8/11/10 | Water | 1 | **4.9** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0138-043.0-20100811 | 8/11/10 | Water | 1 | **41.8** | < 1.0 | < 1.0 | **2.4** | < 1.0 | < 1.0 |
| CRHE-DPT0138-048.0-20100811 | 8/11/10 | Water | 1 | **9.2** | < 1.0 | < 1.0 | **1.7** | < 1.0 | < 1.0 |
| CRHE-DPT0139-010.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0139-018.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0139-028.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0139-033.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0139-038.0-20100811 | 8/11/10 | Water | 10 | **850** | <10 | **34** | **600** | <3.3 I | <5.2 I |
| CRHE-DPT0139-043.0-20100811 | 8/11/10 | Water | 100 | **1700** | <100 | **190** | **7200** | **500** | <52 I |
| CRHE-DPT0139-048.0-20100811 | 8/11/10 | Water | 200 | **910** | <200 | **180 I** | **6100** | **3400** | <110 I |
| CRHE-DPT0140-010.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0140-014.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0140-018.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0140-023.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0140-028.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0140-033.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-169

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0140-038.0-20100811 | 8/12/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0140-043.0-20100811 | 8/12/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0140-048.0-20100811 | 8/12/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

# KB LABS, INC.

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KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-IDW178747-20100806 | 8/9/10 | Water | 1 | **44** | < 1.0 | **1.2** | **140 L** | **6.3** | < 1.0 |
| CRHE-IDW178748-20100810 | 8/10/10 | Water | 5 | **23** | <5.0 | **3.3 I** | **200** | **10** | <2.6 I |
| CRHE-IDW183401-20100811 | 8/12/10 | Water | 5 | **7.5** | <5.0 | **1.9 I** | **100** | **66** | <2.6 I |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** 1603

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CHRE NASA KSC

SAMPLERS: GeoSyntec

CONTACT PERSON: Jan Burton / Joy McKinnon

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE | | | | | | | | | | | |
| DPT0116-010.0-20100702 | | 0915 | | ✓ | 8/2/10 | 0915 | | W | 2 | ✓ | |
| 016.0 | | 0930 | | | | 1040 | | | | | |
| 028.0 | | 0950 | | | | ↓ | | | | | |
| 033.0 | | 1010 | | | | | | | | | |
| 038.0 | | 1030 | | | | | | | | | |
| 043.0 | | 1655 | | | | 1125 | | | | | |
| 048.0 | 1115 | ~~1055~~ | | | | ↓ | | | | | |
| DPT0117-010.0 | | 1145 | | | | 1205 | | | | | |
| 018.0 | | 1158 | | | | ↓ | | | | | |
| 028.0 | | 1300 | | | | 1440 | | | | | |
| 033.0 | | 1320 | | | | ↓ | | | | | |
| 038.0 | | 1345 | | | | | | | | | |
| 043.0 | | 1408 | | | | | | | | | |
| 048.0 | | 1430 | | | | ↓ | | | | | |
| DPT0118-010.0 | | 1505 | | | | 1600 | | | | | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | 8/2/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** K 103

CLIENT NAME: GeosynTec

PROJECT NAME & ADDRESS: CHRE

SAMPLERS:

CONTACT PERSON: Jen Barfus

BATCH # (Lab Use Only):

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHR3 | | | | | | | | | | | |
| DPT0148-018.0-20100802 | | 1520 | | | 8/2/10 | 1600 | | | | | |
| -028.0 | | 1537 | | | | ↓ | | | | | |
| 033.0 | | 1553 | | | | 1710 | | | | | |
| 038.0 | | 1617 | | | | | | | | | |
| 043.0 | | 1637 | | | | | | | | | |
| 048.0 | | 1700 | | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | [signature] | 8/2/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** K03

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE KSC

SAMPLERS

CONTACT PERSON: ~~Jan Barfus~~

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE | | | | | | | | | | | |
| OPT0119-010.0-20100803 | | 0830 | | ✓ | 8/3/10 | 0910 | | W | 2 | ✓ | |
| 014.0 | | 0843 | | | | ↓ | | | | | |
| 018.0 | | 0857 | | | | | | | | | |
| 023.0 | | 0915 | | | | 1005 | | | | | |
| 028.0 | | 0935 | | | | ↓ | | | | | |
| 033.0 | | 0953 | | | | | | | | | |
| 038.0 | | 1013 | | | | 1110 | | | | | |
| 043.0 | | 1035 | | | | ↓ | | | | | |
| 048.0 | | 1100 | | | | | | | | | |
| OPT0120-010.0 | | 1253 | | | | 1325 | | | | | |
| 014.0 | | 1305 | | | | ↓ | | | | | |
| 018.0 | | 1320 | | | | | | | | | |
| 023.0 | | 1335 | | | | 1420 | | | | | |
| 028.0 | | 1357 | | | | | | | | | |
| 033.0 | | 1415 | | | | ↓ | | | | | |

| Precleaned Containers Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | 8/3/10 | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | 8/3/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030


**MOBILE UNIT #** K 13

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CHRE KSC

SAMPLERS:

CONTACT PERSON: Joey

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE | | | | | | | | | | | |
| MOTO120-035.0-20100803 | | 1437 | | ✓ | 8/3/10 | 1030 | | | | | |
| -043.0 | | 1500 | | | | ↓ | | | | | |
| -048.0 | | 1523 | | | | ↓ | | | | | |
| MOTO121-010.0 | | 1608 | | | | 1715 | | | | | |
| 014.0 | | 1625 | | | | ↓ | | | | | |
| 018.0 | | 1640 | | | | ↓ | | | | | |
| 023.0 | | 1658 | | | | ↓ | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 8/3/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030

**MOBILE UNIT #** K63

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE

SAMPLERS

CONTACT PERSON: Joey

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE | | | | | | | | | | | |
| DPT0121-028.0-20100804 | | 0757 | | ✓ | 8/4/10 | 0830 | | W | 2 | ✓ | |
| 033.0 | | 0817 | | | | ↓ | | | | | |
| 038.0 | | 0837 | | | | 0930 | | | | | |
| 043.0 | | 0857 | | | | ↓ | | | | | |
| 048.0 | | 0920 | | | | | | | | | |
| DPT0122-010.0 | | 1005 | | | | 1035 | | | | | |
| 014.0 | | 1020 | | | | ↓ | | | | | |
| 018.0 | | 1030 | | | | | | | | | |
| 023.0 | | 1047 | | | | 1130 | | | | | |
| 028.0 | | 1105 | | | | ↓ | | | | | |
| 033.0 | | 1123 | | | | | | | | | |
| 038.0 | | 1140 | | | | 1235 | | | | | |
| 043.0 | | 1205 | | | | ↓ | | | | | |
| 048.0 | | 1228 | | | | | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 8/4/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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FAX (352) 472-5832

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** 1483

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE

SAMPLERS:

CONTACT PERSON: Joey

BATCH # (Lab Use Only):

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE | | | | | | | | | | | |
| OPT0123-010.0-20100804 | | 1570 | | ✓ | 8/4/10 | 1555 | | | | | |
| 014.0 | | 1523 | | | | ↓ | | | | | |
| 018.0 | | 1545 | | | | | | | | | |
| 023.0 | | 1605 | | | | 1715 | | | | | |
| 028.0 | | 1623 | | | | ↓ | | | | | |
| 033.0 | | 1640 | | | | | | | | | |
| 038.0 | | 1700 | | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | | | | |
|---|---|---|---|---|
| Precleaned Containers Relinquished by: *(Signature)* | Date / Time 8/4/10 | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 8/4/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** 1453

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE

SAMPLERS

CONTACT PERSON: JBey

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE | | | | | | | | | | | |
| OPT0123-043.0-20100805 | | 0745 | | | 8/5/10 | 0845 | | W | 2 | ✓ | |
| 048.0 | | 0807 | | | | ↓ | | | | | |
| OPT0124-010.0 | | 0910 | | | | 1000 | | | | | |
| -014.0 | | 0935 | | | | ↓ | | | | | |
| 018.0 | | 0947 | | | | | | | | | |
| 023.0 | | 1000 | | | | 1040 | | | | | |
| 028.0 | | 1017 | | | | ↓ | | | | | |
| 033.0 | | 1033 | | | | | | | | | |
| 038.0 | | 1050 | | | | ~~102~~ 1125 | | | | | |
| 043.0 | | 1105 | | | | ↓ | | | | | |
| 048.0 | | 1111 | | | | | | | | | |
| OPT025-010.0 | | 1205 | | | | 1205 | | | | | |
| 018.0 | | 1255 | | | | 1340 | | | | | |
| 023.0 | | 1331 | | | | ↓ | | | | | |
| 028.0 | | 1347 | | | | | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 8/5/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** 433

CLIENT NAME: Evergreen Tech

PROJECT NAME & ADDRESS: CHRE

SAMPLER8:

CONTACT PERSON: JDay

BATCH # (Lab Use Only):

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE | | | | | | | | | | | |
| OPT0125-0350-20180705 | | 1400 | | ✓ | 8/8/18 | 1455 | | W | 2 | ✓ | |
| 043.0 | | 1422 | | | | J | | | | | |
| 048.0 | | 1445 | | | | J | | | | | |
| OPT0126-010.0 | | 1540 | | | | 1620 | | | | | |
| -018.0 | | 1555 | | | | J | | | | | |
| -028.0 | | 1610 | | | | J | | | | | |
| -038.0 | | 1630 | | | | 1700 | | | | | |
| 038.0 | | 1645 | | | | J | | | | | |
| 043.0 | | 1715 | | | | 1720 | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (919) 678-0030

**MOBILE UNIT #** 1CB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE

SAMPLERS: ~~CHRE~~

CONTACT PERSON: Tony

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~CHRE~~ ~~Blank~~ | | | | | | | | | | | |
| OPT0126-048.0-20100506 | | 0738 | | ✓ | 5/6/10 | 0755 | | W | 2 | ✓ | |
| OPT0127-033.0 | 0825 | ~~0845~~ Bad | | | | 0900 | | | | | |
| 038.0 | | ~~0845~~ 0845 | | | | ↓ | | | | | |
| 043.0 | | 0905 | | | | 0930 | | | | | |
| 048.0 | | 0925 | | | | ↓ | | | | | |
| OPT0128-033.0 | | 1007 | | | | 1040 | | | | | |
| 038.0 | | 1030 | | | | ↓ | | | | | |
| 043.0 | | 1050 | | | | 1152 | | | | | |
| 048.0 | | 1110 | | | | ↓ | | | | | |
| OPT0129-010.0 | | 1155 | | | | 1215 | | | | | |
| 018.0 | | 1210 | | | | ↓ | | | | | |
| 028.0 | | 1225 | | | | 1255 | | | | | |
| 033.0 | | 1246 | | | | ↓ | | | | | |
| 038.0 | | 1300 | | | | 1415 | | | | | |
| 043.0 | | ~~1345~~ 1320 | | | | ↓ | | ↓ | ↓ | ✓ | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | 5/6/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030

**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| GeoSyntec | CH2E |

SAMPLERS

CONTACT PERSON: Joey

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~CH2E CRANE~~ | | | | | | | | | | | |
| DPT0129-048.0-20100806 | | ~~1310~~ 1510 | | ✓ | 8/6/10 | 1535 | | W | 2 | ✓ | |
| DPT0130 ~~033.0~~ 033.0 | | 1542 | | | | 1600 | | | | | |
| FDW178747 | | 1530 | | | | ↓ | | | | | |
| DPT0130-038.0 | | 1605 | | | | ~~1630~~ 1640 | | | | | |
| 043.0 | | 1630 | | | | ↓ | | | | | |
| 048.0 | | 1650 | | | | 1655 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 8/6/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** 1643

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CH2E IGSC

SAMPLERS: CH2E MW

CONTACT PERSON: Jan Barnes

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~CH2E~~ | | | | | | | | | | | |
| OPTO131-033.0-20100809 | 8/9 | 0835 | | ✓ | 8/9/10 | 0840 | | W | 2 | ✓ | |
| 038.0 | | 0857 | | | | 0905 | | | | | |
| 043.0 | | 0916 | | | | 0950 | | | | | |
| 048.0 | | 0944 | | | | ↓ | | | | | |
| OPTO132-010.0 | | 1021 | | | | 1050 | | | | | |
| 018.0 | | 1030 | | | | ↓ | | | | | |
| 024.0 | | 1042 | | | | ↓ | | | | | |
| 033.0 | | ~~1115~~ 1058 | | | | 1120 | | | | | |
| 038.0 | | 1115 | | | | ↓ | | | | | |
| 043.0 | | 1135 | | | | 1205 | | | | | |
| 048.0 | | 1150 | | | | ↓ | | | | | |
| OPTO133-010.0 | | 1352 | | | | 1420 | | | | | |
| 014.0 | | 1401 | | | | ↓ | | | | | |
| 018.0 | | 1418 | | | | | | | | | |
| 023.0 | | 1422 | | | | 1500 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | [signature] | 8/9/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHAE LSC

SAMPLERS:

CONTACT PERSON: Jan Boras

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID / NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~CHAE~~ ~~MW~~ | | | | | | | | | | | |
| OBTO13-028.0-20100809 | | | | ✓ | 8/9/10 | 1500 | | GW | 2 | ✓ | |
| 033.2 | | 1449 | | | | ↓ | | | | | |
| 038.0 | | 1507 | | | | 055 | | | | | |
| 043.0 | | 1526 | | | | | | | | | |
| 048.0 | | 1543 | | | | | | | | | |
| OBTO14-010.0 | | 1653 | | | | 1715 | | | | | |
| 018.0 | | 1701 | | | | ↓ | | | | | |
| 018.0 | | 1710 | | | | | | | | | |
| 023.0 | | 1722 | | | | 1730 | | | | | |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | 8/9/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** 1463

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE

SAMPLERS: Chris Kow

CONTACT PERSON: Jan Barfus

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID \ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0134-028.0-20100810 | | 0743 | | ✓ | 8/10/10 | 0805 | | W | 2 | ✓ | |
| 033.0 | | 0757 | | | | ↓ | | | | | |
| 038.0 | | 0813 | | | | 0840 | | | | | |
| 043.0 | | 0831 | | | | ↓ | | | | | |
| 048.0 | | 0850 | | | | 0945 | | | | | |
| DPT0135-010.0 | | 0928 | | | | ↓ | | | | | |
| 015.0 | | 0957 | | | | 1010 | | | | | |
| 028.0 | | 1000 | | | | ↓ | | | | | |
| 033.0 | | 1013 | | | | 1045 | | | | | |
| 038.0 | | 1039 | | | | ↓ | | | | | |
| 043.0 | | 1052 | | | | 1135 | | | | | |
| 048.0 | | 1112 | | | | ↓ | | | | | |
| DPT0136-033.0 | | 1146 | | | | 1205 | | | | | |
| -038.0 | | 1200 | | | | ↓ | | | | | |
| -043.0 | | 1310 | | | | 1405 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 8/10/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030

**MOBILE UNIT #** 1483

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE

SAMPLERS

CONTACT PERSON: Jan Burgess

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRTE | | | | | | | | | | | |
| DPT0136-041.0-20 | 100810 | 1330 | | ✓ | 1405 | | | W | 2 | ✓ | |
| 063.0 | | 1336 | | | ↓ | | | | | | |
| DPT0137-033.0 | | 1456 | | | 1520 | | | | | | |
| -038.0 | | 1516 | | | ↓ | | | | | | |
| 043.0 | | 1559 | | | 1620 | | | | | | |
| 048.0 | | 1605 | | | ↓ | | | | | | |
| DPT0131-063.0 | | 1630 | | | 1640 | | | | | | |
| EDW178748 | | 1620 | | | 1650 | | | | | | |

PRESERVATION
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

Matrix Types S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030

**MOBILE UNIT #**

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CRITE |
| **SAMPLERS** | **CONTACT PERSON** |
| | Jan Barfus |

**BATCH # (Lab Use Only)**

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRITE | | | | | | | | | | | |
| DPT0138-010.0-20100811 | ~~0801~~ | 0801 | | ✓ | 8/11/10 | 0820 | | W | 2 | ✓ | |
| 018.0 | ~~0812~~ | 0812 | | | | ↓ | | | | | |
| 028.0 | | 0830 | | | | 0850 | | | | | |
| 033.0 | | 0846 | | | | ↓ | | | | | |
| 038.0 | | 0905 | | | | 0955 | | | | | |
| 043.0 | | 0925 | | | | ↓ | | | | | |
| 048.0 | | 0946 | | | | ↓ | | | | | |
| DPT0139-010.0 | | 1024 | | | | 1055 | | | | | |
| 018.0 | | 1034 | | | | ↓ | | | | | |
| 028.0 | | 1046 | | | | ↓ | | | | | |
| 033.0 | | 1100 | | | | 1125 | | | | | |
| 038.0 | | 1118 | | | | ↓ | | | | | |
| 043.0 | | 1138 | | | | 1210 | | | | | |
| 048.0 | | 1202 | | | | ↓ | | | | | |
| DPT0140-010.0 | | 1416 | | | | 1430 | | | | | |

| Precleaned Containers Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| | 8/11/10 | | | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 8/11/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030

**MOBILE UNIT #** 163

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CRHE

SAMPLERS:

CONTACT PERSON: Jan Barfus

BATCH # (Lab Use Only):

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE | | | | | | | | | | | |
| DPT0140-014.0-20100811 | | ~~1427~~ 1427 | ✓ | | 8/11/10 | 1430 | | W | 2 | ✓ | |
| 018.0 | | 1435 | | | | 1450 | | | | | |
| 023.0 | | 1443 | | | | ″ | | | | | |
| 028.0 | | 1456 | | | | 1515 | | | | | |
| 033.0 | | 1508 | | | | ″ | | | | | |
| 038.0 | | 1522 | | | | 1600 | | | | | |
| 043.0 | | 1534 | | | | ″ | | | | | |
| 048.0 | | 1550 | | | | ″ | | | | | |
| IDW 183401 | | 1630 | | | | 1640 | | | | | |

PRESERVATION
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 8/11/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

***Telephone* (352) 472-5830**
***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

October 21, 2010

Jill Johnson
GeoSyntec Consultants
9511 Holsberry Lane, Suite C
Pensacola, FL 32534

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 10-184**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from October 11 to 14, and 18, 2010. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

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Newberry, FL 32669
Phone: 352-472-5830
Fax: 352-472-5832
Email: info@kbmobilelabs.com

# PROJECT NARRATIVE

## Project Scope

From October 11 to 14, and 18, 2010, a total of 107 water samples were analyzed for GeoSyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB3: FDOH NELAP Certification Number E82816

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0

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Email: info@kbmobilelabs.com

ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

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# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. Changes for sample ID CRHE-DPT0145-043.0-20101012 reported:
   t-1,2-dichloroethene <1.0 changed to 1.6ug/L.
   c-1,2-dichloroethene 1.6 changed to <1.0ug/L.

3. As per NASA client request for diluted samples between the lab RL and MDL are reported with FDEP Data qualifier "I". Some results were changed from the Field Report to the Final Report to reflect this requirement.

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-184 |
| **On-site Dates**: 10/11/10-10/14/10, 10/18/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| VSTD 20 | 10/11/10 | 107 | 111 | 100 | 95 | Pass | Pass | Pass | Pass |
| LCS | 10/11/10 | 105 | 110 | 101 | 96 | Pass | Pass | Pass | Pass |
| BLANK | 10/11/10 | 112 | 112 | 100 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-010.0 | 10/11/10 | 111 | 108 | 100 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-018.0 | 10/11/10 | 113 | 110 | 100 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-028.0 | 10/11/10 | 114 | 111 | 101 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-033.0 | 10/11/10 | 114 | 108 | 99 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-038.0 | 10/11/10 | 112 | 116 | 100 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-043.0 | 10/11/10 | 117 | 114 | 98 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-048.0 | 10/11/10 | 116 | 116 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0142-010.0 | 10/11/10 | 117 | 117 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0142-018.0 | 10/11/10 | 117 | 120 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0142-028.0 | 10/11/10 | 118 | 118 | 98 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0142-033.0 | 10/11/10 | 115 | 120 | 98 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0142-038.0 | 10/11/10 | 118 | 122 | 97 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0142-043.0 | 10/11/10 | 119 | 123 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0142-048.0 | 10/11/10 | 121 | 120 | 97 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0143-028.0 | 10/11/10 | 111 | 114 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0143-033.0 | 10/11/10 | 113 | 112 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0143-038.0 | 10/11/10 | 114 | 116 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0143-043.0 | 10/11/10 | 117 | 118 | 99 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0143-048.0 | 10/11/10 | 117 | 120 | 98 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-010.0 | 10/11/10 | 116 | 114 | 99 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-010.0 MS | 10/11/10 | 110 | 124 | 100 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-010.0 MSD | 10/11/10 | 111 | 108 | 99 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0143-028.0 MS | 10/11/10 | 111 | 118 | 101 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0143-028.0 MSD | 10/11/10 | 109 | 115 | 101 | 93 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/11/10 | 110 | 119 | 99 | 94 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/12/10 | 105 | 112 | 100 | 94 | Pass | Pass | Pass | Pass |
| LCS | 10/12/10 | 110 | 111 | 100 | 95 | Pass | Pass | Pass | Pass |
| BLANK | 10/12/10 | 114 | 110 | 98 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-018.0 | 10/12/10 | 113 | 107 | 101 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-028.0 | 10/12/10 | 113 | 105 | 101 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-033.0 | 10/12/10 | 108 | 104 | 102 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-038.0 | 10/12/10 | 111 | 107 | 100 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-043.0 | 10/12/10 | 111 | 106 | 100 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-048.0 | 10/12/10 | 110 | 104 | 102 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-018.0 MS | 10/12/10 | 107 | 112 | 101 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-018.0 MSD | 10/12/10 | 106 | 109 | 102 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-053.0 | 10/12/10 | 117 | 110 | 101 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-063.0 | 10/12/10 | 116 | 112 | 100 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-010.0 | 10/12/10 | 116 | 112 | 101 | 89 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-184 |
| **On-site Dates**: 10/11/10-10/14/10, 10/18/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0145-018.0 | 10/12/10 | 114 | 108 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-028.0 | 10/12/10 | 117 | 110 | 98 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-063.0 MS | 10/12/10 | 112 | 123 | 99 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-063.0 MSD | 10/12/10 | 114 | 122 | 99 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-033.0 | 10/12/10 | 118 | 120 | 96 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-038.0 | 10/12/10 | 118 | 116 | 97 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-043.0 | 10/12/10 | 117 | 120 | 97 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-048.0 | 10/12/10 | 120 | 121 | 96 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-053.0 | 10/12/10 | 121 | 121 | 96 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-063.0 | 10/12/10 | 120 | 123 | 96 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-048.0 1:5 | 10/12/10 | 119 | 121 | 97 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-053.0 1:50 | 10/12/10 | 118 | 120 | 97 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-063.0 | 10/12/10 | 120 | 116 | 97 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0146-028.0 | 10/12/10 | 117 | 118 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0146-033.0 | 10/12/10 | 119 | 119 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0146-038.0 | 10/12/10 | 116 | 117 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0146-043.0 1:50 | 10/12/10 | 118 | 117 | 97 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0146-048.0 | 10/12/10 | 120 | 114 | 98 | 87 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/12/10 | 111 | 116 | 98 | 93 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/13/10 | 109 | 107 | 99 | 98 | Pass | Pass | Pass | Pass |
| LCS | 10/13/10 | 107 | 112 | 100 | 96 | Pass | Pass | Pass | Pass |
| BLANK | 10/13/10 | 113 | 109 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-063.0 MS | 10/13/10 | 109 | 106 | 99 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-063.0 MSD | 10/13/10 | 107 | 113 | 101 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0147-028.0 | 10/13/10 | 112 | 111 | 100 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0147-033.0 | 10/13/10 | 115 | 111 | 99 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0147-038.0 | 10/13/10 | 116 | 111 | 100 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0147-043.0 | 10/13/10 | 116 | 111 | 100 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0147-048.0 | 10/13/10 | 114 | 110 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0147-028.0 MS | 10/13/10 | 108 | 110 | 102 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0147-028.0 MSD | 10/13/10 | 109 | 115 | 100 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-010.0 | 10/13/10 | 114 | 111 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-018.0 | 10/13/10 | 117 | 111 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-028.0 | 10/13/10 | 118 | 114 | 100 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-033.0 | 10/13/10 | 119 | 114 | 97 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-038.0 | 10/13/10 | 119 | 116 | 97 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-043.0 | 10/13/10 | 118 | 114 | 98 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-048.0 1:20 | 10/13/10 | 118 | 121 | 96 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-043.0 1:10 | 10/13/10 | 117 | 118 | 96 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0149-010.0 | 10/13/10 | 122 | 121 | 97 | 89 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0149-018.0 | 10/13/10 | 120 | 120 | 95 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0149-028.0 | 10/13/10 | 120 | 121 | 95 | 86 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-184 |
| **On-site Dates**: 10/11/10-10/14/10, 10/18/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0149-033.0 | 10/13/10 | 119 | 122 | 96 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0149-038.0 | 10/13/10 | 120 | 122 | 96 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0149-043.0 | 10/13/10 | 122 | 124 | 95 | 86 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0149-033.0 1:100 | 10/13/10 | 124 | 124 | 94 | 88 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0149-043.0 1:10 | 10/13/10 | 126 | 125 | 97 | 87 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0149-048.0 | 10/13/10 | 117 | 121 | 97 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-028.0 | 10/13/10 | 118 | 120 | 96 | 88 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/13/10 | 114 | 124 | 98 | 93 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/14/10 | 105 | 109 | 100 | 96 | Pass | Pass | Pass | Pass |
| LCS | 10/14/10 | 107 | 112 | 102 | 98 | Pass | Pass | Pass | Pass |
| BLANK | 10/14/10 | 110 | 111 | 100 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0149-038 1:100 | 10/14/10 | 115 | 110 | 100 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0149-048.0 1:5 | 10/14/10 | 113 | 115 | 100 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-033.0 | 10/14/10 | 111 | 109 | 100 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-038.0 | 10/14/10 | 114 | 110 | 101 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-043.0 | 10/14/10 | 114 | 109 | 101 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-048.0 | 10/14/10 | 111 | 109 | 100 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-053.0 | 10/14/10 | 112 | 107 | 102 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-063.0 | 10/14/10 | 115 | 112 | 101 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-048.0 MS | 10/14/10 | 107 | 113 | 100 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-048.0 MSD | 10/14/10 | 109 | 118 | 101 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0151-028.0 | 10/14/10 | 114 | 112 | 102 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0151-033.0 | 10/14/10 | 116 | 116 | 98 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0151-038.0 1:5 | 10/14/10 | 114 | 110 | 99 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0151-043.0 | 10/14/10 | 114 | 117 | 99 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0151-048.0 | 10/14/10 | 111 | 104 | 101 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0151-053.0 | 10/14/10 | 118 | 118 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0151-063.0 | 10/14/10 | 117 | 112 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0152-010.0 | 10/14/10 | 113 | 113 | 99 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0152-018.0 | 10/14/10 | 117 | 116 | 99 | 86 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-184 |
| **On-site Dates**: 10/11/10-10/14/10, 10/18/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0152-028.0 | 10/14/10 | 114 | 112 | 98 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0152-033.0 | 10/14/10 | 120 | 116 | 98 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0152-038.0 | 10/14/10 | 116 | 115 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0152-043.0 1:20 | 10/14/10 | 118 | 116 | 96 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0152-048.0 | 10/14/10 | 119 | 118 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0152-043.0 1:5 | 10/14/10 | 118 | 120 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0153-028.0 | 10/14/10 | 118 | 123 | 97 | 89 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/14/10 | 113 | 124 | 97 | 90 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/18/10 | 105 | 110 | 98 | 94 | Pass | Pass | Pass | Pass |
| BLANK | 10/18/10 | 116 | 111 | 98 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0153-033.0 | 10/18/10 | 113 | 107 | 100 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0153-038.0 1:10 | 10/18/10 | 114 | 110 | 98 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0153-043.0 | 10/18/10 | 115 | 108 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0153-048.0 1:20 | 10/18/10 | 112 | 112 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0153-053.0 | 10/18/10 | 116 | 110 | 100 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0153-063.0 | 10/18/10 | 114 | 112 | 98 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-010.0 | 10/18/10 | 113 | 110 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-018.0 | 10/18/10 | 114 | 112 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-028.0 | 10/18/10 | 117 | 114 | 97 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-033.0 | 10/18/10 | 116 | 113 | 98 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-038.0 | 10/18/10 | 116 | 112 | 99 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-043.0 | 10/18/10 | 119 | 112 | 96 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-048.0 | 10/18/10 | 121 | 115 | 97 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-010.0 | 10/18/10 | 114 | 108 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-018.0 | 10/18/10 | 117 | 111 | 97 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-028.0 | 10/18/10 | 119 | 115 | 96 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-033.0 | 10/18/10 | 114 | 112 | 97 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-038.0 | 10/18/10 | 118 | 114 | 97 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-043.0 | 10/18/10 | 119 | 114 | 97 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-048.0 | 10/18/10 | 115 | 116 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-IDW144955-20101015 | 10/18/10 | 115 | 117 | 96 | 85 | Pass | Pass | Pass | Pass |
| CRHE-IDW144956-20101015 1:5 | 10/18/10 | 116 | 115 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-038.0 1:5 | 10/18/10 | 117 | 112 | 98 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-048.0 MS | 10/18/10 | 110 | 116 | 97 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-048.0 MSD | 10/18/10 | 113 | 118 | 97 | 88 | Pass | Pass | Pass | Pass |
| LCS | 10/18/10 | 111 | 117 | 97 | 96 | Pass | Pass | Pass | Pass |
| CCS | 10/18/10 | 113 | 119 | 97 | 92 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-184 |
| **Onsite Dates:** 10/11/10-10/14/10,10/18/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0141-010.0 **Date of Analysis:** 10/11/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 101 | 96 | 5 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 118 | 115 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 118 | 106 | 11 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 103 | 102 | 1 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 95 | 96 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 104 | 104 | 0 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0143-028.0 **Date of Analysis:** 10/11/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 103 | 104 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 121 | 123 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 112 | 112 | 0 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 104 | 104 | 0 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 96 | 99 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 109 | 111 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0144-018.0 **Date of Analysis:** 10/12/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 110 | 103 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 125 | 121 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 119 | 103 | 14 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 106 | 104 | 2 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 100 | 99 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 114 | 114 | 0 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0144-063.0 **Date of Analysis:** 10/12/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 105 | 102 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 121 | 122 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 102 | 100 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 83 | 89 | 7 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 102 | 102 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 112 | 113 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-184 |
| **Onsite Dates:** 10/11/10-10/14/10,10/18/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT0139-063.0 **Date of Analysis:** 10/12/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 112 | 104 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 134 | 124 | 8 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 106 | 101 | 5 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 112 | 104 | 8 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 103 | 97 | 6 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 115 | 110 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0147-028.0 **Date of Analysis:** 10/13/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 103 | 105 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 125 | 129 | 4 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 101 | 102 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 103 | 108 | 4 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 97 | 101 | 4 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 111 | 113 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0150-048.0 **Date of Analysis:** 10/14/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 107 | 104 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 134 | 126 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 130 | 101 | 25 | Pass | Pass | > RPDL |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 107 | 106 | 1 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 101 | 100 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 119 | 111 | 7 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0154-048.0 **Date of Analysis:** 10/18/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 98 | 99 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 108 | 122 | 13 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 104 | 105 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 99 | 102 | 3 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 94 | 95 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 106 | 108 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-184 |
| **Onsite Dates:** 10/11/10-10/14/10,10/18/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1, LCS 2, LCS 3 **Date of Analysis:** 10/11/2010, 10/12/2010, 10/13/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 52 | to | 150 | 101 | 91 | 97 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 58 | to | 132 | 133 | 121 | 127 | > UCL | Pass | Pass |
| Trans-1,2-Dichloroethene | 54 | to | 140 | 118 | 105 | 106 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | to | 126 | 113 | 105 | 109 | Pass | Pass | Pass |
| Trichloroethene | 68 | to | 119 | 102 | 95 | 100 | Pass | Pass | Pass |
| Tetrachloroethene | 58 | to | 127 | 117 | 107 | 113 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4, LCS 5 **Date of Analysis:** 10/14/2010, 10/18/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | | LCS#4 | LCS#5 | |
| Vinyl Chloride | 52 | to | 150 | 100 | 97 | | Pass | Pass | |
| 1,1-Dichloroethene | 58 | to | 132 | 116 | 122 | | Pass | Pass | |
| Trans-1,2-Dichloroethene | 54 | to | 140 | 105 | 106 | | Pass | Pass | |
| Cis-1,2-Dichloroethene | 67 | to | 126 | 108 | 99 | | Pass | Pass | |
| Trichloroethene | 68 | to | 119 | 101 | 94 | | Pass | Pass | |
| Tetrachloroethene | 58 | to | 127 | 115 | 107 | | Pass | Pass | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-DPT0141-010.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0141-018.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0141-028.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0141-033.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0141-038.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0141-043.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0141-048.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0142-010.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0142-018.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0142-028.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0142-033.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0142-038.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0142-043.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0142-048.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0143-028.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-DPT0143-033.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0143-038.0-20101011 | 10/11/10 | Water | 1 | **1.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0143-043.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0143-048.0-20101011 | 10/11/10 | Water | 1 | **1.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-010.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-018.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-028.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-033.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-038.0-20101012 | 10/12/10 | Water | 1 | **1.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-043.0-20101012 | 10/12/10 | Water | 1 | **30.4** | <1.0 | **1.4** | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-048.0-20101012 | 10/12/10 | Water | 1 | **7.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-053.0-20101012 | 10/12/10 | Water | 1 | **2.0** | <1.0 | <1.0 | **3.4** | <1.0 | <1.0 |
| CRHE-DPT0144-063.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0145-010.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0145-018.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Sample ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-DPT0145-028.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0145-033.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0145-038.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0145-043.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | **1.6** | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0145-048.0-20101012 | 10/12/10 | Water | 1, 5 | **150** | <1.0 | **3.9** | **1.6** | <1.0 | <1.0 |
| CRHE-DPT0145-053.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0145-063.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0139-053.0-20101012 | 10/12/10 | Water | 50 | **350** | <15 I | **88** | **1600** | **1200** | <26 I |
| CRHE-DPT0139-063.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0146-028.0-20101012 | 10/12/10 | Water | 1 | **1.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0146-033.0-20101012 | 10/12/10 | Water | 1 | **1.1** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0146-038.0-20101012 | 10/12/10 | Water | 1 | **18.4** | <1.0 | **4.3** | **7.1** | <1.0 | <1.0 |
| CRHE-DPT0146-043.0-20101012 | 10/12/10 | Water | 50 | **330** | <15 I | **100** | **1900** | **2500** | <26 I |
| CRHE-DPT0146-048.0-20101012 | 10/12/10 | Water | 1 | **40.4** | <1.0 | **3.0** | **55.4** | **1.8** | <1.0 |
| CRHE-DPT0147-028.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Sample ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-DPT0147-033.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0147-038.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0147-043.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0147-048.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0148-010.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0148-018.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0148-028.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0148-033.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0148-038.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | **2.9** | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0148-043.0-20101013 | 10/13/10 | Water | 1, 10 | **470** | <1.0 | **7.6** | **8.6** | <1.0 | <1.0 |
| CRHE-DPT0148-048.0-20101013 | 10/13/10 | Water | 20 | **720** | <6.0 I | **11 I** | **260** | <6.6 I | <10 I |
| CRHE-DPT0149-010.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0149-018.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0149-028.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0149-033.0-20101013 | 10/13/10 | Water | 1 | **100** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Sample ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-DPT0149-038.0-20101013 | 10/13/10 | Water | 1, 100 | **2300** | <1.0 | **10.9** | **3.8** | <1.0 | <1.0 |
| CRHE-DPT0149-043.0-20101013 | 10/13/10 | Water | 1, 10 | **310** | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 |
| CRHE-DPT0149-048.0-20101013 | 10/13/10 | Water | 1, 5 | **130** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0150-028.0-20101013 | 10/13/10 | Water | 1 | **2.9** | <1.0 | <1.0 | **7.9** | <1.0 | <1.0 |
| CRHE-DPT0150-033.0-20101014 | 10/14/10 | Water | 1 | **11.3** | <1.0 | <1.0 | **20.1** | <1.0 | <1.0 |
| CRHE-DPT0150-038.0-20101014 | 10/14/10 | Water | 1 | **15.2** | <1.0 | <1.0 | **14.4** | <1.0 | <1.0 |
| CRHE-DPT0150-043.0-20101014 | 10/14/10 | Water | 1 | **22.6** | <1.0 | <1.0 | **21.5** | <1.0 | <1.0 |
| CRHE-DPT0150-048.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0150-053.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0150-063.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0151-028.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0151-033.0-20101014 | 10/14/10 | Water | 1 | **1.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0151-038.0-20101014 | 10/14/10 | Water | 5 | **280** | <1.5 I | **11** | **220** | **5.2** | <2.6 I |
| CRHE-DPT0151-043.0-20101014 | 10/14/10 | Water | 1 | **30.4** | <1.0 | <1.0 | **6.7** | <1.0 | <1.0 |
| CRHE-DPT0151-048.0-20101014 | 10/14/10 | Water | 1 | **37.3** | <1.0 | **1.6** | **7.2** | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Sample ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-DPT0151-053.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0151-063.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0152-010.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0152-018.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0152-028.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0152-033.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0152-038.0-20101014 | 10/14/10 | Water | 1 | **2.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0152-043.0-20101014 | 10/14/10 | Water | 5 | **360** | <1.5 I | **17** | **300** | **4.0 I** | <2.6 I |
| CRHE-DPT0152-048.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0153-028.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0153-033.0-20101015 | 10/18/10 | Water | 1 | **42.4** | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 |
| CRHE-DPT0153-038.0-20101015 | 10/18/10 | Water | 10 | **460** | <3.0 I | **8.6 I** | **86** | <3.3 I | <5.2 I |
| CRHE-DPT0153-043.0-20101015 | 10/18/10 | Water | 1 | **28.5** | <1.0 | **1.4** | **48.4** | **1.2** | <1.0 |
| CRHE-DPT0153-048.0-20101015 | 10/18/10 | Water | 20 | **170** | <6.0 I | **16 I** | **550** | <6.6 I | <10 I |
| CRHE-DPT0153-053.0-20101015 | 10/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-DPT0153-063.0-20101015 | 10/18/10 | Water | 1 | **3.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0154-010.0-20101015 | 10/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0154-018.0-20101015 | 10/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0154-028.0-20101015 | 10/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0154-033.0-20101015 | 10/18/10 | Water | 1 | **1.2** | <1.0 | <1.0 | **6.5** | <1.0 | <1.0 |
| CRHE-DPT0154-038.0-20101015 | 10/18/10 | Water | 1 | **3.3** | <1.0 | <1.0 | **6.4** | <1.0 | <1.0 |
| CRHE-DPT0154-043.0-20101015 | 10/18/10 | Water | 1 | **21.6** | <1.0 | <1.0 | **2.7** | <1.0 | <1.0 |
| CRHE-DPT0154-048.0-20101015 | 10/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0155-010.0-20101015 | 10/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0155-018.0-20101015 | 10/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0155-028.0-20101015 | 10/18/10 | Water | 1 | **9.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0155-033.0-20101015 | 10/18/10 | Water | 1 | **42.3** | <1.0 | <1.0 | **2.5** | <1.0 | <1.0 |
| CRHE-DPT0155-038.0-20101015 | 10/18/10 | Water | 1,5 | **110** | <1.0 | <1.0 | **12.0** | <1.0 | <1.0 |
| CRHE-DPT0155-043.0-20101015 | 10/18/10 | Water | 1 | **79.4** | <1.0 | <1.0 | **1.4** | <1.0 | <1.0 |
| CRHE-DPT0155-048.0-20101015 | 10/18/10 | Water | 1 | **12.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE IDW

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-IDW144955-20101015 | 10/18/10 | Water | 1 | **7.7** | <1.0 | <1.0 | **23.2** | **6.2** | <1.0 |
| CRHE-IDW144956-20101015 | 10/18/10 | Water | 5 | **2.4 I** | <1.5 I | <1.9 I | **2.6 I** | <1.6 I | <2.5 I |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: ~~CHRE~~ CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3 * 10110 | | | | | | | | | | | |
| DW-144957 | 10/08/10 | 1700 | | | 10/11/10 | 0820 | | GW | 2 | ✓ | |
| DPT0141-010.0 | 10/11/10 | 0903 | | | | 1100 | | | | | |
| 018.0 | | 0917 | | | | | | | | | |
| 028.0 | | 0932 | | | | | | | | | |
| 033.0 | | 0953 | | | | | | | | | |
| 038.0 | | 1014 | | | | | | | | | |
| 043.0 | | 1032 | | | | | | | | | |
| 048.0 | | 1055 | | | | | | | | | |
| DPT0142 010.0 | | 1134 | | | | 1152 | | | | | |
| 018.0 | | 1148 | | | | 1152 | | | | | |
| 028.0 | | 1303 | | | | 1350 | | | | | |
| 033.0 | | 1323 | | | | | | | | | |
| 038.0 | | 1341 | | | | | | | | | |
| 043.0 | | 1401 | | | | 1430 | | | | | |
| 048.0 | | 1423 | | | | 1430 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>10/11/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3*101110 | | | | | | | | | | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS | |
| DPT 0143-028.0 | 10/11/10 | 1535 | | | 10/11/10 | 1535 | | GW | 2 | | |
| 033.0 | | 1552 | | | | 1555 | | | | | |
| 038.0 | | 1609 | | | | 1635 | | | | | |
| 043.0 | | 1629 | | | | 1635 | | | | | |
| 048.0 | | 1657 | | | | 1659 | | | | | |
| DPT 0144-010.0 | | 1714 | | | | 1720 | | | | | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | 10/11/10 |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRA KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3+101L10 | | | | | | | | | | | |
| DT0144-018.0 | 10/14/10 | 0740 | | | 10/14/10 | 0748 | | GW | 2 | ✓ | |
| 028.0 | | 0757 | | | | 0820 | | | | | |
| 033.0 | | 0826 | | | | 0840 | | | | | |
| 038.0 | | 0847 | | | | 0850 | | | | | |
| 043.0 | | 0910 | | | | 0920 | | | | | |
| 048.0 | | 0934 | | | | 0945 | | | | | |
| 053.0 | | 1003 | | | | 1035 | | | | | |
| 063.0 | | 1032 | | | | 1035 | | | | | |
| DT0145-090.0 | | 1119 | | | | 1120 | | | | | |
| 015.0 | | 1152 | | | | 1145 | | | | | |
| 028.0 | | 1145 | | | | 1145 | | | | | |
| 033.0 | | 1201 | | | | 1205 | | | | | |
| 038.0 | | 1305 | | | | 1323 | | | | | |
| 043.0 | | 1323 | | | | 1323 | | | | | |
| 048.0 | | 1342 | | | | 1406 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>10/14/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER KB3 * 101210 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0145-053.0 | 10/14/10 | 1406 | | | 10/14/10 | 1406 | | GW | 2 | ✓ | |
| " 063.0 | | 1437 | | | | 1445 | | | | | |
| DPT0139-053.0 | | 1518 | | | | 1520 | | | | | |
| " 063.0 | | 1538 | | | | 1545 | | | | | |
| DPT0146-043.0 | | 1617 | | | | 1618 | | | | | |
| 033.0 | | 1631 | | | | 1636 | | | | | |
| 038.0 | | 1647 | | | | 1655 | | | | | |
| 043.0 | | 1703 | | | | 1710 | | | | | |
| 048.0 | | 1732 | | | | 1730 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>10/14/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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TEL (919) 678-0030


**MOBILE UNIT #** K83

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE KSGFL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER K83 K101310 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0147-028.0 | 10/13/10 | 0853 | | | 10/13/10 | 0852 | | GW | 2 | ✓ | |
| 033.0 | | 0909 | | | | 0912 | | | | | |
| 038.0 | | 0926 | | | | 0928 | | | | | |
| 043.0 | | 0945 | | | | 0945 | | | | | |
| 048.0 | | 1004 | | | | 1008 | | | | | |
| DPT0148-010.0 | | 1046 | | | | 1100 | | | | | |
| 018.0 | | 1100 | | | | 1100 | | | | | |
| 028.0 | | 1114 | | | | 1135 | | | | | |
| 033.0 | | 1130 | | | | 1131 | | | | | |
| 038.0 | | 1153 | | | | 1200 | | | | | |
| 043.0 | | 1214 | | | | 1236 | | | | | |
| 048.0 | | 1232 | | | | 1236 | | | | | |
| DPT0149-010.0 | | 1428 | | | | 1440 | | | | | |
| 018.0 | | 1438 | | | | 1470 | | | | | |
| 028.0 | | 1450 | | | | 1510 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/13/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTF KSCFL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3 #10310 | | | | | | | | | | | |
| DPT 0149-033.0 | 10/13/10 | 1505 | | | 10/13/10 | 1520 | | GW | 2 | ✓ | |
| 038.0 | ↓ | 1521 | | | ↓ | 1540 | | ↓ | ↓ | ↓ | |
| 043.0 | | 1538 | | | | 1540 | | | | | |
| 048.0 | | 1559 | | | | 1650 | | | | | |
| DPT 0150-028.0 | | 1640 | | | | 1650 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/13/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3 H014/0 | | | | | | | | | | | |
| DPT 0150-033.0 | 10/14/10 | 0740 | | | 10/14/10 | 0800 | | GW | 2 | ✓ | |
| 038.0 | | 0758 | | | | 0800 | | | | | |
| 043.0 | | 0819 | | | | 0845 | | | | | |
| 048.0 | | 0841 | | | | 0845 | | | | | |
| 053.0 | | 0913 | | | | 0945 | | | | | |
| 063.0 | | 0936 | | | | 0945 | | | | | |
| DPT 0151-028.0 | | 1032 | | | | 1100 | | | | | |
| 033.0 | | 1055 | | | | 1100 | | | | | |
| 038.0 | | 1117 | | | | 1145 | | | | | |
| 043.0 | | 1139 | | | | 1145 | | | | | |
| 048.0 | | 1200 | | | | 1305 | | | | | |
| 053.0 | | 1257 | | | | 1305 | | | | | |
| 063.0 | | 1324 | | | | 1342 | | | | | |
| DPT 0152 10.0 | | 1422 | | | | 1440 | | | | | |
| 11 018.0 | | 1437 | | | | 1440 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>10/14/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CAPE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3 10/14/10 | | | | | | | | | | | |
| DPT0152-028.0 | 10/14/10 | 1448 | | | 10/14/10 | 1520 | | GW | 2 | ✓ | |
| 033.0 | | 1511 | | | | 1520 | | | | | |
| 038.0 | | 1542 | | | | 1605 | | | | | |
| 043.0 | | 1601 | | | | 1605 | | | | | |
| 048.0 | | 1622 | | | | 1659 | | | | | |
| DPT0153-028.0 | | 1710 | | | | 1730 | | | | | |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/14/10 | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** HB3

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CRHE hSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0153 -033.0 | 10/15 | 08:20 | | | | | | GW | | ✓ | |
| -038.0 | | 08:42 | | | | | | | | | |
| -043.0 | | 09:05 | | | | | | | | | |
| -048.0 | | 09:26 | | | | | | | | | |
| -053.0 | | 09:48 | | | | | | | | | |
| -063.0 | | 10:14 | | | | | | | | | |
| DPT0154 - 010.0 | | 10:52 | | | | | | | | | |
| -018.0 | | 11:02 | | | | | | | | | |
| -028.0 | | 11:16 | | | | | | | | | |
| -033.0 | | 11:30 | | | | | | | | | |
| -038.0 | | 11:45 | | | | | | | | | |
| -043.0 | | 12:07 | | | | | | | | | |
| -048.0 | | 12:27 | | | | | | | | | |
| DPT0155 - 010.0 | | 13:46 | | | | | | | | | |
| -018.0 | | 13:57 | | | | | | | | | |

| | | | |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |

**Remarks and Observations**

CoC hB Lab Office

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** hB3

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CRHE hsc, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0155-028.0 | 10/15 | 14:10 | | | | | | GW | | ✓ | | | | |
| -033.0 | | 14:34 | | | | | | | | | | | | |
| -038.0 | | 14:50 | | | | | | | | | | | | |
| -043.0 | | 15:11 | | | | | | | | | | | | |
| -048.0 | | 15:28 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| CRHE-IDW144955-20101015 | | | | | | | | GW | | ✓ | | | | |
| CRHE-IDW144956-20101015 | | | | | | | | | | ✓ | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | | | |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |

**Remarks and Observations**

CoC hB lab Office

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

***Telephone* (352) 472-5830**
***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

October 24, 2011

Jill Johnson
GeoSyntec Consultants
9515 Holsberry Road, Suite A
Pensacola, FL 32534

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 11-173**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from October 19 to 21, 2011. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 472-5830.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

*KB Labs, Inc.*
*25132 SW 1st Ave*
*Newberry, FL 32669*
*Phone: 352-472-5830*
*Fax: 352-472-5832*
*Email: info@kbmobilelabs.com*

# PROJECT NARRATIVE

## Project Scope

From October 19 to 21, 2011, a total of 58 water samples were analyzed for GeoSyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, freon 113, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB1: FDOH NELAP Certification Number E82815

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report and the results relate only to the actual samples received and analyzed in the laboratory. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example,

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if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0 ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

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# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. As per NASA Client request for diluted samples between the lab RL and MDL are reported with FDEP Data Qualifier "I". Some results were changed from the Field Report to the Final Report to reflect this requirement.

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 11-173 |
| **On-site Dates**: 10/19/11-10/21/11 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CCS 20 | 10/19/11 | 94 | 96 | 103 | 101 | Pass | Pass | Pass | Pass |
| RSTD 20 | 10/19/11 | 95 | 101 | 103 | 96 | Pass | Pass | Pass | Pass |
| BLANK | 10/19/11 | 102 | 104 | 102 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-028.0 | 10/19/11 | 100 | 105 | 102 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-033.0 | 10/19/11 | 74 | 87 | 92 | 89 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0156-038.0 | 10/19/11 | 104 | 115 | 101 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-043.0 | 10/19/11 | 109 | 117 | 99 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-048.0 | 10/19/11 | 98 | 108 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0157-028.0 | 10/19/11 | 94 | 107 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0157-033.0 | 10/19/11 | 112 | 111 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-028.0 MS | 10/19/11 | 106 | 104 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-028.0 MSD | 10/19/11 | 102 | 104 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0157-038.0 | 10/19/11 | 111 | 110 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0157-043.0 | 10/19/11 | 93 | 113 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0157-048.0 | 10/19/11 | 96 | 112 | 98 | 92 | Pass | Pass | Pass | Pass |
| WILC-IDW-185534 1:10 | 10/19/11 | 115 | 117 | 96 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-028.0 | 10/19/11 | 112 | 113 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-033.0 | 10/19/11 | 105 | 111 | 96 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-038.0 | 10/19/11 | 108 | 111 | 98 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-043.0 | 10/19/11 | 109 | 116 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-048.0 | 10/19/11 | 111 | 117 | 93 | 97 | Pass | Pass | Pass | Pass |
| WILC-IDW-185535 1:10 | 10/19/11 | 112 | 119 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-043.0 1:5 | 10/19/11 | 112 | 114 | 93 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-028.0 | 10/19/11 | 110 | 114 | 97 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-033.0 1:5 | 10/19/11 | 109 | 113 | 96 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-038.0 | 10/19/11 | 111 | 118 | 96 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-043.0 | 10/19/11 | 113 | 117 | 97 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-048.0 | 10/19/11 | 94 | 113 | 102 | 96 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/19/11 | 110 | 113 | 98 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-028.0 1:5 | 10/19/11 | 112 | 115 | 94 | 89 | Pass | Pass | Pass | Pass |
| CCS 20 | 10/20/11 | 103 | 106 | 104 | 94 | Pass | Pass | Pass | Pass |
| RSTD 20 | 10/20/11 | 99 | 102 | 100 | 93 | Pass | Pass | Pass | Pass |
| BLANK | 10/20/11 | 110 | 122 | 101 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-028.0 | 10/20/11 | 109 | 115 | 103 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-033.0 | 10/20/11 | 107 | 116 | 104 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-038.0 | 10/20/11 | 110 | 116 | 105 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-043.0 | 10/20/11 | 106 | 114 | 102 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-048.0 | 10/20/11 | 109 | 120 | 103 | 90 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 11-173 |
| **On-site Dates**: 10/19/11-10/21/11 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0161-028.0 | 10/20/11 | 104 | 121 | 103 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-028.0 MS | 10/20/11 | 95 | 113 | 99 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-028.0 MSD | 10/20/11 | 88 | 104 | 96 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-033.0 | 10/20/11 | 134 | 127 | 100 | 94 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0161-038.0 | 10/20/11 | 112 | 125 | 100 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-043.0 | 10/20/11 | 112 | 128 | 99 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-048.0 | 10/20/11 | 110 | 125 | 100 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-028.0 | 10/20/11 | 104 | 126 | 98 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-033.0 1:5 | 10/20/11 | 111 | 125 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-033.0 1:20 | 10/20/11 | 118 | 132 | 101 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-038.0 | 10/20/11 | 113 | 116 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-043.0 | 10/20/11 | 116 | 118 | 99 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-048.0 | 10/20/11 | 120 | 122 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-053.0 | 10/20/11 | 116 | 122 | 100 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-063.0 | 10/20/11 | 117 | 119 | 99 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0163-028.0 | 10/20/11 | 118 | 121 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0163-033.0 | 10/20/11 | 121 | 123 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0163-038.0 | 10/20/11 | 116 | 122 | 96 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0163-043.0 | 10/20/11 | 112 | 119 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0163-048.0 | 10/20/11 | 117 | 119 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-053.0 MS | 10/20/11 | 110 | 118 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-053.0 MSD | 10/20/11 | 112 | 119 | 96 | 95 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/20/11 | 111 | 117 | 98 | 94 | Pass | Pass | Pass | Pass |
| CCS 20 | 10/21/11 | 94 | 102 | 97 | 95 | Pass | Pass | Pass | Pass |
| RSTD 20 | 10/21/11 | 107 | 107 | 101 | 95 | Pass | Pass | Pass | Pass |
| BLANK | 10/21/11 | 111 | 116 | 99 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-028.0 | 10/21/11 | 114 | 114 | 100 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-033.0 | 10/21/11 | 116 | 120 | 96 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-038.0 | 10/21/11 | 118 | 122 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-043.0 | 10/21/11 | 119 | 130 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-048.0 | 10/21/11 | 119 | 129 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-053.0 | 10/21/11 | 113 | 119 | 94 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-063.0 | 10/21/11 | 120 | 130 | 95 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0165-028.0 | 10/21/11 | 116 | 126 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0165-033.0 | 10/21/11 | 116 | 127 | 95 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0165-038.0 | 10/21/11 | 117 | 129 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0165-043.0 | 10/21/11 | 118 | 130 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0165-048.0 | 10/21/11 | 122 | 135 | 96 | 96 | > UCL | > UCL | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 11-173 |
| **On-site Dates**: 10/19/11-10/21/11 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-IDW-185537 1:10 | 10/21/11 | 124 | 137 | 96 | 93 | > UCL | > UCL | Pass | Pass |
| CRHE-IDW-185538 1:10 | 10/21/11 | 122 | 136 | 92 | 93 | > UCL | > UCL | Pass | Pass |
| VSTD 20 | 10/21/11 | 114 | 129 | 98 | 94 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 11-173 |
| **Onsite Dates:** 10/19/11-10/21/11 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0156-028.0 **Date of Analysis:** 10/19/2011

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 102 | 107 | 5 | Pass | Pass | Pass |
| Freon 113 | 50 | 143 | 20 | 107 | 99 | 8 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 112 | 112 | 0 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 94 | 98 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 92 | 93 | 0 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 103 | 108 | 5 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 115 | 120 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0160-028.0 **Date of Analysis:** 10/20/2011

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 98 | 112 | 14 | Pass | Pass | Pass |
| Freon 113 | 50 | 143 | 20 | 110 | 107 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 117 | 112 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 109 | 96 | 12 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 101 | 94 | 7 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 108 | 110 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 121 | 116 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0162-053.0 **Date of Analysis:** 10/20/2011

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 101 | 103 | 2 | Pass | Pass | Pass |
| Freon 113 | 50 | 143 | 20 | 102 | 105 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 124 | 121 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 117 | 116 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 125 | 121 | 3 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 116 | 118 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 123 | 124 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 11-173 |
| **Onsite Dates:** 10/19/11-10/21/11 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 — **Date of Analysis:** 10/19/2011
LCS 2 — 10/20/2011
LCS 3 — 10/21/2011

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 52 | to | 150 | 101 | 97 | 93 | Pass | Pass | Pass |
| Freon 113 | 59 | to | 168 | 109 | 110 | 107 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 58 | to | 132 | 119 | 126 | 127 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 54 | to | 140 | 112 | 114 | 111 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | to | 126 | 105 | 106 | 106 | Pass | Pass | Pass |
| Trichloroethene | 68 | to | 119 | 105 | 111 | 113 | Pass | Pass | Pass |
| Tetrachloroethene | 58 | to | 127 | 113 | 125 | 127 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | Freon 113 | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0156-028.0-20111019 | 10/19/2011 | 0924 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0156-033.0-20111019 | 10/19/2011 | 0937 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0156-038.0-20111019 | 10/19/2011 | 0949 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0156-043.0-20111019 | 10/19/2011 | 1003 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 |
| CRHE-DPT0156-048.0-20111019 | 10/19/2011 | 1019 | Water | 1 | **12.3** | <1.0 | **5.9** | <1.0 | **2.0** | <1.0 | <1.0 |
| CRHE-DPT0157-028.0-20111019 | 10/19/2011 | 1106 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **1.3** | <1.0 | <1.0 |
| CRHE-DPT0157-033.0-20111019 | 10/19/2011 | 1118 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **3.7** | <1.0 | <1.0 |
| CRHE-DPT0157-038.0-20111019 | 10/19/2011 | 1230 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **3.3** | <1.0 | <1.0 |
| CRHE-DPT0157-043.0-20111019 | 10/19/2011 | 1245 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **3.0** | <1.0 | <1.0 |
| CRHE-DPT0157-048.0-20111019 | 10/19/2011 | 1302 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0158-028.0-20111019 | 10/19/2011 | 1347 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0158-033.0-20111019 | 10/19/2011 | 1403 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0158-038.0-20111019 | 10/19/2011 | 1420 | Water | 1 | **110** | <1.0 | <1.0 | <1.0 | **3.3** | <1.0 | <1.0 |
| CRHE-DPT0158-043.0-20111019 | 10/19/2011 | 1435 | Water | 1, 5 | **210** | <1.0 | <1.0 | **2.2** | **6.2** | <1.0 | <1.0 |
| CRHE-DPT0158-048.0-20111019 | 10/19/2011 | 1451 | Water | 1 | **59.9** | <1.0 | <1.0 | **1.1** | **14.4** | <1.0 | <1.0 |
| CRHE-DPT0159-028.0-20111019 | 10/19/2011 | 1601 | Water | 1, 5 | **120** | <1.0 | <1.0 | <1.0 | **4.8** | <1.0 | <1.0 |
| CRHE-DPT0159-033.0-20111019 | 10/19/2011 | 1613 | Water | 5 | **49.0** | <5.0 | <5.0 | <5.0 | **140** | <5.0 | <5.0 |
| CRHE-DPT0159-038.0-20111019 | 10/19/2011 | 1628 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0159-043.0-20111019 | 10/19/2011 | 1644 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0159-048.0-20111019 | 10/19/2011 | 1657 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0160-028.0-20111020 | 10/20/2011 | 0807 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | Freon 113 | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0160-033.0-20111020 | 10/20/2011 | 0820 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0160-038.0-20111020 | 10/20/2011 | 0833 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0160-043.0-20111020 | 10/20/2011 | 0850 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0160-048.0-20111020 | 10/20/2011 | 0910 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0161-028.0-20111020 | 10/20/2011 | 0950 | Water | 1 | **110** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0161-033.0-20111020 | 10/20/2011 | 1026 | Water | 1, 20 | **1100** | <1.0 | <1.0 | **4.4** | **3.6** | <1.0 | <1.0 |
| CRHE-DPT0161-038.0-20111020 | 10/20/2011 | 1040 | Water | 1 | **2.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0161-043.0-20111020 | 10/20/2011 | 1055 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0161-048.0-20111020 | 10/20/2011 | 1114 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0162-028.0-20111020 | 10/20/2011 | 1141 | Water | 1 | **1.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0162-033.0-20111020 | 10/20/2011 | 1154 | Water | 5 | **160** | <5.0 | <5.0 | **4.2 I** | **83** | **1.5 I** | <5.0 |
| CRHE-DPT0162-038.0-20111020 | 10/20/2011 | 1249 | Water | 1 | **14.0** | <1.0 | <1.0 | <1.0 | **4.4** | <1.0 | <1.0 |
| CRHE-DPT0162-043.0-20111020 | 10/20/2011 | 1304 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0162-048.0-20111020 | 10/20/2011 | 1322 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0162-053.0-20111020 | 10/20/2011 | 1339 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0162-063.0-20111020 | 10/20/2011 | 1401 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0163-028.0-20111020 | 10/20/2011 | 1428 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0163-033.0-20111020 | 10/20/2011 | 1501 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0163-038.0-20111020 | 10/20/2011 | 1515 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0163-043.0-20111020 | 10/20/2011 | 1531 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0163-048.0-20111020 | 10/20/2011 | 1547 | Water | 1 | **2.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | Freon 113 | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0164-028.0-20111021 | 10/21/2011 | 0804 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-033.0-20111021 | 10/21/2011 | 0834 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-038.0-20111021 | 10/21/2011 | 0852 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-043.0-20111021 | 10/21/2011 | 0909 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-048.0-20111021 | 10/21/2011 | 0924 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-053.0-20111021 | 10/21/2011 | 0942 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-063.0-20111021 | 10/21/2011 | 1023 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0165-028.0-20111021 | 10/21/2011 | 1052 | Water | 1 | **1.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0165-033.0-20111021 | 10/21/2011 | 1104 | Water | 1 | **2.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0165-038.0-20111021 | 10/21/2011 | 1119 | Water | 1 | **1.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0165-043.0-20111021 | 10/21/2011 | 1134 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0165-048.0-20111021 | 10/21/2011 | 1148 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA IDW

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | Freon 113 | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WILC -IDW-185534-20111019 | 10/19/2011 | 1144 | Water | 10 | **28** | <10 | <10 | <10 | **77** | **3.7 I** | <10 |
| WILC- IDW-185535-20111019 | 10/19/2011 | 1145 | Water | 10 | **2.8 I** | <10 | <10 | <10 | **3.6 I** | <3.0 I | <10 |
| CRHE-IDW-185537-20111021 | 10/21/2011 | NA | Water | 10 | <10 | <10 | <10 | <10 | <10 | <3.0 I | <10 |
| CRHE-IDW-185538-20111021 | 10/21/2011 | NA | Water | 10 | <10 | <10 | <10 | <10 | <10 | <3.0 I | <10 |

Reporting units for waters are ug/L and for soils are mg/kg.

FR1681

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** K61

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE 155 FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1681101911 | | | | | | | | | | | |
| DPTO155-025.0 | 10/18/11 | 0924 | | | 10/18/11 | 0925 | | GW | 2 | ✓ | changed by client |
| DPTO155-033.0 | | 0937 | | | | 0939 | | | | | |
| -038.0 | | 0949 | | | | 0950 | | | | | |
| -043.0 | | 1003 | | | | 1005 | | | | | |
| -048.0 | | 1019 | | | | 1020 | | | | | |
| DPTO157-028.0 | | 1106 | | | | 1110 | | | | | |
| " 033.0 | | 1118 | | | | 1120 | | | | | |
| IDW-185534 | | 1144 | | | | 1148 | | | 1 | | |
| IDW-185535 | | 1145 | | | | 1148 | | | 1 | | |
| DPTO157-038.0 | | 1230 | | | | 1231 | | | 2 | | |
| -043.0 | | 1245 | | | | 1247 | | | | | |
| 048.0 | | 1302 | | | | 1305 | | | | | |
| DPTO158-028.0 | | 1347 | | | | 1348 | | | | | |
| 033.0 | | 1403 | | | | 1403 | | | | | |
| 038.0 | | 1420 | | | | 1422 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/19/11 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB1#01911 | | | | | | | | | | | |
| DPT0158-043.0 | 10/19/11 | 1435 | | | 10/19/11 | 1435 | | GW | 2 | ✓ | |
| " -048.0 | | 1451 | | | | 1452 | | | | | |
| DPT0159-028.0 | | 1601 | | | | 1613 | | | | | |
| -033.0 | | 1613 | | | | 1615 | | | | | |
| -038.0 | | 1618 | | | | 1645 | | | | | |
| -043.0 | | 1644 | | | | 1641 | | | | | |
| -048.0 | | 1657 | | | | 1705 | | | | | |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | 10/19/11 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

| CLIENT NAME | PROJECT NAME & ADDRESS | | |
|---|---|---|---|
| Geosyntec | CR/TE KSC, FL | | |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB1 * 102011 | | | | | | | | | | | |
| DPT 0160-028.0 | 10/20/11 | 0817 | | | 10/20/11 | 0825 | | GW | 2 | | |
| -033.0 | | 0820 | | | | 0825 | | | | | |
| -038.0 | | 0833 | | | | 0850 | | | | | |
| -043.0 | | 0850 | | | | 0850 | | | | | |
| -048.0 | | 0910 | | | | 0918 | | | | | |
| DPT 0161 -028.0 | | 0950 | | | | 0955 | | | | | |
| -033.0 | | 1026 | | | | 1040 | | | | | |
| -038.0 | | 1040 | | | | 1040 | | | | | |
| -043.0 | | 1055 | | | | 1123 | | | | | |
| -048.0 | | 1114 | | | | 1123 | | | | | |
| DPT 0162-028.0 | | 1141 | | | | 1200 | | | | | |
| 033.0 | | 1154 | | | | 1200 | | | | | |
| 038.0 | | 1249 | | | | 1309 | | | | | |
| 043.0 | | 1304 | | | | 1309 | | | | | |
| 048.0 | | 1324 | | | | 1348 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/20/11 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | | Received by: *(Signature)* | | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** ICS1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE ICSQFL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0162-053.0 | 10/20/11 | 1339 | | | 10/20/11 | 1348 | | GW | 2 | ✓ | |
| " -063.0 | | 1401 | | | | 1420 | | | | | |
| DPT0163-028.0 | | 1428 | | | | 1435 | | | | | |
| 033.0 | | 1501 | | | | 1509 | | | | | |
| 038.0 | | 1515 | | | | 1519 | | | | | |
| 043.0 | | 1531 | | | | 1533 | | | | | |
| 048.0 | | 1547 | | | | 1553 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/20/11 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE KSC, FL

SAMPLERS:

CONTACT PERSON:

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB1 *102111 | | | | | | | | | | | |
| DPT0164-028.0 | 10/21/11 | 0804 | | | 10/21/11 | 0840 | | GW | 2 | ✓ | |
| -033.0 | ↓ | 0834 | | | ↓ | 0840 | | ↓ | ↓ | ↓ | |
| -038.0 | | 0852 | | | | 0915 | | | | | |
| -043.0 | | 0909 | | | | 0915 | | | | | |
| -048.0 | | 0924 | | | | 0947 | | | | | |
| -053.0 | | 0942 | | | | 0947 | | | | | |
| -063.0 | | 1023 | | | | 1030 | | | | | |
| DPT0165-028.0 | | 1052 | | | | 1110 | | | | | |
| -033.0 | | 1104 | | | | 1110 | | | | | |
| -038.0 | | 1119 | | | | 1140 | | | | | |
| -043.0 | | 1134 | | | | 1140 | | | | | |
| -048.0 | | 1148 | | | | 1156 | | | | | |
| IDW-185537 | | | | | | 1235 | | | | | |
| IDW-185538 | ↓ | | | | ↓ | 1235 | | ↓ | ↓ | ↓ | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/21/11 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | | Received by: *(Signature)* | | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

***Telephone* (352) 472-5830**
***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

October 24, 2011

Jill Johnson
GeoSyntec Consultants
9515 Holsberry Road, Suite A
Pensacola, FL 32534

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 11-173**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from October 19 to 21, 2011. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 472-5830.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

*KB Labs, Inc.*
*25132 SW 1st Ave*
*Newberry, FL 32669*
*Phone: 352-472-5830*
*Fax: 352-472-5832*
*Email: info@kbmobilelabs.com*

# PROJECT NARRATIVE

## Project Scope

From October 19 to 21, 2011, a total of 58 water samples were analyzed for GeoSyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, freon 113, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB1: FDOH NELAP Certification Number E82815

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report and the results relate only to the actual samples received and analyzed in the laboratory. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example,

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if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0 ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

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# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. As per NASA Client request for diluted samples between the lab RL and MDL are reported with FDEP Data Qualifier "I". Some results were changed from the Field Report to the Final Report to reflect this requirement.

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 11-173 |
| **On-site Dates**: 10/19/11-10/21/11 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CCS 20 | 10/19/11 | 94 | 96 | 103 | 101 | Pass | Pass | Pass | Pass |
| RSTD 20 | 10/19/11 | 95 | 101 | 103 | 96 | Pass | Pass | Pass | Pass |
| BLANK | 10/19/11 | 102 | 104 | 102 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-028.0 | 10/19/11 | 100 | 105 | 102 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-033.0 | 10/19/11 | 74 | 87 | 92 | 89 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0156-038.0 | 10/19/11 | 104 | 115 | 101 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-043.0 | 10/19/11 | 109 | 117 | 99 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-048.0 | 10/19/11 | 98 | 108 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0157-028.0 | 10/19/11 | 94 | 107 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0157-033.0 | 10/19/11 | 112 | 111 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-028.0 MS | 10/19/11 | 106 | 104 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-028.0 MSD | 10/19/11 | 102 | 104 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0157-038.0 | 10/19/11 | 111 | 110 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0157-043.0 | 10/19/11 | 93 | 113 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0157-048.0 | 10/19/11 | 96 | 112 | 98 | 92 | Pass | Pass | Pass | Pass |
| WILC-IDW-185534 1:10 | 10/19/11 | 115 | 117 | 96 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-028.0 | 10/19/11 | 112 | 113 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-033.0 | 10/19/11 | 105 | 111 | 96 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-038.0 | 10/19/11 | 108 | 111 | 98 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-043.0 | 10/19/11 | 109 | 116 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-048.0 | 10/19/11 | 111 | 117 | 93 | 97 | Pass | Pass | Pass | Pass |
| WILC-IDW-185535 1:10 | 10/19/11 | 112 | 119 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-043.0 1:5 | 10/19/11 | 112 | 114 | 93 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-028.0 | 10/19/11 | 110 | 114 | 97 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-033.0 1:5 | 10/19/11 | 109 | 113 | 96 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-038.0 | 10/19/11 | 111 | 118 | 96 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-043.0 | 10/19/11 | 113 | 117 | 97 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-048.0 | 10/19/11 | 94 | 113 | 102 | 96 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/19/11 | 110 | 113 | 98 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-028.0 1:5 | 10/19/11 | 112 | 115 | 94 | 89 | Pass | Pass | Pass | Pass |
| CCS 20 | 10/20/11 | 103 | 106 | 104 | 94 | Pass | Pass | Pass | Pass |
| RSTD 20 | 10/20/11 | 99 | 102 | 100 | 93 | Pass | Pass | Pass | Pass |
| BLANK | 10/20/11 | 110 | 122 | 101 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-028.0 | 10/20/11 | 109 | 115 | 103 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-033.0 | 10/20/11 | 107 | 116 | 104 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-038.0 | 10/20/11 | 110 | 116 | 105 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-043.0 | 10/20/11 | 106 | 114 | 102 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-048.0 | 10/20/11 | 109 | 120 | 103 | 90 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 11-173 |
| **On-site Dates**: 10/19/11-10/21/11 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0161-028.0 | 10/20/11 | 104 | 121 | 103 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-028.0 MS | 10/20/11 | 95 | 113 | 99 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-028.0 MSD | 10/20/11 | 88 | 104 | 96 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-033.0 | 10/20/11 | 134 | 127 | 100 | 94 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0161-038.0 | 10/20/11 | 112 | 125 | 100 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-043.0 | 10/20/11 | 112 | 128 | 99 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-048.0 | 10/20/11 | 110 | 125 | 100 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-028.0 | 10/20/11 | 104 | 126 | 98 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-033.0 1:5 | 10/20/11 | 111 | 125 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-033.0 1:20 | 10/20/11 | 118 | 132 | 101 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-038.0 | 10/20/11 | 113 | 116 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-043.0 | 10/20/11 | 116 | 118 | 99 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-048.0 | 10/20/11 | 120 | 122 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-053.0 | 10/20/11 | 116 | 122 | 100 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-063.0 | 10/20/11 | 117 | 119 | 99 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0163-028.0 | 10/20/11 | 118 | 121 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0163-033.0 | 10/20/11 | 121 | 123 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0163-038.0 | 10/20/11 | 116 | 122 | 96 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0163-043.0 | 10/20/11 | 112 | 119 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0163-048.0 | 10/20/11 | 117 | 119 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-053.0 MS | 10/20/11 | 110 | 118 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-053.0 MSD | 10/20/11 | 112 | 119 | 96 | 95 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/20/11 | 111 | 117 | 98 | 94 | Pass | Pass | Pass | Pass |
| CCS 20 | 10/21/11 | 94 | 102 | 97 | 95 | Pass | Pass | Pass | Pass |
| RSTD 20 | 10/21/11 | 107 | 107 | 101 | 95 | Pass | Pass | Pass | Pass |
| BLANK | 10/21/11 | 111 | 116 | 99 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-028.0 | 10/21/11 | 114 | 114 | 100 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-033.0 | 10/21/11 | 116 | 120 | 96 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-038.0 | 10/21/11 | 118 | 122 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-043.0 | 10/21/11 | 119 | 130 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-048.0 | 10/21/11 | 119 | 129 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-053.0 | 10/21/11 | 113 | 119 | 94 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-063.0 | 10/21/11 | 120 | 130 | 95 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0165-028.0 | 10/21/11 | 116 | 126 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0165-033.0 | 10/21/11 | 116 | 127 | 95 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0165-038.0 | 10/21/11 | 117 | 129 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0165-043.0 | 10/21/11 | 118 | 130 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0165-048.0 | 10/21/11 | 122 | 135 | 96 | 96 | > UCL | > UCL | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 11-173 |
| **On-site Dates**: 10/19/11-10/21/11 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-IDW-185537 1:10 | 10/21/11 | 124 | 137 | 96 | 93 | > UCL | > UCL | Pass | Pass |
| CRHE-IDW-185538 1:10 | 10/21/11 | 122 | 136 | 92 | 93 | > UCL | > UCL | Pass | Pass |
| VSTD 20 | 10/21/11 | 114 | 129 | 98 | 94 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 11-173 |
| **Onsite Dates:** 10/19/11-10/21/11 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0156-028.0 **Date of Analysis:** 10/19/2011

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 102 | 107 | 5 | Pass | Pass | Pass |
| Freon 113 | 50 | 143 | 20 | 107 | 99 | 8 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 112 | 112 | 0 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 94 | 98 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 92 | 93 | 0 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 103 | 108 | 5 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 115 | 120 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0160-028.0 **Date of Analysis:** 10/20/2011

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 98 | 112 | 14 | Pass | Pass | Pass |
| Freon 113 | 50 | 143 | 20 | 110 | 107 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 117 | 112 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 109 | 96 | 12 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 101 | 94 | 7 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 108 | 110 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 121 | 116 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0162-053.0 **Date of Analysis:** 10/20/2011

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 101 | 103 | 2 | Pass | Pass | Pass |
| Freon 113 | 50 | 143 | 20 | 102 | 105 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 124 | 121 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 117 | 116 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 125 | 121 | 3 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 116 | 118 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 123 | 124 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 11-173 |
| **Onsite Dates:** 10/19/11-10/21/11 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 — **Date of Analysis:** 10/19/2011
LCS 2 — 10/20/2011
LCS 3 — 10/21/2011

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 52 | to | 150 | 101 | 97 | 93 | Pass | Pass | Pass |
| Freon 113 | 59 | to | 168 | 109 | 110 | 107 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 58 | to | 132 | 119 | 126 | 127 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 54 | to | 140 | 112 | 114 | 111 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | to | 126 | 105 | 106 | 106 | Pass | Pass | Pass |
| Trichloroethene | 68 | to | 119 | 105 | 111 | 113 | Pass | Pass | Pass |
| Tetrachloroethene | 58 | to | 127 | 113 | 125 | 127 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | Freon 113 | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0156-028.0-20111019 | 10/19/2011 | 0924 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0156-033.0-20111019 | 10/19/2011 | 0937 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0156-038.0-20111019 | 10/19/2011 | 0949 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0156-043.0-20111019 | 10/19/2011 | 1003 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 |
| CRHE-DPT0156-048.0-20111019 | 10/19/2011 | 1019 | Water | 1 | **12.3** | <1.0 | **5.9** | <1.0 | **2.0** | <1.0 | <1.0 |
| CRHE-DPT0157-028.0-20111019 | 10/19/2011 | 1106 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **1.3** | <1.0 | <1.0 |
| CRHE-DPT0157-033.0-20111019 | 10/19/2011 | 1118 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **3.7** | <1.0 | <1.0 |
| CRHE-DPT0157-038.0-20111019 | 10/19/2011 | 1230 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **3.3** | <1.0 | <1.0 |
| CRHE-DPT0157-043.0-20111019 | 10/19/2011 | 1245 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **3.0** | <1.0 | <1.0 |
| CRHE-DPT0157-048.0-20111019 | 10/19/2011 | 1302 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0158-028.0-20111019 | 10/19/2011 | 1347 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0158-033.0-20111019 | 10/19/2011 | 1403 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0158-038.0-20111019 | 10/19/2011 | 1420 | Water | 1 | **110** | <1.0 | <1.0 | <1.0 | **3.3** | <1.0 | <1.0 |
| CRHE-DPT0158-043.0-20111019 | 10/19/2011 | 1435 | Water | 1, 5 | **210** | <1.0 | <1.0 | **2.2** | **6.2** | <1.0 | <1.0 |
| CRHE-DPT0158-048.0-20111019 | 10/19/2011 | 1451 | Water | 1 | **59.9** | <1.0 | <1.0 | **1.1** | **14.4** | <1.0 | <1.0 |
| CRHE-DPT0159-028.0-20111019 | 10/19/2011 | 1601 | Water | 1, 5 | **120** | <1.0 | <1.0 | <1.0 | **4.8** | <1.0 | <1.0 |
| CRHE-DPT0159-033.0-20111019 | 10/19/2011 | 1613 | Water | 5 | **49.0** | <5.0 | <5.0 | <5.0 | **140** | <5.0 | <5.0 |
| CRHE-DPT0159-038.0-20111019 | 10/19/2011 | 1628 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0159-043.0-20111019 | 10/19/2011 | 1644 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0159-048.0-20111019 | 10/19/2011 | 1657 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0160-028.0-20111020 | 10/20/2011 | 0807 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | Freon 113 | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0160-033.0-20111020 | 10/20/2011 | 0820 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0160-038.0-20111020 | 10/20/2011 | 0833 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0160-043.0-20111020 | 10/20/2011 | 0850 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0160-048.0-20111020 | 10/20/2011 | 0910 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0161-028.0-20111020 | 10/20/2011 | 0950 | Water | 1 | **110** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0161-033.0-20111020 | 10/20/2011 | 1026 | Water | 1, 20 | **1100** | <1.0 | <1.0 | **4.4** | **3.6** | <1.0 | <1.0 |
| CRHE-DPT0161-038.0-20111020 | 10/20/2011 | 1040 | Water | 1 | **2.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0161-043.0-20111020 | 10/20/2011 | 1055 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0161-048.0-20111020 | 10/20/2011 | 1114 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0162-028.0-20111020 | 10/20/2011 | 1141 | Water | 1 | **1.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0162-033.0-20111020 | 10/20/2011 | 1154 | Water | 5 | **160** | <5.0 | <5.0 | **4.2 I** | **83** | **1.5 I** | <5.0 |
| CRHE-DPT0162-038.0-20111020 | 10/20/2011 | 1249 | Water | 1 | **14.0** | <1.0 | <1.0 | <1.0 | **4.4** | <1.0 | <1.0 |
| CRHE-DPT0162-043.0-20111020 | 10/20/2011 | 1304 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0162-048.0-20111020 | 10/20/2011 | 1322 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0162-053.0-20111020 | 10/20/2011 | 1339 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0162-063.0-20111020 | 10/20/2011 | 1401 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0163-028.0-20111020 | 10/20/2011 | 1428 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0163-033.0-20111020 | 10/20/2011 | 1501 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0163-038.0-20111020 | 10/20/2011 | 1515 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0163-043.0-20111020 | 10/20/2011 | 1531 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0163-048.0-20111020 | 10/20/2011 | 1547 | Water | 1 | **2.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | Freon 113 | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0164-028.0-20111021 | 10/21/2011 | 0804 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-033.0-20111021 | 10/21/2011 | 0834 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-038.0-20111021 | 10/21/2011 | 0852 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-043.0-20111021 | 10/21/2011 | 0909 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-048.0-20111021 | 10/21/2011 | 0924 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-053.0-20111021 | 10/21/2011 | 0942 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-063.0-20111021 | 10/21/2011 | 1023 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0165-028.0-20111021 | 10/21/2011 | 1052 | Water | 1 | **1.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0165-033.0-20111021 | 10/21/2011 | 1104 | Water | 1 | **2.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0165-038.0-20111021 | 10/21/2011 | 1119 | Water | 1 | **1.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0165-043.0-20111021 | 10/21/2011 | 1134 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0165-048.0-20111021 | 10/21/2011 | 1148 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA IDW

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | Freon 113 | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WILC -IDW-185534-20111019 | 10/19/2011 | 1144 | Water | 10 | **28** | <10 | <10 | <10 | **77** | **3.7 I** | <10 |
| WILC- IDW-185535-20111019 | 10/19/2011 | 1145 | Water | 10 | **2.8 I** | <10 | <10 | <10 | **3.6 I** | <3.0 I | <10 |
| CRHE-IDW-185537-20111021 | 10/21/2011 | NA | Water | 10 | <10 | <10 | <10 | <10 | <10 | <3.0 I | <10 |
| CRHE-IDW-185538-20111021 | 10/21/2011 | NA | Water | 10 | <10 | <10 | <10 | <10 | <10 | <3.0 I | <10 |

Reporting units for waters are ug/L and for soils are mg/kg.

FR1681

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** K61

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE 155 FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1681101911 | | | | | | | | | | | |
| DPTO155-025.0 | 10/18/11 | 0924 | | | 10/18/11 | 0925 | | GW | 2 | ✓ | changed by client |
| DPTO155-033.0 | | 0937 | | | | 0939 | | | | | |
| -038.0 | | 0949 | | | | 0950 | | | | | |
| -043.0 | | 1003 | | | | 1005 | | | | | |
| -048.0 | | 1019 | | | | 1020 | | | | | |
| DPTO157-028.0 | | 1106 | | | | 1110 | | | | | |
| " 033.0 | | 1118 | | | | 1120 | | | | | |
| IDW-185534 | | 1144 | | | | 1148 | | | 1 | | |
| IDW-185535 | | 1145 | | | | 1148 | | | 1 | | |
| DPTO157-038.0 | | 1230 | | | | 1231 | | | 2 | | |
| -043.0 | | 1245 | | | | 1247 | | | | | |
| 048.0 | | 1302 | | | | 1305 | | | | | |
| DPTO158-028.0 | | 1347 | | | | 1348 | | | | | |
| 033.0 | | 1403 | | | | 1403 | | | | | |
| 038.0 | | 1420 | | | | 1422 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/19/11 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB1#01911 | | | | | | | | | | | |
| DPT0158-043.0 | 10/19/11 | 1435 | | | 10/19/11 | 1435 | | GW | 2 | ✓ | |
| " -048.0 | | 1451 | | | | 1452 | | | | | |
| DPT0159-028.0 | | 1601 | | | | 1613 | | | | | |
| -033.0 | | 1613 | | | | 1615 | | | | | |
| -038.0 | | 1618 | | | | 1645 | | | | | |
| -043.0 | | 1644 | | | | 1641 | | | | | |
| -048.0 | | 1657 | | | | 1705 | | | | | |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | 10/19/11 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

| CLIENT NAME | PROJECT NAME & ADDRESS | | |
|---|---|---|---|
| Geosyntec | CR/TE KSC, FL | | |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB1 * 102011 | | | | | | | | | | | |
| DPT 0160-028.0 | 10/20/11 | 0817 | | | 10/20/11 | 0825 | | GW | 2 | | |
| -033.0 | | 0820 | | | | 0825 | | | | | |
| -038.0 | | 0833 | | | | 0850 | | | | | |
| -043.0 | | 0850 | | | | 0850 | | | | | |
| -048.0 | | 0910 | | | | 0918 | | | | | |
| DPT 0161 -028.0 | | 0950 | | | | 0955 | | | | | |
| -033.0 | | 1026 | | | | 1040 | | | | | |
| -038.0 | | 1040 | | | | 1040 | | | | | |
| -043.0 | | 1055 | | | | 1123 | | | | | |
| -048.0 | | 1114 | | | | 1123 | | | | | |
| DPT 0162-028.0 | | 1141 | | | | 1200 | | | | | |
| 033.0 | | 1154 | | | | 1200 | | | | | |
| 038.0 | | 1249 | | | | 1309 | | | | | |
| 043.0 | | 1304 | | | | 1309 | | | | | |
| 048.0 | | 1324 | | | | 1348 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/20/11 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | | Received by: *(Signature)* | | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** ICS1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE ICSQFL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0162-053.0 | 10/20/11 | 1339 | | | 10/20/11 | 1348 | | GW | 2 | ✓ | |
| " -063.0 | | 1401 | | | | 1420 | | | | | |
| DPT0163-028.0 | | 1428 | | | | 1435 | | | | | |
| 033.0 | | 1501 | | | | 1509 | | | | | |
| 038.0 | | 1515 | | | | 1519 | | | | | |
| 043.0 | | 1531 | | | | 1533 | | | | | |
| 048.0 | | 1547 | | | | 1553 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/20/11 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE KSC, FL

SAMPLERS:

CONTACT PERSON:

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB1 *102111 | | | | | | | | | | | |
| DPT0164-028.0 | 10/21/11 | 0804 | | | 10/21/11 | 0840 | | GW | 2 | ✓ | |
| -033.0 | ↓ | 0834 | | | ↓ | 0840 | | ↓ | ↓ | ↓ | |
| -038.0 | | 0852 | | | | 0915 | | | | | |
| -043.0 | | 0909 | | | | 0915 | | | | | |
| -048.0 | | 0924 | | | | 0947 | | | | | |
| -053.0 | | 0942 | | | | 0947 | | | | | |
| -063.0 | | 1023 | | | | 1030 | | | | | |
| DPT0165-028.0 | | 1052 | | | | 1110 | | | | | |
| -033.0 | | 1104 | | | | 1110 | | | | | |
| -038.0 | | 1119 | | | | 1140 | | | | | |
| -043.0 | | 1134 | | | | 1140 | | | | | |
| -048.0 | | 1148 | | | | 1156 | | | | | |
| IDW-185537 | | | | | | 1235 | | | | | |
| IDW-185538 | ↓ | | | | ↓ | 1235 | | ↓ | ↓ | ↓ | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/21/11 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | | Received by: *(Signature)* | | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

***Telephone* (352) 472-5830**
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January 16, 2012

Jill Johnson
GeoSyntec Consultants
316 South Baylen Street, Suite 201
Pensacola, FL 32502

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project #11-173**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from January 9 to 12, 2012. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 472-5830.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

*KB Labs, Inc.*
*25132 SW 1st Ave*
*Newberry, FL 32669*
*Phone: 352-472-5830*
*Fax: 352-472-5832*
*Email: info@kbmobilelabs.com*

# PROJECT NARRATIVE

## Project Scope

From January 9 to 12, 2012, a total of 71 water samples were analyzed for Geosyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB2: FDOH NELAP Certification Number E82840
KB Mobile Labs Unit KB1: FDOH NELAP Certification Number E82815

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report and the results relate only to the actual samples received and analyzed in the laboratory. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the

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Newberry, FL 32669
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standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0 ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

---

# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. As per NASA client request for diluted samples between the lab RL and MDL are reported with FDEP Data qualifier "I".

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Glenn Jackson, Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 11-173 |
| **On-site Dates**: 1/9/12-1/12/12 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| VSTD 20 | 01/09/12 | 110 | 92 | 102 | 96 | Pass | Pass | Pass | Pass |
| RSTD 20 | 01/09/12 | 105 | 95 | 103 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 01/09/12 | 111 | 95 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0166-028.0 | 01/09/12 | 100 | 87 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0166-033.0 | 01/09/12 | 118 | 98 | 103 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0166-043.0 | 01/09/12 | 119 | 97 | 103 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0166-048.0 | 01/09/12 | 109 | 107 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0166-028.0 MS | 01/09/12 | 115 | 98 | 101 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0166-028.0 MSD | 01/09/12 | 115 | 101 | 106 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0166-038.0 | 01/09/12 | 118 | 100 | 102 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0167-028.0 | 01/09/12 | 117 | 95 | 100 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0167-033.0 | 01/09/12 | 121 | 102 | 104 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0167-038.0 | 01/09/12 | 122 | 104 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0167-043.0 | 01/09/12 | 124 | 103 | 103 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0167-048.0 | 01/09/12 | 123 | 107 | 100 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0168-028.0 | 01/09/12 | 123 | 105 | 103 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0168-033.0 | 01/09/12 | 121 | 106 | 101 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0168-038.0 | 01/09/12 | 107 | 99 | 105 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0168-043.0 | 01/09/12 | 124 | 107 | 98 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0168-048.0 | 01/09/12 | 123 | 104 | 103 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0169-028.0 | 01/09/12 | 125 | 110 | 101 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0169-033.0 | 01/09/12 | 127 | 107 | 100 | 96 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0169-038.0 | 01/09/12 | 126 | 107 | 97 | 98 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0169-043.0 | 01/09/12 | 126 | 110 | 102 | 98 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0169-048.0 | 01/09/12 | 128 | 112 | 102 | 98 | > UCL | Pass | Pass | Pass |
| VSTD 20 | 01/09/12 | 123 | 105 | 102 | 94 | Pass | Pass | Pass | Pass |
| BLANK | 01/10/12 | 101 | 104 | 98 | 107 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/10/12 | 100 | 104 | 98 | 105 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/10/12 | 101 | 105 | 97 | 104 | Pass | Pass | Pass | Pass |
| BLANK | 01/10/12 | 101 | 105 | 100 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0170-028.0 | 01/10/12 | 100 | 101 | 99 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0170-033.0 | 01/10/12 | 97 | 96 | 101 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0170-038.0 | 01/10/12 | 100 | 101 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0170-043.0 | 01/10/12 | 103 | 107 | 99 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0170-048.0 | 01/10/12 | 101 | 105 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0170-028.0 MS | 01/10/12 | 98 | 97 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0170-028.0 MSD | 01/10/12 | 100 | 100 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0171-028.0 | 01/10/12 | 100 | 100 | 100 | 106 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Glenn Jackson, Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 11-173 |
| **On-site Dates**: 1/9/12-1/12/12 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0171-033.0 | 01/10/12 | 104 | 108 | 99 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0171-038.0 | 01/10/12 | 102 | 104 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0171-043.0 | 01/10/12 | 104 | 109 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0171-048.0 | 01/10/12 | 103 | 109 | 98 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0172-028.0 | 01/10/12 | 101 | 101 | 99 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0172-033.0 | 01/10/12 | 103 | 105 | 100 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0172-038.0 | 01/10/12 | 100 | 101 | 101 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0172-043.0 | 01/10/12 | 101 | 100 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0172-048.0 | 01/10/12 | 102 | 106 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0172-053.0 | 01/10/12 | 104 | 109 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0172-063.0 | 01/10/12 | 104 | 107 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0173-028.0 | 01/10/12 | 103 | 106 | 99 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0173-033.0 | 01/10/12 | 103 | 108 | 98 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0173-038.0 | 01/10/12 | 104 | 107 | 99 | 104 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/10/12 | 97 | 103 | 99 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 01/11/12 | 97 | 96 | 102 | 106 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/11/12 | 99 | 100 | 99 | 104 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/11/12 | 99 | 106 | 98 | 102 | Pass | Pass | Pass | Pass |
| BLANK | 01/11/12 | 101 | 106 | 99 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0173-043.0 | 01/11/12 | 101 | 103 | 99 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0173-048.0 | 01/11/12 | 103 | 109 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0173-053.0 | 01/11/12 | 102 | 105 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0173-063.0 | 01/11/12 | 103 | 109 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0174-028.0 | 01/11/12 | 103 | 108 | 98 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0174-033.0 1:10 | 01/11/12 | 103 | 105 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0174-033.0 1:20 | 01/11/12 | 102 | 104 | 100 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0174-038.0 1:50 | 01/11/12 | 102 | 103 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0174-043.0 1:50 | 01/11/12 | 102 | 107 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0174-048.0 1:20 | 01/11/12 | 101 | 105 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0175-028.0 | 01/11/12 | 103 | 103 | 100 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0175-033.0 | 01/11/12 | 103 | 107 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0175-038.0 | 01/11/12 | 104 | 109 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0175-043.0 | 01/11/12 | 104 | 109 | 97 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0175-048.0 | 01/11/12 | 103 | 105 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0175-048.0 MS | 01/11/12 | 101 | 107 | 98 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0175-048.0 MSD | 01/11/12 | 99 | 102 | 99 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0176-028.0 | 01/11/12 | 103 | 107 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0176-033.0 | 01/11/12 | 105 | 111 | 97 | 102 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Glenn Jackson, Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 11-173 |
| **On-site Dates**: 1/9/12-1/12/12 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0176-038.0 | 01/11/12 | 106 | 110 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0176-043.0 | 01/11/12 | 104 | 106 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0176-048.0 | 01/11/12 | 104 | 108 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-IDW 188675 | 01/11/12 | 106 | 114 | 97 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/11/12 | 98 | 99 | 101 | 95 | Pass | Pass | Pass | Pass |
| BLANK | 01/12/12 | 106 | 110 | 100 | 103 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/12/12 | 104 | 107 | 98 | 97 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/12/12 | 101 | 102 | 99 | 98 | Pass | Pass | Pass | Pass |
| BLANK | 01/12/12 | 103 | 107 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-028.0 | 01/12/12 | 106 | 109 | 99 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-033.0 | 01/12/12 | 101 | 97 | 100 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-038.0 | 01/12/12 | 106 | 109 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-043.0 | 01/12/12 | 103 | 106 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-048.0 | 01/12/12 | 106 | 110 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-048.0 MS | 01/12/12 | 101 | 103 | 98 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-048.0 MSD | 01/12/12 | 100 | 100 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0178-028.0 | 01/12/12 | 101 | 97 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0178-033.0 | 01/12/12 | 104 | 106 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0178-038.0 | 01/12/12 | 104 | 102 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0178-043.0 | 01/12/12 | 105 | 109 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0178-048.0 | 01/12/12 | 104 | 104 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-IDW088675 | 01/12/12 | 109 | 115 | 96 | 101 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/12/12 | 108 | 120 | 95 | 93 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Glenn Jackson, Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 11-173 |
| **Onsite Dates:** 1/9/12-1/12/12 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0166-028.0 **Date of Analysis:** 1/9/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 102 | 104 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 105 | 107 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 103 | 107 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 107 | 110 | 2 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 89 | 90 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 86 | 90 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0170-028.0 **Date of Analysis:** 1/10/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 77 | 79 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 91 | 95 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 83 | 86 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 85 | 88 | 4 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 83 | 87 | 4 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 83 | 86 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0175-048.0 **Date of Analysis:** 1/11/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 89 | 92 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 115 | 113 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 89 | 87 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 91 | 89 | 2 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 89 | 88 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 86 | 87 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0177-048.0 **Date of Analysis:** 1/12/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 93 | 90 | 4 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 115 | 110 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 86 | 84 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 89 | 86 | 3 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 89 | 86 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 86 | 84 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Glenn Jackson, Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 11-173 |
| **Onsite Dates:** 1/9/12-1/12/12 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1, LCS 2, LCS 3 **Date of Analysis:** 1/9/2012, 1/10/2012, 1/11/2012

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 58 | to | 135 | 103 | 89 | 95 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 60 | to | 141 | 100 | 104 | 116 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 99 | 102 | 97 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 95 | 105 | 99 | Pass | Pass | Pass |
| Trichloroethene | 68 | to | 128 | 83 | 106 | 99 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | to | 135 | 90 | 102 | 95 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 **Date of Analysis:**

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | | | LCS#4 | | |
| Vinyl Chloride | 58 | to | 135 | 90 | | | Pass | | |
| 1,1-Dichloroethene | 60 | to | 141 | 108 | | | Pass | | |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 88 | | | Pass | | |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 90 | | | Pass | | |
| Trichloroethene | 68 | to | 128 | 90 | | | Pass | | |
| Tetrachloroethene | 67 | to | 135 | 88 | | | Pass | | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0166-028.0-20120109 | 1/9/2012 | 0905 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0166-033.0-20120109 | 1/9/2012 | 0938 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0166-038.0-20120109 | 1/9/2012 | 1000 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0166-043.0-20120109 | 1/9/2012 | 1020 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0166-048.0-20120109 | 1/9/2012 | 1040 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0167-028.0-20120109 | 1/9/2012 | 1148 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0167-033.0-20120109 | 1/9/2012 | 1204 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0167-038.0-20120109 | 1/9/2012 | 1230 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0167-043.0-20120109 | 1/9/2012 | 1248 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0167-048.0-20120109 | 1/9/2012 | 1302 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0168-028.0-20120109 | 1/9/2012 | 1355 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0168-033.0-20120109 | 1/9/2012 | 1412 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0168-038.0-20120109 | 1/9/2012 | 1432 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0168-043.0-20120109 | 1/9/2012 | 1450 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0168-048.0-20120109 | 1/9/2012 | 1512 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0169-028.0-20120109 | 1/9/2012 | 1620 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0169-033.0-20120109 | 1/9/2012 | 1632 | Water | 1 | **1.2** | <1.0 | <1.0 | **5.0** | <1.0 | <1.0 |
| CRHE-DPT0169-038.0-20120109 | 1/9/2012 | 1646 | Water | 1 | **17.6** | <1.0 | <1.0 | **32.2** | <1.0 | <1.0 |
| CRHE-DPT0169-043.0-20120109 | 1/9/2012 | 1704 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0169-048.0-20120109 | 1/9/2012 | 1718 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0170-028.0-20120110 | 1/10/2012 | 0823 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0170-033.0-20120110 | 1/10/2012 | 0836 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0170-038.0-20120110 | 1/10/2012 | 0854 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0170-043.0-20120110 | 1/10/2012 | 0915 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0170-048.0-20120110 | 1/10/2012 | 0932 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0171-028.0-20120110 | 1/10/2012 | 1049 | Water | 1 | **6.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0171-033.0-20120110 | 1/10/2012 | 1105 | Water | 1 | **18.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0171-038.0-20120110 | 1/10/2012 | 1121 | Water | 1 | **52.6** | <1.0 | <1.0 | **1.6** | <1.0 | <1.0 |
| CRHE-DPT0171-043.0-20120110 | 1/10/2012 | 1137 | Water | 1 | **50.7** | <1.0 | <1.0 | **2.5** | <1.0 | <1.0 |
| CRHE-DPT0171-048.0-20120110 | 1/10/2012 | 1155 | Water | 1 | **7.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0172-028.0-20120110 | 1/10/2012 | 1346 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0172-033.0-20120110 | 1/10/2012 | 1402 | Water | 1 | **48.2** | <1.0 | <1.0 | **2.1** | <1.0 | <1.0 |
| CRHE-DPT0172-038.0-20120110 | 1/10/2012 | 1418 | Water | 1 | **27.7** | <1.0 | <1.0 | **4.0** | <1.0 | <1.0 |
| CRHE-DPT0172-043.0-20120110 | 1/10/2012 | 1436 | Water | 1 | **13.5** | <1.0 | <1.0 | **4.3** | <1.0 | <1.0 |
| CRHE-DPT0172-048.0-20120110 | 1/10/2012 | 1500 | Water | 1 | **27.0** | <1.0 | **2.2** | **84.4** | <1.0 | <1.0 |
| CRHE-DPT0172-053.0-20120110 | 1/10/2012 | 1526 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0172-063.0-20120110 | 1/10/2012 | 1550 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0173-028.0-20120110 | 1/10/2012 | 1635 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0173-033.0-20120110 | 1/10/2012 | 1647 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0173-038.0-20120110 | 1/10/2012 | 1705 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0173-043.0-20120111 | 1/11/2012 | 0745 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0173-048.0-20120111 | 1/11/2012 | 0805 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0173-053.0-20120111 | 1/11/2012 | 0825 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0173-063.0-20120111 | 1/11/2012 | 0850 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0174-028.0-20120111 | 1/11/2012 | 1003 | Water | 1 | **1.4** | <1.0 | **2.4** | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report
NASA CRHE
KSC, FL

Prepared for: GeoSyntec

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0174-033.0-20120111 | 1/11/2012 | 1018 | Water | 10, 20 | **720** | **6.5 I** | **48** | **1600** | **22** | <10 |
| CRHE-DPT0174-038.0-20120111 | 1/11/2012 | 1034 | Water | 50 | **740** | <50 | **80** | **2800** | <13 I | <50 |
| CRHE-DPT0174-043.0-20120111 | 1/11/2012 | 1053 | Water | 50 | **400** | <50 | **85** | **2600** | **31 I** | <50 |
| CRHE-DPT0174-048.0-20120111 | 1/11/2012 | 1134 | Water | 20 | **280** | <20 | **37** | **1100** | <5 I | <20 |
| CRHE-DPT0175-028.0-20120111 | 1/11/2012 | 1202 | Water | 1 | <1.0 | <1.0 | <1.0 | **4.5** | <1.0 | <1.0 |
| CRHE-DPT0175-033.0-20120111 | 1/11/2012 | 1248 | Water | 1 | <1.0 | <1.0 | <1.0 | **7.6** | <1.0 | <1.0 |
| CRHE-DPT0175-038.0-20120111 | 1/11/2012 | 1304 | Water | 1 | <1.0 | <1.0 | <1.0 | **19.1** | <1.0 | <1.0 |
| CRHE-DPT0175-043.0-20120111 | 1/11/2012 | 1320 | Water | 1 | **1.5** | <1.0 | <1.0 | **19.8** | <1.0 | <1.0 |
| CRHE-DPT0175-048.0-20120111 | 1/11/2012 | 1342 | Water | 1 | **6.5** | <1.0 | <1.0 | **3.3** | <1.0 | <1.0 |
| CRHE-DPT0176-028.0-20120111 | 1/11/2012 | 1437 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0176-033.0-20120111 | 1/11/2012 | 1455 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0176-038.0-20120111 | 1/11/2012 | 1512 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0176-043.0-20120111 | 1/11/2012 | 1532 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0176-048.0-20120111 | 1/11/2012 | 1555 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0177-028.0-20120112 | 1/12/2012 | 0826 | Water | 1 | **15.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report
NASA CRHE
KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0177-033.0-20120112 | 1/12/2012 | 0856 | Water | 1 | **7.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0177-038.0-20120112 | 1/12/2012 | 0918 | Water | 1 | **1.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0177-043.0-20120112 | 1/12/2012 | 0934 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0177-048.0-20120112 | 1/12/2012 | 0952 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0178-028.0-20120112 | 1/12/2012 | 1110 | Water | 1 | **35.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0178-033.0-20120112 | 1/12/2012 | 1129 | Water | 1 | **2.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0178-038.0-20120112 | 1/12/2012 | 1145 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0178-043.0-20120112 | 1/12/2012 | 1200 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0178-048.0-20120112 | 1/12/2012 | 1218 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE - IDW

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-IDW188675-20120111 | 1/11/2012 | 1715 | Water | 1 | **8.1** | <1.0 | <1.0 | **40.4** | <1.0 | <1.0 |
| CRHE-IDW088675-20120112 | 1/12/2012 | 1410 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS:

CONTACT PERSON:

BATCH # (Lab Use Only):

| SAMPLE FIELD ID.\ NUMBER KB1+0109/12 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0166-028.0 | 4/9/12 | 0905 | | | 4/9/12 | 1050 | | GW | 2 | ✓ | |
| -033.0 | | 0938 | | | | | | | | | |
| 038.0 | | 1000 | | | | | | | | | |
| 043.0 | | 1020 | | | | | | | | | |
| 048.0 | | 1040 | | | | | | | | | |
| DPT0167-028.0 | | 1148 | | | | 1315 | | | | | |
| 033.0 | | 1204 | | | | | | | | | |
| 038.0 | | 1230 | | | | | | | | | |
| 043.0 | | 1248 | | | | | | | | | |
| 048.0 | | 1300 | | | | | | | | | |
| DPT0168 028.0 | | 1355 | | | | 1520 | | | | | |
| 033.0 | | 1412 | | | | | | | | | |
| 038.0 | | 1432 | | | | | | | | | |
| 043.0 | | 1450 | | | | | | | | | |
| 048.0 | | 1512 | | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 4/9/12 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | | Received by: *(Signature)* | | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KS1

CLIENT NAME: Graydon

PROJECT NAME & ADDRESS: CAHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KS1-K0109-12 | | | | | | | | | | | |
| Dpt-0169-028.0 | 1/9/12 | 1520 | | | 1/9/12 | 1720 | | GW | 2 | ✓ | |
| 033.0 | ↓ | 1632 | | | ↓ | ↓ | | ↓ | ↓ | ↓ | |
| 038.0 | | 1646 | | | | | | | | | |
| 043.0 | | 1704 | | | | | | | | | |
| 048.0 | | 1718 | | | | | | | | | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | 1/9/12 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

1/4

Mobile Laboratory Services

25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB2

| CLIENT NAME | PROJECT NAME & ADDRESS | | |

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB2

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA - CRHE

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER KB2 - 011012 - | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0172 - 53 | 1/10/12 | 1526 | | | 1/10/12 | 1605 | | GW | 2 | ✓ | KB2 - 011112 |
| DPT0172 - 63 | ↓ | 1550 | | | ↓ | 1605 | | ↓ | ↓ | ↓ | ↓ |
| DPT0173 - 28 | | 1635 | | | | 1720 | | | | | |
| DPT0173 - 33 | | 1647 | | | | 1720 | | | | | |
| DPT0173 - 38 | | 1705 | | | | 1720 | | | | | |
| DPT0173 - 43 | 1/11/12 | 0745 | | | 1/11/12 | 0905 | | GW | 2 | ✓ | KB2 - 011112 |
| DPT0173 - 48 | ↓ | 0805 | | | ↓ | 0905 | | ↓ | ↓ | ↓ | ↓ |
| DPT0173 - 53 | | 0825 | | | | 0905 | | | | | |
| DPT0173 - 63 | | 0850 | | | | 0905 | | | | | |
| DPT0174 - 28 | | 1003 | | | | 1045 | | | | | |
| DPT0174 - 33 | | 1018 | | | | 1045 | | | | | |
| DPT0174 - 38 | | 1034 | | | | 1045 | | | | | |
| DPT0174 - 43 | | 1053 | | | | 1134 | | | | | |
| DPT0174 - 48 | | 1109 | | | | 1134 | | | | | |
| DPT0175 - 28 | | 1202 | | | | 1355 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 1/12/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** MB2

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA - CRHE

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0175 - 33 | 1/11/12 | 1248 | | | 1/11/12 | 1355 | | GW | 2 | ✓ | MB2 - 011112 |
| DPT0175 - 38 | | 1304 | | | | 1355 | | | | | |
| DPT0175 - 43 | | 1320 | | | | 1355 | | | | | |
| DPT0175 - 48 | | 1342 | | | | 1355 | | | | | |
| DPT0176 - 28 | | 1437 | | | | 1615 | | | | | |
| DPT0176 - 33 | | 1455 | | | | 1615 | | | | | |
| DPT0176 - 38 | | 1512 | | | | 1615 | | | | | |
| DPT0176 - 43 | | 1532 | | | | 1615 | | | | | |
| DPT0176 - 48 | | 1555 | | | | 1615 | | | | | |
| IDW 188675 | | 1715 | | | | 1715 | | | | | |
| DPT0177 - 28 | 1/12/12 | 0826 | | | 1/12/12 | 0835 | | | | | MB2 - 011212 |
| DPT0177 - 33 | | 0856 | | | | 0925 | | | | | |
| DPT0177 - 38 | | 0918 | | | | 0925 | | | | | |
| DPT0177 - 43 | | 0934 | | | | 1010 | | | | | |
| DPT0177 - 48 | | 0952 | | | | 1010 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* BM | Date / Time 1/12/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

4/4


Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 472-5830
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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB2

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA - CRHC

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0178-28 | 1/12/12 | 1110 | | | 1/12/12 | 1309 | | GW | 2 | ✓ | KB2 - 011212 |
| DPT0178-33 | " | 1129 | | | " | 1309 | | " | " | " | " |
| DPT0178-38 | " | 1145 | | | " | 1309 | | " | " | " | " |
| DPT0178-43 | " | 1200 | | | " | 1309 | | " | " | " | " |
| DPT0178-48 | " | 1218 | | | " | 1309 | | " | " | " | " |
| IDW 088675 | " | 1410 | | | " | 1420 | | " | " | " | " |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | | |
| Relinquished by: (Signature) | | Received by: (Signature) | Date / Time: 1/12/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

***Telephone* (352) 472-5830**
***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

February 13, 2012

Jill Johnson
Geosyntec Consultants
316 South Baylen Street, Suite 201
Pensacola, FL 32502

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project #12-28**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from February 7 to 10, 2012. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 472-5830.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

KB Labs, Inc.
25132 SW 1st Ave
Newberry, FL 32669
Phone: 352-472-5830
Fax: 352-472-5832
Email: info@kbmobilelabs.com

# PROJECT NARRATIVE

## Project Scope

From February 7 to 10, 2012, a total of 53 water samples were analyzed for Geosyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB2: FDOH NELAP Certification Number E82840

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report and the results relate only to the actual samples received and analyzed in the laboratory. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example,

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if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0 ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

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# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. As per NASA client request for diluted samples between the lab RL and MDL are reported with FDEP Data qualifier "I".

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 12-28 |
| **On-site Dates**: 2/7/12-2/10/12 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CCS 20 | 02/07/12 | 100 | 99 | 99 | 98 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/07/12 | 97 | 90 | 101 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 02/07/12 | 105 | 101 | 100 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-010.0 | 02/07/12 | 104 | 104 | 98 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-018.0 | 02/07/12 | 104 | 99 | 100 | 103 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/08/12 | 99 | 91 | 102 | 98 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/08/12 | 97 | 91 | 100 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 02/08/12 | 105 | 102 | 97 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-010.0 | 02/08/12 | 106 | 99 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-018.0 | 02/08/12 | 105 | 98 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0167-010.0 | 02/08/12 | 105 | 98 | 101 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0167-018.0 | 02/08/12 | 105 | 98 | 100 | 105 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/08/12 | 101 | 98 | 99 | 99 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/08/12 | 100 | 94 | 99 | 99 | Pass | Pass | Pass | Pass |
| BLANK | 02/08/12 | 107 | 104 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-010.0 | 02/08/12 | 106 | 101 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-018.0 | 02/08/12 | 101 | 96 | 101 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-028.0 | 02/08/12 | 109 | 102 | 113 | 117 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-033.0 | 02/08/12 | 104 | 96 | 102 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-038.0 | 02/08/12 | 104 | 100 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-043.0 | 02/08/12 | 109 | 104 | 98 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-048.0 | 02/08/12 | 105 | 100 | 100 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-048.0 MS | 02/08/12 | 99 | 92 | 103 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-048.0 MSD | 02/08/12 | 96 | 86 | 104 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0180-010.0 | 02/08/12 | 103 | 98 | 101 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0180-018.0 | 02/08/12 | 107 | 101 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0180-028.0 | 02/08/12 | 108 | 102 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0180-033.0 | 02/08/12 | 107 | 99 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0180-038.0 | 02/08/12 | 108 | 98 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0180-043.0 | 02/09/12 | 107 | 98 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0180-048.0 | 02/09/12 | 107 | 98 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0181-010.0 | 02/09/12 | 105 | 96 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0181-018.0 | 02/09/12 | 107 | 100 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0181-028.0 | 02/09/12 | 107 | 98 | 99 | 101 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 12-28 |
| **On-site Dates**: 2/7/12-2/10/12 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0181-038.0 | 02/09/12 | 108 | 100 | 98 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0181-043.0 | 02/09/12 | 106 | 99 | 98 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0181-048.0 | 02/09/12 | 105 | 94 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0182-010.0 | 02/09/12 | 107 | 98 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0182-018.0 | 02/09/12 | 107 | 99 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0182-028.0 | 02/09/12 | 108 | 102 | 97 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0182-038.0 | 02/09/12 | 106 | 97 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0182-043.0 | 02/09/12 | 107 | 99 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0182-048.0 | 02/09/12 | 107 | 98 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-010.0 | 02/09/12 | 107 | 99 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-010.0 MS | 02/09/12 | 102 | 95 | 100 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-010.0 MSD | 02/09/12 | 99 | 91 | 100 | 100 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/09/12 | 96 | 87 | 102 | 101 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/09/12 | 97 | 84 | 102 | 99 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/09/12 | 97 | 90 | 100 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 02/09/12 | 105 | 98 | 100 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-018.0 | 02/09/12 | 107 | 101 | 99 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/09/12 | 99 | 94 | 100 | 100 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/09/12 | 97 | 90 | 101 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 02/09/12 | 100 | 94 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-018.0 | 02/09/12 | 100 | 92 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-028.0 | 02/09/12 | 102 | 97 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-038.0 | 02/09/12 | 103 | 97 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-043.0 | 02/09/12 | 102 | 93 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-048.0 | 02/09/12 | 105 | 98 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-010.0 | 02/09/12 | 106 | 96 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-014.0 | 02/09/12 | 105 | 96 | 101 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-023.0 | 02/09/12 | 103 | 93 | 101 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-010.0 | 02/09/12 | 102 | 93 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-018.0 | 02/09/12 | 106 | 98 | 99 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-028.0 | 02/09/12 | 105 | 99 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-033.0 | 02/09/12 | 104 | 96 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-038.0 | 02/10/12 | 104 | 92 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-043.0 | 02/10/12 | 103 | 93 | 100 | 101 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 12-28 |
| **On-site Dates**: 2/7/12-2/10/12 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0184-048.0 | 02/10/12 | 103 | 95 | 101 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-014.0 | 02/10/12 | 103 | 94 | 101 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-023.0 | 02/10/12 | 103 | 95 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-IDW188738 1:10 | 02/10/12 | 100 | 92 | 102 | 101 | Pass | Pass | Pass | Pass |
| CRHE-IDW188736 1:10 | 02/10/12 | 100 | 93 | 100 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-048.0 MS | 02/10/12 | 98 | 91 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-048.0 MSD | 02/10/12 | 98 | 89 | 102 | 101 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/10/12 | 93 | 86 | 103 | 101 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 12-28 |
| **Onsite Dates:** 2/7/12-2/10/12 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0179-048.0 **Date of Analysis:** 2/8/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 110 | 106 | 4 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 103 | 97 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 102 | 96 | 6 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 89 | 86 | 4 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 102 | 97 | 5 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 105 | 101 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0183-010.0 **Date of Analysis:** 2/9/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 111 | 102 | 8 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 103 | 93 | 10 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 104 | 97 | 7 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 96 | 90 | 6 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 100 | 93 | 7 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 103 | 97 | 6 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0184-048.0 **Date of Analysis:** 2/10/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 97 | 99 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 94 | 95 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 94 | 95 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 88 | 87 | 1 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 92 | 93 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 96 | 97 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 12-28 |
| **Onsite Dates:** 2/7/12-2/10/12 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 — **Date of Analysis:** 2/7/2012
LCS 2 — 2/8/2012
LCS 3 — 2/8/2012

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 58 | to | 135 | 104 | 106 | 130 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 60 | to | 141 | 98 | 99 | 119 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 93 | 100 | 122 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 99 | 94 | 115 | Pass | Pass | Pass |
| Trichloroethene | 68 | to | 128 | 101 | 97 | 119 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | to | 135 | 102 | 101 | 122 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 — **Date of Analysis:** 2/9/2012
LCS 5 — 2/9/2012

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | | LCS#4 | LCS#5 | |
| Vinyl Chloride | 58 | to | 135 | 95 | 102 | | Pass | Pass | |
| 1,1-Dichloroethene | 60 | to | 141 | 85 | 97 | | Pass | Pass | |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 89 | 98 | | Pass | Pass | |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 87 | 93 | | Pass | Pass | |
| Trichloroethene | 68 | to | 128 | 86 | 98 | | Pass | Pass | |
| Tetrachloroethene | 67 | to | 135 | 91 | 97 | | Pass | Pass | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0159-010.0-20120207 | 2/7/2012 | 0923 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0159-018.0-20120207 | 2/7/2012 | 0944 | Water | 1 | **16.8** | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 |
| CRHE-DPT0161-010.0-20120207 | 2/8/2012 | 1030 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0161-018.0-20120207 | 2/8/2012 | 1047 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0167-010.0-20120207 | 2/8/2012 | 1320 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0167-018.0-20120207 | 2/8/2012 | 1339 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0179-010.0-20120207 | 2/8/2012 | 1427 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0179-018.0-20120207 | 2/8/2012 | 1440 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0179-028.0-20120207 | 2/8/2012 | 1453 | Water | 1 | **1.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0179-033.0-20120207 | 2/8/2012 | 1511 | Water | 1 | **1.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0179-038.0-20120207 | 2/8/2012 | 1528 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0179-043.0-20120207 | 2/8/2012 | 1542 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0179-048.0-20120207 | 2/8/2012 | 1605 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0180-010.0-20120207 | 2/8/2012 | 1632 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0180-018.0-20120208 | 2/8/2012 | 0802 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0180-028.0-20120208 | 2/8/2012 | 0816 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0180-033.0-20120208 | 2/8/2012 | 0836 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0180-038.0-20120208 | 2/8/2012 | 0854 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0180-043.0-20120208 | 2/9/2012 | 0914 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0180-048.0-20120208 | 2/9/2012 | 0930 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0181-010.0-20120208 | 2/9/2012 | 1053 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0181-018.0-20120208 | 2/9/2012 | 1105 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0181-028.0-20120208 | 2/9/2012 | 1119 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0181-038.0-20120208 | 2/9/2012 | 1135 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0181-043.0-20120208 | 2/9/2012 | 1154 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0181-048.0-20120208 | 2/9/2012 | 1212 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0182-010.0-20120208 | 2/9/2012 | 1407 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0182-018.0-20120208 | 2/9/2012 | 1416 | Water | 1 | **2.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0182-028.0-20120208 | 2/9/2012 | 1423 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0182-038.0-20120208 | 2/9/2012 | 1439 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0182-043.0-20120208 | 2/9/2012 | 1505 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0182-048.0-20120208 | 2/9/2012 | 1525 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0183-010.0-20120208 | 2/9/2012 | 1645 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0183-018.0-20120209 | 2/9/2012 | 0719 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0183-028.0-20120209 | 2/9/2012 | 0732 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0183-038.0-20120209 | 2/9/2012 | 0750 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0183-043.0-20120209 | 2/9/2012 | 0807 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0183-048.0-20120209 | 2/9/2012 | 0833 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0177-010.0-20120209 | 2/9/2012 | 1107 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0177-014.0-20120209 | 2/9/2012 | 1118 | Water | 1 | **1.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report
NASA CRHE
KSC, FL

Prepared for: Geosyntec Consultants

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0177-018.0-20120209 | 2/9/2012 | 1127 | Water | 1 | **1.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0177-023.0-20120209 | 2/9/2012 | 1136 | Water | 1 | **2.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0184-010.0-20120209 | 2/9/2012 | 1336 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0184-018.0-20120209 | 2/9/2012 | 1346 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0184-028.0-20120209 | 2/9/2012 | 1356 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0184-033.0-20120209 | 2/9/2012 | 1413 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0184-038.0-20120209 | 2/10/2012 | 1430 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0184-043.0-20120209 | 2/10/2012 | 1446 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0184-048.0-20120209 | 2/10/2012 | 1500 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0159-014.0-20120207 | 2/10/2012 | 0936 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0159-023.0-20120207 | 2/10/2012 | 0956 | Water | 1 | **53.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-IDW188738-20120209 | 2/10/2012 | 1710 | Water | 10 | <2.4 I | <10 | <10 | <10 | <2.5 I | <10 |
| CRHE-IDW188736-20120209 | 2/10/2012 | 1711 | Water | 10 | <2.4 I | <10 | <10 | <10 | <2.5 I | <10 |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD

1/2


Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB2

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA - CRMS | |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB2-020712 | | | | | | | | | | | |
| DPT0159-010.0 | 2/7/12 | 0923 | | | 2/7/12 | 1625 | | GW | 2 | ✓ | |
| DPT0159-014.0 | | 0936 | | | | | | | | | H |
| DPT0159-018.0 | | 0944 | | | | | | | | | |
| DPT0159-023.0 | | 0956 | | | | | | | | | H |
| DPT 0161-010.0 | | 1030 | | | | | | | | | |
| DPT 0161-014.0 | | 1036 | | | | | | | | | H - Do not run |
| DPT 0161-018.0 | | 1047 | | | | | | | | | |
| DPT 0161-023.0 | | 1055 | | | | | | | | | H - Do not run |
| DPT 0167-010.0 | | 1320 | | | | | | | | | |
| DPT 0167-014.0 | | 1329 | | | | | | | | | H - Do not run |
| DPT 0167-018.0 | | 1339 | | | | | | | | | |
| DPT 0167-023.0 | | 1353 | | | | | | | | | H - Do not run |
| DPT 0179-010.0 | | 1427 | | | | | | | | | |
| DPT 0179-018.0 | | 1440 | | | | | | | | | |
| DPT 0179-028.0 | | 1453 | | | | | | | | | |

| | | | |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>2/7/12 |

**Remarks and Observations**

Do not run per client on 2/7/12.

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

2/2

Mobile Laboratory Services

25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB2

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB2-020712 | | | | | | | | | | | |
| DPT0179-033.0 | 2/7/12 | 1511 | | | 2/7/12 | 1625 | | GW | 2 | ✓ | |
| DPT0179-038.0 | | 1528 | | | | 1625 | | | | | |
| DPT0179-043.0 | | 1542 | | | | 1625 | | | | | |
| DPT0179-048.0 | | 1603 | | | | 1625 | | | | | |
| DPT0180-010.0 | | 1632 | | | | 1753 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 2/7/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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TEL (352) 472-5830
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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB2

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | NASA - CRTE |
| SAMPLERS | CONTACT PERSON / BATCH # (Lab Use Only) |

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB2-020812 | | | | | | | | | | | |
| DPT 0180 - 018.0 | 2/8/12 | 0802 | | | 2/8/12 | 1420 | | GW | 2 | ✓ | |
| 028.0 | | 0816 | | | | 1420 | | | | | |
| 033.0 | | 0836 | | | | 1420 | | | | | |
| 038.0 | | 0854 | | | | 1420 | | | | | |
| 043.0 | | 0914 | | | | 1420 | | | | | |
| 048.0 | | 0930 | | | | 1420 | | | | | |
| DPT 0181 - 010.0 | | 1053 | | | | 1420 | | | | | |
| - 018.0 | | 1105 | | | | 1420 | | | | | |
| - 028.0 | | 1119 | | | | 1420 | | | | | |
| - 038.0 | | 1135 | | | | 1420 | | | | | |
| - 043.0 | | 1154 | | | | 1420 | | | | | |
| - 048.0 | | 1212 | | | | 1420 | | | | | |
| DPT 0182 - 010.0 | | 1407 | | | | 1657 | | | | | |
| 018.0 | | 1416 | | | | 1657 | | | | | |
| 028.0 | | 1423 | | | | 1657 | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | | Received by: *(Signature)* | 2/8/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
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TEL (352) 472-5830
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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB2

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA - CRH2 | |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT 0182 - 038.0 | 2/6/12 | 1439 | | | 2/6/12 | 1657 | | GW | 2 | ✓ | |
| " - 043.0 | " | 1505 | | | " | 1657 | | " | " | " | |
| " - 048.0 | " | 1525 | | | " | 1657 | | " | " | " | |
| DPT 0183 - 010.0 | " | 1645 | | | " | 1657 | | " | " | " | |

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* BM JR | Date / Time 2/6/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

1/2

Mobile Laboratory Services

25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB2

| CLIENT NAME | PROJECT NAME & ADDRESS | BATCH # (Lab Use Only) |
|---|---|---|
| Geosyntec | NASA - CRHE | |
| SAMPLERS | CONTACT PERSON | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB2-020912 | | | | | | | | | | | |
| CRHE - DPT0183-018.0 | 2/9/12 | 0719 | | | 2/9/12 | 1149 | | GW | 2 | ✓ | |
| DPT 0183 - 026.0 | | 0732 | | | | 1149 | | | | | |
| DPT 0183 - 038.0 | | 0750 | | | | 1149 | | | | | |
| DPT 0183 - 043.0 | | 0807 | | | | 1149 | | | | | |
| DPT 0183 - 048.0 | | 0833 | | | | 1149 | | | | | |
| DPT 0177 - 010.0 | | 1107 | | | | 1149 | | | | | |
| DPT 0177 - 014.0 | | 1118 | | | | 1149 | | | | | |
| DPT 0177 - 018.0 | | 1127 | | | | 1149 | | | | | |
| DPT 0177 - 023.0 | | 1136 | | | | 1149 | | | | | |
| DPT 0184 - 010.0 | | 1336 | | | | 1520 | | | | | |
| DPT 0184 - 018.0 | | 1346 | | | | 1520 | | | | | |
| DPT 0184 - 026.0 | | 1356 | | | | 1520 | | | | | |
| DPT 0184 - 033.0 | | 1413 | | | | 1520 | | | | | |
| DPT 0184 - 038.0 | | 1430 | | | | 1520 | | | | | |
| DPT 0184 - 043.0 | | 1446 | | | | 1520 | | | | | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | BD JE | 2/9/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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Newberry, FL 32669
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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB 2

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | NASA - CRHE |
| SAMPLERS | CONTACT PERSON / BATCH # (Lab Use Only) |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB2 - 020912 | | | | | | | | | | | |
| DPT0154 - 048.0 | 2/9/12 | 1500 | | | 2/9/12 | 1520 | | GW | 2 | V | |
| IDW 188738 | " | 1710 | | | " | 1720 | | " | " | " | |
| IDW 188736 | " | 1711 | | | " | 1720 | | " | " | " | |

| | | | |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* BB | Date / Time 2/9/12 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

April 05, 2012 Service Request No: J1201360

Ms. Jill Johnson
Geosyntec Consultants
9515 Holsberry Road
Suite A
Pensacola, FL 32534

**Laboratory Results for: KSC CRHE/FR1681**

Dear Ms. Johnson:

Enclosed are the results of the sample(s) submitted to our laboratory on March 22, 2012. For your reference, these analyses have been assigned our service request number **J1201360**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. If required, the laboratory can provide uncertainty measurements for each method employed in sample analysis; this uncertainty measurement would be generated using method validation studies and the laboratory's quality control data.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at CMyers@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc. dba ALS Environmental**

Craig Myers
Project Manager



*CAS Jacksonville is NELAC-accredited by the State of Florida, #E82502. Other state accreditations include: Georgia, #958; Kentucky, #63; Louisiana, #02086; North Carolina, #527; South Carolina, #96021001; Texas, #T104704197-09-TX; Maine, #2011006; DoD #66206.*

Columbia Analytical Services™
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Columbia Analytical Services, Inc.
Part of the ALS Group A Campbell Brothers Limited Company
www.caslab.com ▪ www.alsglobal.com

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**CAS Lab Reference No.: J1201360**
**Non CLP Tier III (w/o Raw Data)**


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COLUMBIA ANALYTICAL SERVICES, INC.

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request No.:** | J1201360 |
| **Project:** | KSC CRHE | **Date Received:** | 3/22/12 |
| **Sample Matrix:** | Water/Soil | | |

## CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III data deliverables including validation summary forms. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

### Sample Receipt

Twenty-nine water samples and one trip blank were received for analysis at Columbia Analytical Services on 3/22/12. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at $\leq$6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

### Volatile Organic Analyses:

Method 8260B: The upper control criterion was exceeded for the following analyte in Laboratory Control Samples (LCS) JWG1200321-1 and JWG1200333-3: Isopropylbenzene. The analyte in question was not detected in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

### General Chemistry Analyses:

No significant data anomalies were noted with this analysis.

Approved by_____ Date 4/5/12

**Client:** Geosyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360

## SAMPLE CROSS-REFERENCE

| SAMPLE # | CLIENT SAMPLE ID | DATE | TIME |
|---|---|---|---|
| J1201360-001 | CRHE-MW0032-045.0-03192012 | 3/19/12 | 11:00 |
| J1201360-002 | CRHE-MW0030-010.0-03192012 | 3/19/12 | 12:05 |
| J1201360-003 | CRHE-MW0023-065.0-03192012 | 3/19/12 | 14:40 |
| J1201360-004 | CRHE-MW0031-045.0-03192012 | 3/19/12 | 15:25 |
| J1201360-005 | CRHE-IW0020I-045.0-03192012 | 3/19/12 | 16:40 |
| J1201360-006 | CRHE-MW0039-030.0-03192012 | 3/19/12 | 17:39 |
| J1201360-007 | CRHE-MW0038-010.0-03192012 | 3/19/12 | 18:10 |
| J1201360-008 | EB01-03192012 | 3/19/12 | 15:30 |
| J1201360-009 | CRHE-IW0015I-040.0-03192012 | 3/19/12 | 18:10 |
| J1201360-010 | CRHE-MW0034-038.5-03202012 | 3/20/12 | 09:37 |
| J1201360-011 | CRHE-IW0019I-040.0-03202012 | 3/20/12 | 09:40 |
| J1201360-012 | CRHE-MW0033-048.5-03202012 | 3/20/12 | 10:17 |
| J1201360-013 | CRHE-IW0021I-045.0-03202012 | 3/20/12 | 11:23 |
| J1201360-014 | CRHE-MW0035-045.0-03202012 | 3/20/12 | 14:11 |
| J1201360-015 | CRHE-MW0028-040.0-03202012 | 3/20/12 | 14:20 |
| J1201360-016 | CRHE-MW0037-030.0-03202012 | 3/20/12 | 14:41 |
| J1201360-017 | CRHE-IW0017I-030.0-03202012 | 3/20/12 | 15:10 |
| J1201360-018 | CRHE-IW0014I-040.0-03212012 | 3/21/12 | 09:05 |
| J1201360-019 | CRHE-MW0029-045.0-03212012 | 3/21/12 | 11:00 |
| J1201360-020 | CRHE-MW0026-035.0-03212012 | 3/21/12 | 12:00 |
| J1201360-021 | CRHE-MW0022-065.0-03212012 | 3/21/12 | 15:05 |
| J1201360-022 | CRHE-MW0027-045.0-03212012 | 3/21/12 | 15:45 |
| J1201360-023 | CRHE-MW0024-010.0-03212012 | 3/21/12 | 17:50 |
| J1201360-024 | CRHE-MW0025-030.0-03212012 | 3/21/12 | 18:30 |
| J1201360-025 | CRHE-188849-IDW-03212012 | 3/21/12 | 16:15 |
| J1201360-026 | CRHE-188797-IDW-03212012 | 3/21/12 | 16:40 |
| J1201360-027 | CRHE-188842-IDW-03212012 | 3/21/12 | 16:45 |
| J1201360-028 | CRHE-188838-IDW-03212012 | 3/21/12 | 17:00 |
| J1201360-029 | Trip Blank | 3/19/12 | 00:00 |
| J1201360-030 | CHRE-MW0036-010.0-03202012 | 3/20/12 | 15:21 |

# Florida DEP Data Qualifiers

B Results based upon colony counts outside the acceptable range.

D Measurement was made in the field.

H Value based on field kit determination; results may not be accurate.

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
2. No known quality control criteria exists for the component.
3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).

K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).

L Off scale high. The analyte is above the upper limit of the linear calibration range.

M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.

N Presumptive evidence of the analyte. Confirmation was not performed.

Q Sample held beyond the accepted holding time.

T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.

U Indicates that the compound was analyzed for but not detected.

V Indicates that the analyte was detected in both the sample and the associated method blank.

Y The laboratory analysis was from an improperly preserved sample.

Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.

## Acronyms

| | |
|---|---|
| ASTM | American Society for Testing and Materials |
| A2LA | American Association for Laboratory Accreditation |
| CARB | California Air Resources Board |
| CAS Number | Chemical Abstract Service registry Number |
| CFC | Chlorofluorocarbon |
| CFU | Colony-Forming Unit |
| DEC | Department of Environmental Conservation |
| DEQ | Department of Environmental Quality |
| DHS | Department of Health Services |
| DOE | Department of Ecology |
| DOH | Department of Health |
| EPA | U. S. Environmental Protection Agency |
| ELAP | Environmental Laboratory Accreditation Program |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| LUFT | Leaking Underground Fuel Tank |
| M | Modified |
| MCL | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL | Method Detection Limit |
| MPN | Most Probable Number |
| MRL | Method Reporting Limit |
| NA | Not Applicable |
| NC | Not Calculated |
| NCASI | National Council of the Paper Industry for Air and Stream Improvement |
| ND | Not Detected |
| NIOSH | National Institute for Occupational Safety and Health |
| PQL | Practical Quantitation Limit |
| RCRA | Resource Conservation and Recovery Act |
| SIM | Selected Ion Monitoring |
| TPH | Total Petroleum Hydrocarbons |
| tr | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL. |

Columbia Analytical Services

# Chain of Custody Documentation

9143 Philips Highway, Suite 200
Jacksonville, Florida 32256
Phone: (904) 739-2277 Fax (904) 739-2011
www.caslab.com

Columbia Analytical Services

www.caslab.com

# CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR # J1201360

CAS Contact

9143 Philips Highway, Suite 200, Jacksonville, FL 32256 / Phone (904) 739-2277 / 800-695-7222 x06 / FAX (904) 739-2011



| Project Name | Project Number |
|---|---|
| KSC-CRHE | FR1681/17*4 |
| Report To: Jill Johnson | Report CC |
| jjohnson@geosyntec.com | |
| Company/Address | |
| 316 S. Baylen Street, Suite 201 | |
| Pensacola, FL 32502 | |
| Phone # | FAX # |
| 850-477-6542 | N/A |
| Sampler's Signature | Sampler's Printed Name |
| | Lauren Petty |

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

Preservative Key: 0. None; 1. HCL; 2. HNO3; 3. H2SO4; 4. NaOH; 5. Zn. Acetate; 6. MeOH; 7. NaHSO4; 8. Other

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | Matrix | NUMBER OF CONTAINERS | Preservative | 8260B (Full List VOC) | REMARKS |
|---|---|---|---|---|---|---|---|---|
| CRHE-MW0022-065.0-03212012 | | 3/21/2012 | 1505 | W | 3 | | X | |
| CRHE-MW0023-065.0-03192012 | | 3/19/2012 | 1440 | W | 3 | | X | |
| CRHE-MW0024-010.0-03212012 | | 3/21/2012 | 1750 | W | 3 | | X | |
| CRHE-MW0025-030.0-03212012 | | 3/21/2012 | 1830 | W | 3 | | X | |
| CRHE-MW0026-035.0-03212012 | | 3/21/2012 | 1200 | W | 3 | | X | |
| CRHE-MW0027-045.0-03212012 | | 3/21/2012 | 1545 | W | 3 | | X | |
| CRHE-MW0028-040.0-03202012 | | 3/20/2012 | 1420 | W | 3 | | X | |
| CRHE-MW0029-045.0-03212012 | | 3/21/2012 | 1100 | W | 3 | | X | |
| CRHE-MW0030-010.0-03192012 | | 3/19/2012 | 1205 | W | 3 | | X | |
| CRHE-MW0031-045.0-03192012 | | 3/19/2012 | 1525 | W | 3 | | X | |

**Special Instructions/Comments:**

W = Water

NASA RIS KEDD → Data Deliverable

3.0°C F71

TURNAROUND REQUIREMENTS

___ RUSH (SURCHARGES APPLY)

1 STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

___ I. Results Only

___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

___ III. Results + QC and Calibration Summaries

___ IV. Data Validation Report with Raw Data

Edata ___ Yes ___ No

INVOICE INFORMATION

P.O. # ___

Bill to: Geosyntec

316 S. Baylen Street Ste. 201

Pensacola, FL 32502

| Relinquished By | Received By | Relinquished By | Received By | Relinquished By | Received By |
|---|---|---|---|---|---|
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name: Geosyntec | Printed Name | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm: Lauren Petty | Firm: CAS/ALS | Firm | Firm | Firm | Firm |
| Date/Time: 03/22/12/0530 | Date/Time: 3.22.12 0730 | Date/Time | Date/Time | Date/Time | Date/Time |

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# CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR # J1201360

CAS Contact

9143 Philips Highway, Suite 200 Jacksonville, FL 32256 / Phone (904) 739-2277 / 800-695-7222 x06 / FAX (904) 739-2011 Page 2 of 3

| Project Name | Project Number |
|---|---|
| KSC-CRHE | FR1681/17*4 |
| Report To Jill Johnson | Report CC |
| jjohnson@geosyntec.com | |
| Company/Address | |
| 316 S. Baylen Street, Suite 201 | |
| Pensacola, FL 32502 | |
| Phone # | FAX # |
| 850-477-6542 | N/A |
| Sampler's Signature | Sampler's Printed Name |
| | Lauren Petty |

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | Matrix | NUMBER OF CONTAINERS | Preservative | 8260B (Full List VOC | REMARKS |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 1 | | |
| CRHE-MW0032-045.0-03192012 | | 3/19/2012 | 1100 | W | | | X | |
| CRHE-MW0033-048 5-03202012 | | 3/20/2012 | 1017 | W | | | X | |
| CRHE-MW0034-038 5-03202012 | | 3/20/2012 | 0937 | W | | | X | |
| CRHE-MW0035-045 0-03202012 | | 3/20/2012 | 1411 | W | | | X | |
| CRHE-MW0036-010 0-03202012 | | 3/20/2012 | 1521 | W | | | X | |
| CRHE-MW0037-030.0-03202012 | | 3/20/2012 | 1441 | W | | | X | |
| CRHE-MW0038-010 0-03192012 | | 3/19/2012 | 1810 | W | | | X | |
| CRHE-MW0039-030 0-03192012 | | 3/19/2012 | 1739 | W | | | X | |
| CRHE-MW0014I-040 0-03212012 | | 3/21/2012 | 0905 | W | | | X | |
| CRHE-IW0015I-040 0-03192012 | | 3/19/2012 | 1810 | W | | | X | |

Preservative Key: 0. None; 1. HCL; 2. HNO3; 3. H2SO4; 4. NaOH; 5. Zn Acetate; 6. MeOH; 7. NaHSO4; 8. Other

Special Instructions/Comments:

W = Water

Data Deliverable → NASA RIS KEDD

3.0 c T71

TURNAROUND REQUIREMENTS

RUSH (SURCHARGES APPLY)

STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

I. Results Only

II. Results + QC Summaries

III. Results + QC and Calibration Summaries

IV. Data Validation Report with Raw Data

Edata ____ Yes ____ No

INVOICE INFORMATION

P.O. #

Bill to Geosyntec

316 S. Baylen Street Ste. 201

Pensacola, FL 32502

| Relinquished By | Received By | Relinquished By | Received By | Relinquished By | Received By |
|---|---|---|---|---|---|
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name: Lauren Petty | Printed Name: Bauer | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm: Geosyntec | Firm: CAS (ALS) | Firm | Firm | Firm | Firm |
| Date/Time: 3/22/12 1253 | Date/Time: 3.22.12 0930 | Date/Time | Date/Time | Date/Time | Date/Time |

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# CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR # J1201360

CAS Contact

9143 Philips Highway, Suite 200 Jacksonville, FL 32256 / Phone (904) 739-2277 / 800-695-7222 x06 / FAX (904) 739-2011 Page 3 of 3

| Project Name | Project Number |
|---|---|
| KSC-CRHE | FR1681/17*4 |
| Report To. Jill Johnson | Report CC |
| jjohnson@geosyntec.com | |
| Company/Address | |
| 316 S. Baylen Street, Suite 201 | |
| Pensacola, FL 32502 | |
| Phone # | FAX # |
| 850-477-6542 | N/A |
| Sampler's Signature | Sampler's Printed Name |
| | Lauren Petty |

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | Matrix | NUMBER OF CONTAINERS | 8260B (Full List VOC | 8260B (Full List VOC | 8260B (Full List VOC | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| Preservative | | | | | | 1 | 0 | 6 | |
| CRHE-IW0017I-030 0-03202012 | | 3/20/2012 | 1510 | W | 3 | X | | | |
| CRHE-IW0019I-040 0-03202012 | | 3/20/2012 | 0940 | W | 3 | X | | | |
| CRHE-IW0020I-045 0-03192012 | | 3/19/2012 | 1640 | W | 3 | X | | | |
| CRHE-IW0021I-045 0-03202012 | | 3/20/2012 | 1123 | W | 3 | X | | | |
| EB01-03192012 | | 3/19/2012 | 1530 | W | 3 | X | | | |
| CRHE-188849-IDW-03212012 | | 3/21/2012 | 1615 | S | 4 | | 3 | 1 | |
| CRHE-188797-IDW-03212012 | | 3/21/2012 | 1640 | S | 4 | | 3 | 1 | |
| CRHE-188842-IDW-03212012 | | 3/21/2012 | 1645 | S | 4 | | 3 | 1 | |
| CRHE-188838-IDW-03212012 | | 3/21/2012 | 1700 | S | 4 | | 3 | 1 | |
| Trip Blank | | Lab Provided | | | 2 | X | | | |

Preservative Key: 0 None; 1 HCL; 2 HNO3; 3 H2SO4; 4 NaOH; 5 Zn Acetate; 6 MeOH; 7 NaHSO4; 8. Other

**Special Instructions/Comments:**

W = Water
S = Soil

NASA RISKED → Data Deliverable
3.0°C TM

**TURNAROUND REQUIREMENTS**

RUSH (SURCHARGES APPLY)

STANDARD

PROJECT REQUIRED FAX DATE:

REQUIRED REPORT DATE:

**REPORT REQUIREMENTS**

I. Results Only

II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

III. Results + QC and Calibration Summaries

IV. Data Validation Report with Raw Data

Edata ___ Yes ___ No

**INVOICE INFORMATION**

P.O. #

Bill to: Geosyntec
316 S. Baylen Street Ste. 201
Pensacola, FL 32502

| Relinquished By | Received By | Relinquished By | Received By | Relinquished By | Received By |
|---|---|---|---|---|---|
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name: Lauren Petty | Printed Name | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm: Geosyntec | Firm: CAS LAS | Firm | Firm | Firm | Firm |
| Date/Time: 3/22/12/0530 | Date/Time: 3.22.12 0730 | Date/Time | Date/Time | Date/Time | Date/Time |

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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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SR # J1201360
CAS Contact

| | |
|---|---|
| Project Name: KSC-CRHE | Project Number: FR1681 |
| Project Manager: Bill Johnson | Email Address: bjohnson@geosyntec.com |
| Company/Address: 316 S. Baylen Street, Suite 201, Pensacola, FL 32502 | |
| Phone #: 850-477-6547 | FAX#: 850-477-6707 |
| Sampler's Signature: [signature] | Sampler's Printed Name: Lauren Petty |

ANALYSIS REQUESTED (Include Method Number an [redacted]

PRESERVATIVE: HCl

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | 6200 (VOH) |
|---|---|---|---|---|---|---|
| CRHE-MW0032-03192012 | | 3/19/12 | 1100 | W | 3 | ✓ |
| CRHE-MW0030-03192012 | | 3/19/12 | 1205 | | | |
| CRHE-MW0023-03192012 | | | 1440 | | | |
| CRHE-MW0031-03192012 | | | 1525 | | | |
| CRHE-IWW0020I-03192012 | | | 1640 | | | |
| CRHE-MW0039-03192012 | | | 1739 | | | |
| CRHE-MW0036-03192012 | | | 1810 | | | |
| EB01-03192012 | | ↓ | 1530 | | | ✓ |
| CRHE-IW0015I-03192012 | | 3/19/12 | 1910 | | | |
| CRHE-MW0034-03202012 | | 3/20/12 | 0937 | ↓ | ↓ | ↓ |

1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

SPECIAL INSTRUCTIONS/COMMENTS

W = Water

Will email Report Requirements 3/22.

See QAPP ☐ 3.0°C T71

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
___ V. Speicalized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
PO#
BILL TO: Geosyntec
316 S Baylen St, Ste 201
Pensacola, FL 32502

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| Signature | Signature [signature] | Signature | Signature | Signature | Signature |
| Printed Name | Printed Name C Bauer | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm | Firm CAS/ALS | Firm | Firm | Firm | Firm |
| Date/Time | Date/Time 3.22.12 0730 | Date/Time | Date/Time | Date/Time | Date/Time |

Distribution: White - Return to Originator; Yellow - Retained by Client

JSCOC-3/11

Columbia Analytical Services

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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PAGE 2 OF 3

SR # 31201360
CAS Contact

| | |
|---|---|
| Project Name: KSC - CRHE | Project Number: FR1681 |
| Project Manager: Jill Johnson | Email Address: JJohnson@geosyntec.com |
| Company/Address: 316 S. Baylen Street, Ste 201, Pensacola, FL 32502 | |
| Phone #: 850-477-6547 | FAX#: 850-477-6707 |
| Sampler's Signature: | Sampler's Printed Name: Lauren Petty |

ANALYSIS REQUESTED (Include Method Number a [redacted]

PRESERVATIVE: 1

NUMBER OF CONTAINERS: 3

8260 (VOA)

0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|
| CRHE-IW0019I-03202012 | | 3/20/12 | 0940 | W | |
| CRHE-MW0033-03202012 | | " | 1017 | " | |
| CRHE-~~MW~~IW0021I-03202012 | | | 1123 | | |
| CRHE-MW0035-03202012 | | | 1411 | | |
| CRHE-MW0028-03202012 | | | 1420 | | |
| CRHE-MW0037-03202012 | | | 1441 | | |
| CRHE-IW0017I-03202012 | | | 1510 | | |
| CRHE-IW0014I-03202012 | | 3/21/12 | 0905 | | |
| CRHE-MW0029-03202012 | | | 1100 | | |
| CRHE-MW0026-03212012 | | | 1200 | | |

SPECIAL INSTRUCTIONS/COMMENTS

WE Water

See QAPP ☐ 3.0°C T71

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE:
REQUESTED REPORT DATE:

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Speicalized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:
Sue pay

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| 2 | | | | | |
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name | Printed Name Bauer | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm | Firm CAS/ACS | Firm | Firm | Firm | Firm |
| Date/Time | Date/Time 3.22.12 0730 | Date/Time | Date/Time | Date/Time | Date/Time |

Distribution: White - Return to Originator; Yellow - Retained by Client

JSCOC-3/11

Columbia Analytical Services

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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PAGE 3 OF 3

SR # 5120860

CAS Contact

| | |
|---|---|
| Project Name: KSC - CRHE | Project Number: FR11681 |
| Project Manager: Jill Johnson | Email Address: JJohnson@geosyntec.com |
| Company/Address: 316 S. Baylen Street Ste. 201, Pensacola, FL 32502 | |
| Phone #: 805-477-6547 | FAX#: 850-477-6707 |
| Sampler's Signature | Sampler's Printed Name: Lauren Petty |

ANALYSIS REQUESTED (Include Method Number and [redacted]

PRESERVATIVE: 1 0 6

NUMBER OF CONTAINERS

8260 (VOA)
8260 (VOA)
8260 (VOA)

1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | | | | | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-MW0022-032120 12 | | 3/21/12 | 1505 | W | 3 | X | | | |
| CRHE-MW0027-032120 12 | | | 1545 | | | | | | |
| CRHE-MW0024-032120 12 | | | 1750 | | | | | | |
| CRHE-MW0025-032120 12 | | | ~~1825~~ 1830 | | | | | | |
| ~~CRHE-IDW-188849 MP~~ | | | | ~~SP~~ | | | | | |
| CRHE-188849-IDW-032120 12 | | | 1615 | S | 4 | | 3 | 1 | |
| CRHE-188797-IDW-032120 12 | | | 1640 | | | | 3 | 1 | |
| CRHE-188842-IDW-032120 12 | | | 1645 | | | | 3 | 1 | |
| CRHE-188838-IDW-032120 12 | | | 1700 | | | | 3 | 1 | |
| TRIP Blank | | LAB Provided | | W | 2 | 2 | | | |

SPECIAL INSTRUCTIONS/COMMENTS

CRHE-MW0036-032020 12 3/20/12 1521 W 3

W = Water

S = Soil

* Added per client SL 3/23/12

3.0°C T71

See QAPP ☐

TURNAROUND REQUIREMENTS

____ RUSH (SURCHARGES APPLY)

X STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

____ I. Results Only

____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

____ V. Specialized Forms / Custom Report

Edata ____ Yes ____ No

INVOICE INFORMATION

PO#

BILL TO: See pg 1

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| 1 3 | | | | | |
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name | Printed Name: C Bauer | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm | Firm: CAS/ALS | Firm | Firm | Firm | Firm |
| Date/Time | Date/Time: 3.22.12 0930 | Date/Time | Date/Time | Date/Time | Date/Time |

Distribution: White - Return to Originator; Yellow - Retained by Client

JSCOC-3/11

Columbia Analytical Services™

## Cooler Receipt Form

Client: Geosyntec Service Request #: J1201360

Project: KSC - CRHE

Cooler received on 3.22.12 and opened on 3.22.12 by GB

COURIER: CAS UPS FEDEX (Client) Other _____ Airbill #_____

| | | | |
|---|---|---|---|
| 1 | Were custody seals on outside of cooler? | (Yes) | No |
| | If yes, how many and where? | #: 1 (on lid) | other |
| 2 | Were seals intact and signature and date correct? | (Yes) | No N/A |
| 3 | Were custody papers properly filled out? | (Yes) | No N/A |
| 4 | Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C) | 3.0 | |
| 5 | Thermometer ID | T71 | |
| 6 | Temperature Blank Present? | (Yes) | No |
| 7 | Were Ice or Ice Packs present | (Ice) | Ice Packs No |
| 8 | Did all bottles arrive in good condition (unbroken, etc....)? | (Yes) | No N/A |
| 9 | Type of packing material present | Netting (Vial Holder) (Bubble Wrap) | |
| | | Paper Styrofoam Other N/A | |
| 10 | Were all bottle labels complete (sample ID, preservation, etc....)? | (Yes) | No N/A |
| 11 | Did all bottle labels and tags agree with custody papers? | Yes (No) | N/A |
| 12 | Were the correct bottles used for the tests indicated? | (Yes) | No N/A |
| 13 | Were all of the preserved bottles received with the appropriate preservative? | Yes No (N/A) | |
| | HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2 | | |
| | Preservative additions noted below | | |
| 14 | Were all samples received within analysis holding times? | (Yes) | No N/A |
| 15 | Were all VOA vials free of air bubbles? If present, note below | (Yes) | No N/A |
| 16 | Where did the bottles originate? | (CAS) | Client |

| Sample ID | Reagent | Lot # | ml added | Initials Date/Time |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | (1) | |

Additional comments and/or explanation of all discrepancies noted above: 1 of 3 volatile vial label has the ID as MW0031-03192012 for MW0032-03192012. (2) Sample date & time matches Sample time on labels is 1832 for MW0038-03192012. (3) Sample ID on labels is

Client approval to run samples if discrepancies noted: Date:

Columbia Analytical Services

Jacksonville Laboratory
Condition Upon Receipt - Sample pH

SR # : J 1201360

Date: 3.22.12 Initials: GB

Note that pH is check and meets the required pH criterion listed in the column heading unless otherwise noted on the cooler receipt form.

| Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 40mL | 40mL | 40mL | 125mL | 125mL | 125mL | 125mL | 250mL | 250mL | 250mL | 250mL | 250mL | 250mL | 250mL | 500mL | 500mL | 500mL | 500mL | 500mL | 1L | 1L | 1L | 1L | 1L | 2oz | 4oz | 8oz | 16oz | 100ml | Ziplock | Misc. | |
| Container | G | G | G | P | P | P | P | P | P | P | P | P | G | G | P | P | P | P | G | P | P | G | G | G | G | G | G | G | P | P | Misc. | |
| Preserve | N/A | HCl | Na2 S2O3 | N/A | HCl | H2SO4 | HNO3 | N/A | H2SO4 | HNO3 | ZnAc2/ NaOH | NaOH | N/A | HNO3 | N/A | HCl | H2SO4 | HNO3 | N/A | N/A | HNO3 | N/A | HCl | H2SO4 | N/A | N/A | N/A | N/A | Na2 S2O3 | N/A | N/A | |
| Req. pH | N/A | <2 | N/A | N/A | <2 | <2 | <2 | N/A | <2 | <2 | >9 | >12 | N/A | <2 | N/A | <2 | <2 | <2 | N/A | N/A | <2 | N/A | <2 | <2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Sample # | - | - | | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | - | - | | - | |
| -1 | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -1 |
| -2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -2 |
| -3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -3 |
| -4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -4 |
| -5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -5 |
| -6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -6 |
| -7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -7 |
| -8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -8 |
| -9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -9 |
| -10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -10 |
| -11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -11 |
| -12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -12 |
| -13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -13 |
| -14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -14 |
| -15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -15 |
| -16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -16 |
| -17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -17 |
| -18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -18 |
| -19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -19 |
| -20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -20 |
| -21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -21 |
| -22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -22 |
| -23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -23 |
| -24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -24 |
| -25 | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | -25 |
| -26 | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | -26 |
| -27 | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | -27 |
| -28 | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | -28 |
| -29 | | 4 | Trip Blank | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -29 |
| -30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -30 |
| -31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -31 |
| -32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -32 |
| -33 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -33 |
| -34 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -34 |
| -35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -35 |
| -36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -36 |
| -37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -37 |
| -38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -38 |
| -39 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -39 |
| -40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -40 |

NOTE: VOA pH checks are performed by the analytical area, not sample control

Columbia Analytical Services™

# Summary Package

9143 Philips Highway, Suite 200
Jacksonville, Florida 32256
Phone: (904) 739-2277 Fax (904) 739-2011
www.caslab.com

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Summary Package

## Sample and QC Results



n:\Stealth\Crystal.rpt\DividerA.rpt

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360

## Cover Page - Organic Analysis Data Package
## Volatile Organic Compounds by GC/MS

| Sample Name | Lab Code | Date Collected | Date Received |
|---|---|---|---|
| CRHE-MW0032-045.0-03192012 | J1201360-001 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | 03/19/2012 | 03/22/2012 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | 03/19/2012 | 03/22/2012 |
| EB01-03192012 | J1201360-008 | 03/19/2012 | 03/22/2012 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | 03/20/2012 | 03/22/2012 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | 03/20/2012 | 03/22/2012 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | 03/20/2012 | 03/22/2012 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | 03/20/2012 | 03/22/2012 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | 03/20/2012 | 03/22/2012 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | 03/20/2012 | 03/22/2012 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | 03/20/2012 | 03/22/2012 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | 03/20/2012 | 03/22/2012 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | 03/21/2012 | 03/22/2012 |
| CRHE-188849-IDW-03212012 | J1201360-025 | 03/21/2012 | 03/22/2012 |
| CRHE-188797-IDW-03212012 | J1201360-026 | 03/21/2012 | 03/22/2012 |
| CRHE-188842-IDW-03212012 | J1201360-027 | 03/21/2012 | 03/22/2012 |
| CRHE-188838-IDW-03212012 | J1201360-028 | 03/21/2012 | 03/22/2012 |
| Trip Blank | J1201360-029 | 03/19/2012 | 03/22/2012 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | 03/20/2012 | 03/22/2012 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: James Nicholson

Date: 4/4/12 Title: Organics Manager

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0032-045.0-03192012
**Lab Code:** J1201360-001

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.54** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | **0.57** | I | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.62** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **6.6** | | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **13** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | **0.31** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0032-045.0-03192012
**Lab Code:** J1201360-001

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.30** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.71** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **8.2** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **83** | | 20 | 4.4 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0030-010.0-03192012
**Lab Code:** J1201360-002

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | 5.9 | I | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0030-010.0-03192012
**Lab Code:** J1201360-002

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 101 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0023-065.0-03192012
**Lab Code:** J1201360-003

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **0.70** | I | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.46** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0023-065.0-03192012
**Lab Code:** J1201360-003

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.21** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0031-045.0-03192012
**Lab Code:** J1201360-004

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **59** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0031-045.0-03192012
**Lab Code:** J1201360-004

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **6.0** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | **1.5** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **200** | | 10 | 2.2 | 10 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0020I-045.0-03192012
**Lab Code:** J1201360-005

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.25** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.49** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **33** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **0.92** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **79** | | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0020I-045.0-03192012
**Lab Code:** J1201360-005

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.27** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **130** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0039-030.0-03192012
**Lab Code:** J1201360-006

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.49** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **0.96** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0039-030.0-03192012
**Lab Code:** J1201360-006

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.50** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.43** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **92** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 113 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 97 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0038-010.0-03192012
**Lab Code:** J1201360-007

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0038-010.0-03192012
**Lab Code:** J1201360-007

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** EB01-03192012
**Lab Code:** J1201360-008

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** EB01-03192012
**Lab Code:** J1201360-008

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 101 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0015I-040.0-03192012
**Lab Code:** J1201360-009

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **2.0** | | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.21** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **76** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0015I-040.0-03192012
**Lab Code:** J1201360-009

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | 27 | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0034-038.5-03202012
**Lab Code:** J1201360-010

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.36** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **3.4** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **12** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **1.2** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **140** | | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0034-038.5-03202012
**Lab Code:** J1201360-010

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **150** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 101 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0019I-040.0-03202012
**Lab Code:** J1201360-011

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | **4.1** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.48** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **1.3** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **1000** | | 20 | 7.2 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **1.3** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0019I-040.0-03202012
**Lab Code:** J1201360-011

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.25** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **18** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **530** | | 20 | 4.4 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 102 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0033-048.5-03202012
**Lab Code:** J1201360-012

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.92** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | **9.9** | I | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.42** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **99** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **3.0** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0033-048.5-03202012
**Lab Code:** J1201360-012

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **1.4** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | **0.52** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **33** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 96 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 103 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

Analytical Results

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0021I-045.0-03202012
**Lab Code:** J1201360-013

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.98** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0021I-045.0-03202012
**Lab Code:** J1201360-013

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0035-045.0-03202012
**Lab Code:** J1201360-014

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.26** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.55** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0035-045.0-03202012
**Lab Code:** J1201360-014

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.23** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.44** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **130** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0028-040.0-03202012
**Lab Code:** J1201360-015

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.59** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.31** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **4.2** | | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **3.5** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0028-040.0-03202012
**Lab Code:** J1201360-015

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.55** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **4.1** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **180** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 95 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 110 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0037-030.0-03202012
**Lab Code:** J1201360-016

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.25** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **1.2** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.44** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **8.0** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0037-030.0-03202012
**Lab Code:** J1201360-016

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.20** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **19** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0017I-030.0-03202012
**Lab Code:** J1201360-017

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.32** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.52** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0017I-030.0-03202012
**Lab Code:** J1201360-017

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.27** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **90** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0014I-040.0-03212012
**Lab Code:** J1201360-018

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | **4.0** | I | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0014I-040.0-03212012
**Lab Code:** J1201360-018

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | **3.6** | | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0029-045.0-03212012
**Lab Code:** J1201360-019

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **1.4** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | **1.4** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **420** | | 10 | 3.6 | 10 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0029-045.0-03212012
**Lab Code:** J1201360-019

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **13** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **140** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **100** | | 10 | 2.2 | 10 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 112 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0026-035.0-03212012
**Lab Code:** J1201360-020

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | **3.5** | | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **9.1** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | **6.4** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | **0.41** | I | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **3600** | | 100 | 36 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0026-035.0-03212012
**Lab Code:** J1201360-020

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | **0.22** | I | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | **0.36** | I | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **34** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **1000** | | 100 | 16 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **2000** | | 100 | 22 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 95 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0022-065.0-03212012
**Lab Code:** J1201360-021

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | **0.51** | I | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | **1.5** | | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Collected:** | 03/21/2012 |
| **Sample Matrix:** | Water | **Date Received:** | 03/22/2012 |

## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | CRHE-MW0022-065.0-03212012 | **Units:** | ug/L |
| **Lab Code:** | J1201360-021 | **Basis:** | NA |
| **Extraction Method:** | EPA 5030B | **Level:** | Low |
| **Analysis Method:** | 8260B | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | **0.22** | I | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0027-045.0-03212012
**Lab Code:** J1201360-022

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | **0.96** | I | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **2.7** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **790** | | 100 | 36 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0027-045.0-03212012
**Lab Code:** J1201360-022

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | **0.22** | I | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **14** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **1.3** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **1700** | | 100 | 22 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0024-010.0-03212012
**Lab Code:** J1201360-023

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **11** | | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0024-010.0-03212012
**Lab Code:** J1201360-023

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **0.74** | I | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **13** | | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0025-030.0-03212012
**Lab Code:** J1201360-024

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | **2.2** | | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | **15** | | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | **9700** | | 200 | 72 | 200 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0025-030.0-03212012
**Lab Code:** J1201360-024

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | **0.41** | I | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | **75** | | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | **0.60** | I | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | **7600** | | 200 | 44 | 200 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 92 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** Trip Blank
**Lab Code:** J1201360-029

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** Trip Blank
**Lab Code:** J1201360-029

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CHRE-MW0036-010.0-03202012
**Lab Code:** J1201360-030

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CHRE-MW0036-010.0-03202012
**Lab Code:** J1201360-030

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

Analytical Results

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 95 | 88-115 | 03/30/12 | Acceptable |

Comments:

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200333-4

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200333-4

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 103 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188849-IDW-03212012
**Lab Code:** J1201360-025

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.1 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.1 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.1 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 11 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 11 | 0.40 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 26 | 0.91 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 11 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 11 | 0.59 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 130 | 3.6 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.1 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 11 | 0.42 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.1 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.1 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 11 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 110 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188849-IDW-03212012
**Lab Code:** J1201360-025

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 11 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.1 | 0.064 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 51 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.1 | 0.074 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.1 | 0.51 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.1 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 21 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 21 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.1 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 99 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 101 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188797-IDW-03212012
**Lab Code:** J1201360-026

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.6 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.6 | 0.33 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.6 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 12 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 12 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 12 | 0.44 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.6 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.6 | 0.067 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.6 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 28 | 1.0 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 12 | 0.62 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 12 | 0.65 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 140 | 3.9 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.6 | 0.077 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 12 | 0.46 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.6 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.6 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.6 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 12 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 120 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188797-IDW-03212012
**Lab Code:** J1201360-026

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.6 | 0.067 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 12 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 12 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.6 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | **2.0** | I | 56 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.6 | 0.082 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.6 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.6 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.6 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 23 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 23 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.6 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 92 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 102 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 105 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188842-IDW-03212012
**Lab Code:** J1201360-027

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.1 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.1 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.1 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 11 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 11 | 0.40 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 26 | 0.91 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 11 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 11 | 0.59 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | 22 | I | 130 | 3.6 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.1 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 11 | 0.42 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.1 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.1 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 11 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 110 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188842-IDW-03212012
**Lab Code:** J1201360-027

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 11 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.1 | 0.064 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 51 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.1 | 0.074 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.1 | 0.51 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.1 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 21 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 21 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.1 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 90 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 103 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 91 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 105 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188838-IDW-03212012
**Lab Code:** J1201360-028

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.8 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.8 | 0.34 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.8 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 12 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 12 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 12 | 0.45 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.8 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.8 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.8 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 29 | 1.1 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 12 | 0.64 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 12 | 0.67 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | **17** | I | 150 | 4.1 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.8 | 0.080 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | **2.1** | I | 12 | 0.48 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.8 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.8 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.8 | 0.32 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 12 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 120 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188838-IDW-03212012
**Lab Code:** J1201360-028

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.8 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 12 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 12 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.8 | 0.073 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 58 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.8 | 0.085 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.8 | 0.58 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.8 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.8 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 24 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 24 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.8 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 116 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 99 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 108 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200305-2

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.0 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.0 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.0 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 10 | 0.39 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 25 | 0.90 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 10 | 0.55 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 10 | 0.58 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 130 | 3.5 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.0 | 0.069 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 10 | 0.41 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.0 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.0 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 10 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 100 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200305-2

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 10 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.0 | 0.063 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 50 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.0 | 0.073 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.0 | 0.50 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.0 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 20 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.0 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 95 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 102 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360

## Surrogate Recovery Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 | Sur2 | Sur3 | Sur4 |
|---|---|---|---|---|---|
| CRHE-MW0032-045.0-03192012 | J1201360-001 | 97 | 109 | 99 | 98 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | 98 | 106 | 98 | 101 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | 100 | 107 | 99 | 96 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | 97 | 106 | 100 | 98 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | 96 | 107 | 100 | 99 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | 99 | 113 | 99 | 97 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | 100 | 109 | 100 | 100 |
| EB01-03192012 | J1201360-008 | 97 | 106 | 99 | 101 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | 101 | 107 | 99 | 100 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | 99 | 109 | 101 | 98 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | 98 | 105 | 97 | 102 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | 96 | 109 | 96 | 103 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | 99 | 109 | 99 | 99 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | 99 | 108 | 98 | 96 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | 95 | 110 | 98 | 98 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | 97 | 107 | 99 | 98 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | 97 | 108 | 99 | 100 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | 94 | 107 | 97 | 99 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | 98 | 112 | 99 | 100 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | 99 | 108 | 95 | 96 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | 99 | 107 | 99 | 98 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | 96 | 107 | 98 | 96 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | 98 | 107 | 99 | 98 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | 97 | 111 | 92 | 98 |
| Trip Blank | J1201360-029 | 94 | 111 | 97 | 96 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | 97 | 111 | 97 | 100 |
| Method Blank | JWG1200321-2 | 98 | 105 | 100 | 95 |
| Method Blank | JWG1200325-2 | 99 | 105 | 99 | 98 |
| Method Blank | JWG1200333-4 | 96 | 103 | 97 | 96 |
| Lab Control Sample | JWG1200321-1 | 99 | 107 | 99 | 100 |
| Lab Control Sample | JWG1200325-1 | 94 | 104 | 98 | 97 |
| Lab Control Sample | JWG1200333-3 | 95 | 109 | 97 | 96 |

**Surrogate Recovery Control Limits (%)**

| | |
|---|---|
| Sur1 = 1,2-Dichloroethane-d4 | 72-121 |
| Sur2 = 4-Bromofluorobenzene | 86-113 |
| Sur3 = Dibromofluoromethane | 86-112 |
| Sur4 = Toluene-d8 | 88-115 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360

## Surrogate Recovery Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 | Sur2 | Sur3 | Sur4 |
|---|---|---|---|---|---|
| CRHE-188849-IDW-03212012 | J1201360-025 | 94 | 99 | 96 | 101 |
| CRHE-188797-IDW-03212012 | J1201360-026 | 92 | 102 | 96 | 105 |
| CRHE-188842-IDW-03212012 | J1201360-027 | 90 | 103 | 91 | 105 |
| CRHE-188838-IDW-03212012 | J1201360-028 | 94 | 116 | 99 | 108 |
| Method Blank | JWG1200305-2 | 94 | 95 | 96 | 102 |
| Lab Control Sample | JWG1200305-1 | 94 | 97 | 98 | 101 |

**Surrogate Recovery Control Limits (%)**

| | | |
|---|---|---|
| Sur1 = | 1,2-Dichloroethane-d4 | 80-120 |
| Sur2 = | 4-Bromofluorobenzene | 64-135 |
| Sur3 = | Dibromofluoromethane | 74-125 |
| Sur4 = | Toluene-d8 | 46-156 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 09:45

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS52\DATA\MS52-120322\0322-02.D
**Instrument ID:** MS52
**Analysis Method:** 8260B

**Lab Code:** JWG1200306-2
**Analysis Lot:** JWG1200306

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| | **Results ==>** | 53,457 | 11.60 | 47,863 | 9.16 | 122,997 | 6.17 |
| | **Upper Limit ==>** | 106,914 | 12.10 | 95,726 | 9.66 | 245,994 | 6.67 |
| | **Lower Limit ==>** | 26,729 | 11.10 | 23,932 | 8.66 | 61,499 | 5.67 |
| | **ICAL Result ==>** | 48,766 | 11.60 | 43,592 | 9.16 | 110,750 | 6.17 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200305-1 | 52,658 | 11.60 | 48,614 | 9.16 | 125,564 | 6.17 |
| Method Blank | JWG1200305-2 | 50,853 | 11.59 | 47,975 | 9.16 | 125,218 | 6.17 |
| CRHE-188849-IDW-03212012 | J1201360-025 | 45,168 | 11.60 | 46,360 | 9.16 | 121,432 | 6.17 |
| CRHE-188797-IDW-03212012 | J1201360-026 | 40,555 | 11.60 | 43,358 | 9.16 | 116,772 | 6.17 |
| CRHE-188842-IDW-03212012 | J1201360-027 | 40,415 | 11.60 | 42,767 | 9.17 | 117,887 | 6.17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | 35,955 | 11.60 | 42,626 | 9.16 | 118,248 | 6.18 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 11:12

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120330\0330-02.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200322-2
**Analysis Lot:** JWG1200322

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 328,039 | 11.12 | 413,475 | 8.80 | 1,184,883 | 5.51 |
| | **Upper Limit ==>** | 656,078 | 11.62 | 826,950 | 9.30 | 2,369,766 | 6.01 |
| | **Lower Limit ==>** | 164,020 | 10.62 | 206,738 | 8.30 | 592,442 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200321-1 | 318,654 | 11.12 | 397,222 | 8.80 | 1,171,291 | 5.51 |
| Method Blank | JWG1200321-2 | 337,907 | 11.13 | 403,441 | 8.80 | 1,145,808 | 5.51 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | 315,754 | 11.13 | 399,126 | 8.80 | 1,148,047 | 5.51 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | 323,166 | 11.13 | 392,864 | 8.80 | 1,177,874 | 5.51 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | 322,551 | 11.13 | 384,128 | 8.80 | 1,104,427 | 5.52 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | 331,420 | 11.13 | 396,550 | 8.80 | 1,156,645 | 5.51 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | 322,585 | 11.13 | 393,897 | 8.80 | 1,164,407 | 5.51 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | 319,516 | 11.13 | 401,946 | 8.80 | 1,172,242 | 5.51 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | 327,430 | 11.13 | 405,589 | 8.80 | 1,173,486 | 5.51 |
| EB01-03192012 | J1201360-008 | 330,521 | 11.13 | 389,632 | 8.80 | 1,146,764 | 5.51 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | 332,367 | 11.13 | 389,217 | 8.80 | 1,147,109 | 5.52 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | 321,006 | 11.13 | 397,996 | 8.80 | 1,125,602 | 5.52 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | 316,893 | 11.13 | 382,659 | 8.80 | 1,133,176 | 5.51 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | 324,878 | 11.13 | 388,136 | 8.80 | 1,169,094 | 5.52 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | 320,327 | 11.13 | 393,071 | 8.80 | 1,149,686 | 5.51 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | 330,706 | 11.12 | 409,470 | 8.80 | 1,174,443 | 5.52 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | 319,532 | 11.13 | 409,711 | 8.80 | 1,202,891 | 5.51 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | 322,399 | 11.13 | 400,508 | 8.80 | 1,144,939 | 5.51 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | 326,036 | 11.12 | 400,878 | 8.80 | 1,158,793 | 5.51 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 09:21

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120402\0402-02.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200326-2
**Analysis Lot:** JWG1200326

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 338,282 | 11.13 | 419,066 | 8.80 | 1,182,437 | 5.51 |
| | **Upper Limit ==>** | 676,564 | 11.63 | 838,132 | 9.30 | 2,364,874 | 6.01 |
| | **Lower Limit ==>** | 169,141 | 10.63 | 209,533 | 8.30 | 591,219 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200325-1 | 322,206 | 11.13 | 386,918 | 8.80 | 1,106,267 | 5.51 |
| Method Blank | JWG1200325-2 | 322,051 | 11.13 | 383,241 | 8.80 | 1,093,788 | 5.51 |
| Trip Blank | J1201360-029 | 314,454 | 11.13 | 402,969 | 8.80 | 1,172,678 | 5.51 |
| CRHE-MW0032-045.0-03192012D | J1201360-001 | 317,812 | 11.13 | 379,377 | 8.80 | 1,119,988 | 5.51 |
| CRHE-MW0031-045.0-03192012D | J1201360-004 | 322,770 | 11.13 | 395,883 | 8.80 | 1,159,224 | 5.51 |
| CRHE-IW0020I-045.0-03192012D | J1201360-005 | 319,432 | 11.13 | 390,271 | 8.80 | 1,120,582 | 5.51 |
| CRHE-MW0039-030.0-03192012D | J1201360-006 | 325,142 | 11.13 | 389,370 | 8.80 | 1,108,624 | 5.51 |
| CRHE-MW0034-038.5-03202012D | J1201360-010 | 327,008 | 11.13 | 395,803 | 8.80 | 1,096,028 | 5.51 |
| CRHE-IW0019I-040.0-03202012D | J1201360-011 | 319,532 | 11.13 | 392,191 | 8.80 | 1,116,694 | 5.51 |
| CRHE-MW0035-045.0-03202012D | J1201360-014 | 317,749 | 11.13 | 383,466 | 8.80 | 1,119,903 | 5.52 |
| CRHE-MW0028-040.0-03202012D | J1201360-015 | 320,292 | 11.13 | 385,204 | 8.80 | 1,151,728 | 5.51 |
| CRHE-IW0017I-030.0-03202012D | J1201360-017 | 313,536 | 11.13 | 395,840 | 8.80 | 1,123,689 | 5.51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | 316,218 | 11.13 | 402,165 | 8.80 | 1,116,092 | 5.52 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | 332,100 | 11.13 | 405,929 | 8.80 | 1,179,725 | 5.52 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | 326,026 | 11.13 | 414,330 | 8.80 | 1,170,714 | 5.52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | 314,676 | 11.13 | 399,293 | 8.80 | 1,157,084 | 5.52 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | 324,993 | 11.13 | 393,830 | 8.80 | 1,133,953 | 5.52 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | 318,409 | 11.13 | 384,678 | 8.80 | 1,105,383 | 5.52 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 11:53

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120403\0403-03.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200334-2
**Analysis Lot:** JWG1200334

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 317,277 | 11.13 | 383,361 | 8.80 | 1,079,939 | 5.51 |
| | **Upper Limit ==>** | 634,554 | 11.63 | 766,722 | 9.30 | 2,159,878 | 6.01 |
| | **Lower Limit ==>** | 158,639 | 10.63 | 191,681 | 8.30 | 539,970 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200333-3 | 309,433 | 11.13 | 402,331 | 8.80 | 1,130,474 | 5.51 |
| Method Blank | JWG1200333-4 | 316,138 | 11.13 | 389,420 | 8.80 | 1,095,457 | 5.51 |
| CRHE-IW0014I-040.0-03212012RI | J1201360-018 | 316,659 | 11.13 | 370,802 | 8.80 | 1,091,211 | 5.51 |
| CRHE-MW0022-065.0-03212012R | J1201360-021 | 315,576 | 11.13 | 390,002 | 8.80 | 1,108,138 | 5.51 |
| CRHE-MW0029-045.0-03212012D | J1201360-019 | 301,400 | 11.13 | 375,955 | 8.80 | 1,085,571 | 5.51 |
| CRHE-MW0026-035.0-03212012D | J1201360-020 | 304,045 | 11.12 | 375,196 | 8.80 | 1,067,834 | 5.51 |
| CRHE-MW0027-045.0-03212012D | J1201360-022 | 304,830 | 11.12 | 381,443 | 8.80 | 1,056,074 | 5.51 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | 307,096 | 11.13 | 380,864 | 8.80 | 1,120,196 | 5.51 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | 305,472 | 11.13 | 384,814 | 8.80 | 1,106,582 | 5.51 |
| CRHE-MW0025-030.0-03212012D | J1201360-024 | 313,276 | 11.13 | 402,002 | 8.80 | 1,159,827 | 5.52 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200321

| Analyte Name | Lab Control Sample JWG1200321-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.8 | 20.0 | 99 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 19.6 | 20.0 | 98 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 20.3 | 20.0 | 102 | 66-135 |
| 1,1,2-Trichloroethane | 19.6 | 20.0 | 98 | 75-122 |
| 1,1-Dichloroethane | 20.5 | 20.0 | 103 | 79-117 |
| 1,1-Dichloroethene | 23.0 | 20.0 | 115 | 72-128 |
| 1,2,3-Trichlorobenzene | 20.7 | 20.0 | 104 | 62-136 |
| 1,2,4-Trichlorobenzene | 19.2 | 20.0 | 96 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.5 | 20.0 | 82 | 60-122 |
| 1,2-Dibromoethane (EDB) | 18.7 | 20.0 | 93 | 76-118 |
| 1,2-Dichlorobenzene | 20.5 | 20.0 | 103 | 81-115 |
| 1,2-Dichloroethane (EDC) | 19.9 | 20.0 | 100 | 70-117 |
| 1,2-Dichloropropane | 21.6 | 20.0 | 108 | 79-117 |
| 1,3-Dichlorobenzene | 21.5 | 20.0 | 107 | 82-116 |
| 1,4-Dichlorobenzene | 20.9 | 20.0 | 105 | 82-115 |
| 2-Butanone (MEK) | 102 | 100 | 102 | 62-138 |
| 2-Hexanone | 93.2 | 100 | 93 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 96.1 | 100 | 96 | 77-120 |
| Acetone | 88.3 | 100 | 88 | 42-161 |
| Benzene | 21.4 | 20.0 | 107 | 80-117 |
| Bromochloromethane | 19.6 | 20.0 | 98 | 78-118 |
| Bromodichloromethane | 20.2 | 20.0 | 101 | 75-118 |
| Bromoform | 19.2 | 20.0 | 96 | 63-121 |
| Bromomethane | 19.1 | 20.0 | 95 | 31-153 |
| Carbon Disulfide | 119 | 100 | 119 | 72-128 |
| Carbon Tetrachloride | 18.3 | 20.0 | 91 | 67-124 |
| Chlorobenzene | 20.7 | 20.0 | 103 | 83-118 |
| Chloroethane | 21.5 | 20.0 | 107 | 68-132 |
| Chloroform | 19.6 | 20.0 | 98 | 77-116 |
| Chloromethane | 24.8 | 20.0 | 124 | 60-128 |
| cis-1,2-Dichloroethene | 21.5 | 20.0 | 108 | 78-117 |
| cis-1,3-Dichloropropene | 20.9 | 20.0 | 105 | 80-119 |
| Cyclohexane | 20.3 | 20.0 | 102 | 75-124 |
| Dibromochloromethane | 19.4 | 20.0 | 97 | 74-121 |
| Dichlorodifluoromethane | 22.1 | 20.0 | 111 | 49-132 |
| Ethylbenzene | 21.8 | 20.0 | 109 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200321

| | Lab Control Sample JWG1200321-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| Isopropylbenzene | 24.0 | 20.0 | 120 * | 78-119 |
| m,p-Xylenes | 44.3 | 40.0 | 111 | 79-122 |
| Methyl Acetate | 19.4 | 20.0 | 97 | 50-137 |
| Methyl tert-Butyl Ether | 20.0 | 20.0 | 100 | 73-118 |
| Methylene Chloride | 20.5 | 20.0 | 103 | 75-123 |
| o-Xylene | 21.3 | 20.0 | 106 | 80-119 |
| Styrene | 20.9 | 20.0 | 105 | 80-121 |
| Tetrachloroethene (PCE) | 20.2 | 20.0 | 101 | 75-126 |
| Toluene | 21.1 | 20.0 | 105 | 52-152 |
| trans-1,2-Dichloroethene | 20.9 | 20.0 | 104 | 75-121 |
| trans-1,3-Dichloropropene | 19.7 | 20.0 | 98 | 76-118 |
| Trichloroethene (TCE) | 20.6 | 20.0 | 103 | 78-122 |
| Trichlorofluoromethane | 20.3 | 20.0 | 101 | 58-134 |
| Trichlorotrifluoroethane | 21.4 | 20.0 | 107 | 77-128 |
| Vinyl Chloride | 21.4 | 20.0 | 107 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200325

| Analyte Name | Lab Control Sample JWG1200325-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.4 | 20.0 | 97 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 20.2 | 20.0 | 101 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 21.1 | 20.0 | 106 | 66-135 |
| 1,1,2-Trichloroethane | 19.6 | 20.0 | 98 | 75-122 |
| 1,1-Dichloroethane | 21.2 | 20.0 | 106 | 79-117 |
| 1,1-Dichloroethene | 23.6 | 20.0 | 118 | 72-128 |
| 1,2,3-Trichlorobenzene | 19.5 | 20.0 | 98 | 62-136 |
| 1,2,4-Trichlorobenzene | 18.7 | 20.0 | 93 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.7 | 20.0 | 83 | 60-122 |
| 1,2-Dibromoethane (EDB) | 19.1 | 20.0 | 96 | 76-118 |
| 1,2-Dichlorobenzene | 20.3 | 20.0 | 101 | 81-115 |
| 1,2-Dichloroethane (EDC) | 19.8 | 20.0 | 99 | 70-117 |
| 1,2-Dichloropropane | 21.5 | 20.0 | 108 | 79-117 |
| 1,3-Dichlorobenzene | 21.0 | 20.0 | 105 | 82-116 |
| 1,4-Dichlorobenzene | 21.0 | 20.0 | 105 | 82-115 |
| 2-Butanone (MEK) | 99.8 | 100 | 100 | 62-138 |
| 2-Hexanone | 94.3 | 100 | 94 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 95.0 | 100 | 95 | 77-120 |
| Acetone | 86.2 | 100 | 86 | 42-161 |
| Benzene | 21.4 | 20.0 | 107 | 80-117 |
| Bromochloromethane | 19.4 | 20.0 | 97 | 78-118 |
| Bromodichloromethane | 20.9 | 20.0 | 104 | 75-118 |
| Bromoform | 20.2 | 20.0 | 101 | 63-121 |
| Bromomethane | 19.4 | 20.0 | 97 | 31-153 |
| Carbon Disulfide | 121 | 100 | 121 | 72-128 |
| Carbon Tetrachloride | 19.3 | 20.0 | 96 | 67-124 |
| Chlorobenzene | 20.3 | 20.0 | 101 | 83-118 |
| Chloroethane | 22.3 | 20.0 | 112 | 68-132 |
| Chloroform | 20.5 | 20.0 | 102 | 77-116 |
| Chloromethane | 25.2 | 20.0 | 126 | 60-128 |
| cis-1,2-Dichloroethene | 21.7 | 20.0 | 108 | 78-117 |
| cis-1,3-Dichloropropene | 20.7 | 20.0 | 104 | 80-119 |
| Cyclohexane | 20.8 | 20.0 | 104 | 75-124 |
| Dibromochloromethane | 19.5 | 20.0 | 97 | 74-121 |
| Dichlorodifluoromethane | 22.3 | 20.0 | 111 | 49-132 |
| Ethylbenzene | 21.1 | 20.0 | 105 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200325

| Analyte Name | Lab Control Sample JWG1200325-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| Isopropylbenzene | 23.8 | 20.0 | 119 | 78-119 |
| m,p-Xylenes | 44.3 | 40.0 | 111 | 79-122 |
| Methyl Acetate | 18.4 | 20.0 | 92 | 50-137 |
| Methyl tert-Butyl Ether | 20.8 | 20.0 | 104 | 73-118 |
| Methylene Chloride | 21.2 | 20.0 | 106 | 75-123 |
| o-Xylene | 21.4 | 20.0 | 107 | 80-119 |
| Styrene | 21.2 | 20.0 | 106 | 80-121 |
| Tetrachloroethene (PCE) | 20.2 | 20.0 | 101 | 75-126 |
| Toluene | 21.1 | 20.0 | 105 | 52-152 |
| trans-1,2-Dichloroethene | 21.2 | 20.0 | 106 | 75-121 |
| trans-1,3-Dichloropropene | 19.9 | 20.0 | 100 | 76-118 |
| Trichloroethene (TCE) | 20.8 | 20.0 | 104 | 78-122 |
| Trichlorofluoromethane | 21.2 | 20.0 | 106 | 58-134 |
| Trichlorotrifluoroethane | 22.4 | 20.0 | 112 | 77-128 |
| Vinyl Chloride | 22.0 | 20.0 | 110 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200333

| Analyte Name | Lab Control Sample JWG1200333-3 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.9 | 20.0 | 95 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 19.5 | 20.0 | 97 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 19.6 | 20.0 | 98 | 66-135 |
| 1,1,2-Trichloroethane | 19.4 | 20.0 | 97 | 75-122 |
| 1,1-Dichloroethane | 20.4 | 20.0 | 102 | 79-117 |
| 1,1-Dichloroethene | 22.4 | 20.0 | 112 | 72-128 |
| 1,2,3-Trichlorobenzene | 19.2 | 20.0 | 96 | 62-136 |
| 1,2,4-Trichlorobenzene | 17.9 | 20.0 | 89 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.1 | 20.0 | 81 | 60-122 |
| 1,2-Dibromoethane (EDB) | 18.2 | 20.0 | 91 | 76-118 |
| 1,2-Dichlorobenzene | 19.6 | 20.0 | 98 | 81-115 |
| 1,2-Dichloroethane (EDC) | 20.0 | 20.0 | 100 | 70-117 |
| 1,2-Dichloropropane | 21.1 | 20.0 | 105 | 79-117 |
| 1,3-Dichlorobenzene | 20.9 | 20.0 | 105 | 82-116 |
| 1,4-Dichlorobenzene | 20.4 | 20.0 | 102 | 82-115 |
| 2-Butanone (MEK) | 98.5 | 100 | 99 | 62-138 |
| 2-Hexanone | 91.0 | 100 | 91 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 92.1 | 100 | 92 | 77-120 |
| Acetone | 90.0 | 100 | 90 | 42-161 |
| Benzene | 20.5 | 20.0 | 102 | 80-117 |
| Bromochloromethane | 18.7 | 20.0 | 94 | 78-118 |
| Bromodichloromethane | 20.6 | 20.0 | 103 | 75-118 |
| Bromoform | 18.3 | 20.0 | 92 | 63-121 |
| Bromomethane | 17.8 | 20.0 | 89 | 31-153 |
| Carbon Disulfide | 114 | 100 | 114 | 72-128 |
| Carbon Tetrachloride | 17.7 | 20.0 | 88 | 67-124 |
| Chlorobenzene | 19.7 | 20.0 | 98 | 83-118 |
| Chloroethane | 19.9 | 20.0 | 100 | 68-132 |
| Chloroform | 19.7 | 20.0 | 98 | 77-116 |
| Chloromethane | 21.6 | 20.0 | 108 | 60-128 |
| cis-1,2-Dichloroethene | 20.9 | 20.0 | 104 | 78-117 |
| cis-1,3-Dichloropropene | 19.6 | 20.0 | 98 | 80-119 |
| Cyclohexane | 19.8 | 20.0 | 99 | 75-124 |
| Dibromochloromethane | 18.4 | 20.0 | 92 | 74-121 |
| Dichlorodifluoromethane | 19.8 | 20.0 | 99 | 49-132 |
| Ethylbenzene | 20.8 | 20.0 | 104 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200333

| | Lab Control Sample JWG1200333-3 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| Isopropylbenzene | 24.1 | 20.0 | 120 * | 78-119 |
| m,p-Xylenes | 41.0 | 40.0 | 102 | 79-122 |
| Methyl Acetate | 19.1 | 20.0 | 95 | 50-137 |
| Methyl tert-Butyl Ether | 19.8 | 20.0 | 99 | 73-118 |
| Methylene Chloride | 20.0 | 20.0 | 100 | 75-123 |
| o-Xylene | 20.2 | 20.0 | 101 | 80-119 |
| Styrene | 19.9 | 20.0 | 99 | 80-121 |
| Tetrachloroethene (PCE) | 18.9 | 20.0 | 94 | 75-126 |
| Toluene | 20.0 | 20.0 | 100 | 52-152 |
| trans-1,2-Dichloroethene | 20.1 | 20.0 | 100 | 75-121 |
| trans-1,3-Dichloropropene | 19.3 | 20.0 | 96 | 76-118 |
| Trichloroethene (TCE) | 20.3 | 20.0 | 101 | 78-122 |
| Trichlorofluoromethane | 18.9 | 20.0 | 95 | 58-134 |
| Trichlorotrifluoroethane | 20.0 | 20.0 | 100 | 77-128 |
| Vinyl Chloride | 19.6 | 20.0 | 98 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry
**Level:** Low
**Extraction Lot:** JWG1200305

| | Lab Control Sample JWG1200305-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| 1,1,1,2-Tetrachloroethane | 18.1 | 20.0 | 90 | 71-124 |
| 1,1,1-Trichloroethane (TCA) | 17.4 | 20.0 | 87 | 72-131 |
| 1,1,2,2-Tetrachloroethane | 17.4 | 20.0 | 87 | 51-136 |
| 1,1,2-Trichloroethane | 18.4 | 20.0 | 92 | 74-113 |
| 1,1-Dichloroethane | 18.3 | 20.0 | 92 | 74-124 |
| 1,1-Dichloroethene | 16.0 | 20.0 | 80 | 67-128 |
| 1,2,3-Trichlorobenzene | 18.9 | 20.0 | 94 | 64-129 |
| 1,2,4-Trichlorobenzene | 18.7 | 20.0 | 93 | 61-135 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 17.4 | 20.0 | 87 | 54-129 |
| 1,2-Dibromoethane (EDB) | 18.2 | 20.0 | 91 | 74-114 |
| 1,2-Dichlorobenzene | 18.6 | 20.0 | 93 | 74-111 |
| 1,2-Dichloroethane (EDC) | 17.7 | 20.0 | 88 | 74-120 |
| 1,2-Dichloropropane | 18.3 | 20.0 | 91 | 77-119 |
| 1,3-Dichlorobenzene | 18.5 | 20.0 | 93 | 74-114 |
| 1,4-Dichlorobenzene | 18.7 | 20.0 | 93 | 72-112 |
| 2-Butanone (MEK) | 87.5 | 100 | 87 | 55-136 |
| 2-Hexanone | 88.0 | 100 | 88 | 60-127 |
| 4-Methyl-2-pentanone (MIBK) | 90.1 | 100 | 90 | 64-122 |
| Acetone | 83.4 | 100 | 83 | 30-164 |
| Benzene | 18.2 | 20.0 | 91 | 76-123 |
| Bromochloromethane | 19.0 | 20.0 | 95 | 75-124 |
| Bromodichloromethane | 17.1 | 20.0 | 85 | 74-124 |
| Bromoform | 16.8 | 20.0 | 84 | 58-126 |
| Bromomethane | 18.5 | 20.0 | 92 | 25-175 |
| Carbon Disulfide | 110 | 100 | 110 | 62-134 |
| Carbon Tetrachloride | 16.0 | 20.0 | 80 | 68-134 |
| Chlorobenzene | 19.0 | 20.0 | 95 | 74-116 |
| Chloroethane | 17.5 | 20.0 | 88 | 64-131 |
| Chloroform | 17.1 | 20.0 | 86 | 75-120 |
| Chloromethane | 16.6 | 20.0 | 83 | 59-138 |
| cis-1,2-Dichloroethene | 18.4 | 20.0 | 92 | 74-122 |
| cis-1,3-Dichloropropene | 18.5 | 20.0 | 93 | 75-115 |
| Cyclohexane | 19.3 | 20.0 | 96 | 70-127 |
| Dibromochloromethane | 16.7 | 20.0 | 83 | 67-123 |
| Dichlorodifluoromethane | 17.1 | 20.0 | 86 | 51-150 |
| Ethylbenzene | 18.9 | 20.0 | 95 | 71-122 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry
**Level:** Low
**Extraction Lot:** JWG1200305

| | Lab Control Sample JWG1200305-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| Isopropylbenzene | 20.9 | 20.0 | 105 | 67-124 |
| m,p-Xylenes | 38.0 | 40.0 | 95 | 71-122 |
| Methyl Acetate | 16.6 | 20.0 | 83 | 25-160 |
| Methyl tert-Butyl Ether | 18.1 | 20.0 | 90 | 72-121 |
| Methylene Chloride | 16.6 | 20.0 | 83 | 60-140 |
| o-Xylene | 18.3 | 20.0 | 92 | 71-120 |
| Styrene | 19.1 | 20.0 | 95 | 70-122 |
| Tetrachloroethene (PCE) | 18.9 | 20.0 | 95 | 69-124 |
| Toluene | 18.7 | 20.0 | 93 | 72-118 |
| trans-1,2-Dichloroethene | 17.6 | 20.0 | 88 | 71-127 |
| trans-1,3-Dichloropropene | 17.6 | 20.0 | 88 | 73-115 |
| Trichloroethene (TCE) | 18.4 | 20.0 | 92 | 70-129 |
| Trichlorofluoromethane | 17.4 | 20.0 | 87 | 67-129 |
| Trichlorotrifluoroethane | 17.7 | 20.0 | 89 | 66-131 |
| Vinyl Chloride | 18.9 | 20.0 | 95 | 62-137 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 13:10

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120330\0330-06.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200321

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200321-1 | J:\MS53\DATA\MS53-120330\0330-03.D | 03/30/12 | 11:42 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/12 | 13:40 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/12 | 14:10 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/12 | 14:40 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/12 | 15:09 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/12 | 15:39 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/12 | 16:09 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/12 | 16:39 |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/12 | 17:09 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/12 | 17:39 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/12 | 18:09 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/12 | 18:39 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/12 | 19:09 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/12 | 19:39 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/12 | 20:09 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/12 | 20:39 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/12 | 21:08 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/12 | 21:38 |

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Extracted:** | 04/02/2012 |
| **Sample Matrix:** | Water | **Date Analyzed:** | 04/02/2012 |
| | | **Time Analyzed:** | 11:20 |

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Instrument ID:** | MS53 |
| **Lab Code:** | JWG1200325-2 | **File ID:** | J:\MS53\DATA\MS53-120402\0402-06.D |
| **Extraction Method:** | EPA 5030B | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | JWG1200325 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200325-1 | J:\MS53\DATA\MS53-120402\0402-03.D | 04/02/12 | 09:51 |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/12 | 11:50 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/12 | 12:20 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/12 | 12:49 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/12 | 13:20 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/12 | 13:50 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/12 | 14:20 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/12 | 14:50 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/12 | 15:19 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/12 | 15:49 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/12 | 16:19 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/12 | 16:49 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/12 | 17:19 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/12 | 17:49 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/12 | 18:19 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/12 | 18:49 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/12 | 19:19 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 13:53

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200333-4

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120403\0403-07.D

**Level:** Low
**Extraction Lot:** JWG1200333

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200333-3 | J:\MS53\DATA\MS53-120403\0403-04.D | 04/03/12 | 12:25 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/12 | 14:23 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/12 | 14:52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/12 | 15:22 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/12 | 15:51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/12 | 16:21 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/12 | 16:50 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/12 | 17:20 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/12 | 18:18 |

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Extracted:** | 03/22/2012 |
| **Sample Matrix:** | Soil | **Date Analyzed:** | 03/22/2012 |
| | | **Time Analyzed:** | 11:28 |

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Instrument ID:** | MS52 |
| **Lab Code:** | JWG1200305-2 | **File ID:** | J:\MS52\DATA\MS52-120322\0322-05.D |
| **Extraction Method:** | EPA 5035 | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | JWG1200305 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200305-1 | J:\MS52\DATA\MS52-120322\0322-03.D | 03/22/12 | 10:14 |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/12 | 18:20 |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/12 | 18:48 |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/12 | 19:17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/12 | 19:45 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 11:42

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200321-1

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120330\0330-03.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200321

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200321-2 | J:\MS53\DATA\MS53-120330\0330-06.D | 03/30/12 | 13:10 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/12 | 13:40 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/12 | 14:10 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/12 | 14:40 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/12 | 15:09 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/12 | 15:39 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/12 | 16:09 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/12 | 16:39 |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/12 | 17:09 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/12 | 17:39 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/12 | 18:09 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/12 | 18:39 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/12 | 19:09 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/12 | 19:39 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/12 | 20:09 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/12 | 20:39 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/12 | 21:08 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/12 | 21:38 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 09:51

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200325-1

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120402\0402-03.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200325

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200325-2 | J:\MS53\DATA\MS53-120402\0402-06.D | 04/02/12 | 11:20 |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/12 | 11:50 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/12 | 12:20 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/12 | 12:49 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/12 | 13:20 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/12 | 13:50 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/12 | 14:20 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/12 | 14:50 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/12 | 15:19 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/12 | 15:49 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/12 | 16:19 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/12 | 16:49 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/12 | 17:19 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/12 | 17:49 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/12 | 18:19 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/12 | 18:49 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/12 | 19:19 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 12:25

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200333-3

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120403\0403-04.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200333

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200333-4 | J:\MS53\DATA\MS53-120403\0403-07.D | 04/03/12 | 13:53 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/12 | 14:23 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/12 | 14:52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/12 | 15:22 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/12 | 15:51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/12 | 16:21 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/12 | 16:50 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/12 | 17:20 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/12 | 18:18 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 10:14

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200305-1

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Instrument ID:** MS52
**File ID:** J:\MS52\DATA\MS52-120322\0322-03.D

**Level:** Low
**Extraction Lot:** JWG1200305

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200305-2 | J:\MS52\DATA\MS52-120322\0322-05.D | 03/22/12 | 11:28 |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/12 | 18:20 |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/12 | 18:48 |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/12 | 19:17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/12 | 19:45 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 09:17

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS52\DATA\MS52-120322\0322-01.D
**Instrument ID:** MS52
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200306

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 15.1 | 3056 | PASS |
| 75 | 95 | 30 | 60 | 44.7 | 9053 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 20275 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 1378 | PASS |
| 173 | 174 | 0 | 2 | 0.4 | 78 | PASS |
| 174 | 95 | 50 | 120 | 93.5 | 18957 | PASS |
| 175 | 174 | 5 | 9 | 7.2 | 1370 | PASS |
| 176 | 174 | 95 | 101 | 98.9 | 18742 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 1226 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200306-2 | J:\MS52\DATA\MS52-120322\0322-02.D | 03/22/2012 | 09:45 | |
| Lab Control Sample | JWG1200305-1 | J:\MS52\DATA\MS52-120322\0322-03.D | 03/22/2012 | 10:14 | |
| Method Blank | JWG1200305-2 | J:\MS52\DATA\MS52-120322\0322-05.D | 03/22/2012 | 11:28 | |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/2012 | 18:20 | |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/2012 | 18:48 | |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/2012 | 19:17 | |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/2012 | 19:45 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 10:42

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120330\0330-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200322

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 15.2 | 25176 | PASS |
| 75 | 95 | 30 | 60 | 33.7 | 55912 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 166080 | PASS |
| 96 | 95 | 5 | 9 | 6.4 | 10595 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 90.7 | 150592 | PASS |
| 175 | 174 | 5 | 9 | 7.5 | 11247 | PASS |
| 176 | 174 | 95 | 101 | 95.4 | 143616 | PASS |
| 177 | 176 | 5 | 9 | 6.0 | 8649 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200322-2 | J:\MS53\DATA\MS53-120330\0330-02.D | 03/30/2012 | 11:12 | |
| Lab Control Sample | JWG1200321-1 | J:\MS53\DATA\MS53-120330\0330-03.D | 03/30/2012 | 11:42 | |
| Method Blank | JWG1200321-2 | J:\MS53\DATA\MS53-120330\0330-06.D | 03/30/2012 | 13:10 | |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/2012 | 13:40 | |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/2012 | 14:10 | |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/2012 | 14:40 | |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/2012 | 15:09 | |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/2012 | 15:39 | |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/2012 | 16:09 | |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/2012 | 16:39 | |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/2012 | 17:09 | |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/2012 | 17:39 | |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/2012 | 18:09 | |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/2012 | 18:39 | |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/2012 | 19:09 | |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/2012 | 19:39 | |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/2012 | 20:09 | |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/2012 | 20:39 | |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/2012 | 21:08 | |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/2012 | 21:38 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 08:51

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120402\0402-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200326

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.4 | 37064 | PASS |
| 75 | 95 | 30 | 60 | 35.7 | 80421 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 225429 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 14647 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 79.9 | 180139 | PASS |
| 175 | 174 | 5 | 9 | 7.7 | 13885 | PASS |
| 176 | 174 | 95 | 101 | 96.2 | 173248 | PASS |
| 177 | 176 | 5 | 9 | 6.3 | 10928 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200326-2 | J:\MS53\DATA\MS53-120402\0402-02.D | 04/02/2012 | 09:21 | |
| Lab Control Sample | JWG1200325-1 | J:\MS53\DATA\MS53-120402\0402-03.D | 04/02/2012 | 09:51 | |
| Method Blank | JWG1200325-2 | J:\MS53\DATA\MS53-120402\0402-06.D | 04/02/2012 | 11:20 | |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/2012 | 11:50 | |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/2012 | 12:20 | |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/2012 | 12:49 | |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/2012 | 13:20 | |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/2012 | 13:50 | |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/2012 | 14:20 | |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/2012 | 14:50 | |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/2012 | 15:19 | |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/2012 | 15:49 | |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/2012 | 16:19 | |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/2012 | 16:49 | |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/2012 | 17:19 | |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/2012 | 17:49 | |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/2012 | 18:19 | |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/2012 | 18:49 | |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/2012 | 19:19 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 10:53

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120403\0403-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200334

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.8 | 34616 | PASS |
| 75 | 95 | 30 | 60 | 36.5 | 75304 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 206165 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 13426 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 74.0 | 152600 | PASS |
| 175 | 174 | 5 | 9 | 8.1 | 12319 | PASS |
| 176 | 174 | 95 | 101 | 95.9 | 146363 | PASS |
| 177 | 176 | 5 | 9 | 6.7 | 9745 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200334-2 | J:\MS53\DATA\MS53-120403\0403-03.D | 04/03/2012 | 11:53 | |
| Lab Control Sample | JWG1200333-3 | J:\MS53\DATA\MS53-120403\0403-04.D | 04/03/2012 | 12:25 | |
| Method Blank | JWG1200333-4 | J:\MS53\DATA\MS53-120403\0403-07.D | 04/03/2012 | 13:53 | |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/2012 | 14:23 | |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/2012 | 14:52 | |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/2012 | 15:22 | |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/2012 | 15:51 | |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/2012 | 16:21 | |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/2012 | 16:50 | |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/2012 | 17:20 | |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/2012 | 18:18 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\MS52\DATA\MS52-120227\0227-04.D | F | J:\MS52\DATA\MS52-120227\0227-09.D |
| B | J:\MS52\DATA\MS52-120227\0227-05.D | G | J:\MS52\DATA\MS52-120227\0227-10.D |
| C | J:\MS52\DATA\MS52-120227\0227-06.D | H | J:\MS52\DATA\MS52-120227\0227-11.D |
| D | J:\MS52\DATA\MS52-120227\0227-07.D | I | J:\MS52\DATA\MS52-120227\0227-12.D |
| E | J:\MS52\DATA\MS52-120227\0227-08.D | | |

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | A | 1.0 | 1.06 | B | 2.0 | 1.07 | C | 5.0 | 1.09 | D | 10 | 1.16 | E | 20 | 1.24 |
| | F | 50 | 1.29 | G | 100 | 1.41 | H | 150 | 1.24 | I | 200 | 1.35 | | | |
| 1,1,1-Trichloroethane (TCA) | A | 1.0 | 0.672 | B | 2.0 | 0.693 | C | 5.0 | 0.706 | D | 10 | 0.709 | E | 20 | 0.843 |
| | F | 50 | 0.863 | G | 100 | 0.927 | H | 150 | 0.774 | I | 200 | 0.890 | | | |
| 1,1,2,2-Tetrachloroethane | A | 1.0 | 0.996 | B | 2.0 | 0.870 | C | 5.0 | 0.993 | D | 10 | 0.943 | E | 20 | 0.984 |
| | F | 50 | 1.03 | G | 100 | 1.16 | H | 150 | 1.08 | I | 200 | 1.03 | | | |
| 1,1,2-Trichloroethane | A | 1.0 | 0.650 | B | 2.0 | 0.651 | C | 5.0 | 0.608 | D | 10 | 0.664 | E | 20 | 0.665 |
| | F | 50 | 0.704 | G | 100 | 0.758 | H | 150 | 0.685 | I | 200 | 0.694 | | | |
| 1,1-Dichloroethane | A | 1.0 | 0.636 | B | 2.0 | 0.665 | C | 5.0 | 0.745 | D | 10 | 0.712 | E | 20 | 0.795 |
| | F | 50 | 0.787 | G | 100 | 0.830 | H | 150 | 0.727 | I | 200 | 0.812 | | | |
| 1,1-Dichloroethene | A | 1.0 | 0.518 | B | 2.0 | 0.546 | C | 5.0 | 0.598 | D | 10 | 0.564 | E | 20 | 0.676 |
| | F | 50 | 0.699 | G | 100 | 0.729 | H | 150 | 0.616 | I | 200 | 0.713 | | | |
| 1,2,3-Trichlorobenzene | | | | | | | C | 5.0 | 1.51 | D | 10 | 1.53 | E | 20 | 1.65 |
| | F | 50 | 1.68 | G | 100 | 1.88 | H | 150 | 1.79 | I | 200 | 1.79 | | | |
| 1,2,4-Trichlorobenzene | | | | | | | C | 5.0 | 1.78 | D | 10 | 1.65 | E | 20 | 1.85 |
| | F | 50 | 1.95 | G | 100 | 2.14 | H | 150 | 2.02 | I | 200 | 2.06 | | | |
| 1,2-Dibromo-3-chloropropane (DBCP | | | | | | | C | 5.0 | 0.201 | D | 10 | 0.207 | E | 20 | 0.215 |
| | F | 50 | 0.224 | G | 100 | 0.265 | H | 150 | 0.268 | I | 200 | 0.246 | | | |
| 1,2-Dibromoethane (EDB) | A | 1.0 | 0.828 | B | 2.0 | 0.746 | C | 5.0 | 0.831 | D | 10 | 0.838 | E | 20 | 0.879 |
| | F | 50 | 0.910 | G | 100 | 1.02 | H | 150 | 0.922 | I | 200 | 0.926 | | | |
| 1,2-Dichlorobenzene | A | 1.0 | 2.20 | B | 2.0 | 2.23 | C | 5.0 | 2.29 | D | 10 | 2.27 | E | 20 | 2.42 |
| | F | 50 | 2.48 | G | 100 | 2.75 | H | 150 | 2.54 | I | 200 | 2.57 | | | |
| 1,2-Dichloroethane (EDC) | A | 1.0 | 0.451 | B | 2.0 | 0.543 | C | 5.0 | 0.534 | D | 10 | 0.526 | E | 20 | 0.550 |
| | F | 50 | 0.559 | G | 100 | 0.594 | H | 150 | 0.529 | I | 200 | 0.541 | | | |
| 1,2-Dichloroethane-d4 | A | 50 | 0.259 | B | 50 | 0.263 | C | 50 | 0.260 | D | 50 | 0.257 | E | 50 | 0.250 |
| | F | 50 | 0.246 | G | 50 | 0.250 | H | 50 | 0.238 | I | 50 | 0.232 | | | |
| 1,2-Dichloropropane | A | 1.0 | 0.317 | B | 2.0 | 0.359 | C | 5.0 | 0.385 | D | 10 | 0.389 | E | 20 | 0.419 |
| | F | 50 | 0.414 | G | 100 | 0.449 | H | 150 | 0.398 | I | 200 | 0.432 | | | |
| 1,3-Dichlorobenzene | A | 1.0 | 2.49 | B | 2.0 | 2.45 | C | 5.0 | 2.50 | D | 10 | 2.50 | E | 20 | 2.68 |
| | F | 50 | 2.78 | G | 100 | 2.98 | H | 150 | 2.75 | I | 200 | 2.89 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | A | 1.0 | 2.55 | B | 2.0 | 2.49 | C | 5.0 | 2.54 | D | 10 | 2.51 | E | 20 | 2.68 |
| | F | 50 | 2.71 | G | 100 | 2.93 | H | 150 | 2.66 | I | 200 | 2.76 | | | |
| 2-Butanone (MEK) | A | 5.0 | 0.110 | B | 10 | 0.121 | C | 25 | 0.134 | D | 50 | 0.129 | E | 100 | 0.122 |
| | F | 250 | 0.126 | G | 500 | 0.137 | H | 750 | 0.133 | I | 1000 | 0.120 | | | |
| 2-Hexanone | A | 5.0 | 0.483 | B | 10 | 0.458 | C | 25 | 0.508 | D | 50 | 0.502 | E | 100 | 0.493 |
| | F | 250 | 0.519 | G | 500 | 0.587 | H | 750 | 0.567 | I | 1000 | 0.513 | | | |
| 4-Bromofluorobenzene | A | 50 | 0.871 | B | 50 | 0.864 | C | 50 | 0.864 | D | 50 | 0.885 | E | 50 | 0.872 |
| | F | 50 | 0.901 | G | 50 | 0.940 | H | 50 | 1.01 | I | 50 | 1.05 | | | |
| 4-Methyl-2-pentanone (MIBK) | A | 5.0 | 0.687 | B | 10 | 0.676 | C | 25 | 0.718 | D | 50 | 0.734 | E | 100 | 0.712 |
| | F | 250 | 0.727 | G | 500 | 0.822 | H | 750 | 0.779 | I | 1000 | 0.708 | | | |
| Acetone | A | 5.0 | 0.109 | B | 10 | 0.114 | C | 25 | 0.0910 | D | 50 | 0.0862 | E | 100 | 0.0760 |
| | F | 250 | 0.0764 | G | 500 | 0.0848 | H | 750 | 0.0801 | I | 1000 | 0.0729 | | | |
| Benzene | A | 1.0 | 1.64 | B | 2.0 | 1.61 | C | 5.0 | 1.72 | D | 10 | 1.63 | E | 20 | 1.81 |
| | F | 50 | 1.84 | G | 100 | 1.93 | H | 150 | 1.66 | I | 200 | 1.84 | | | |
| Bromochloromethane | A | 1.0 | 0.229 | B | 2.0 | 0.251 | C | 5.0 | 0.275 | D | 10 | 0.266 | E | 20 | 0.289 |
| | F | 50 | 0.281 | G | 100 | 0.280 | H | 150 | 0.254 | I | 200 | 0.262 | | | |
| Bromodichloromethane | A | 1.0 | 0.550 | B | 2.0 | 0.529 | C | 5.0 | 0.562 | D | 10 | 0.550 | E | 20 | 0.610 |
| | F | 50 | 0.623 | G | 100 | 0.668 | H | 150 | 0.599 | I | 200 | 0.632 | | | |
| Bromoform | A | 1.0 | 0.578 | B | 2.0 | 0.610 | C | 5.0 | 0.604 | D | 10 | 0.656 | E | 20 | 0.670 |
| | F | 50 | 0.738 | G | 100 | 0.832 | H | 150 | 0.780 | I | 200 | 0.769 | | | |
| Bromomethane | A | 1.0 | 0.210 | B | 2.0 | 0.245 | C | 5.0 | 0.239 | D | 10 | 0.240 | E | 20 | 0.289 |
| | F | 50 | 0.312 | G | 100 | 0.316 | H | 150 | 0.267 | I | 200 | 0.285 | | | |
| Carbon Disulfide | A | 5.0 | 0.950 | B | 10 | 0.925 | C | 25 | 0.995 | D | 50 | 0.961 | E | 100 | 1.11 |
| | F | 250 | 1.12 | G | 500 | 1.16 | H | 750 | 0.967 | I | 1000 | 1.12 | | | |
| Carbon Tetrachloride | A | 1.0 | 0.499 | B | 2.0 | 0.583 | C | 5.0 | 0.602 | D | 10 | 0.603 | E | 20 | 0.705 |
| | F | 50 | 0.755 | G | 100 | 0.804 | H | 150 | 0.676 | I | 200 | 0.775 | | | |
| Chlorobenzene | A | 1.0 | 2.91 | B | 2.0 | 3.04 | C | 5.0 | 3.14 | D | 10 | 3.18 | E | 20 | 3.41 |
| | F | 50 | 3.49 | G | 100 | 3.79 | H | 150 | 3.26 | I | 200 | 3.61 | | | |
| Chloroethane | A | 1.0 | 0.284 | B | 2.0 | 0.292 | C | 5.0 | 0.287 | D | 10 | 0.265 | E | 20 | 0.321 |
| | F | 50 | 0.322 | G | 100 | 0.335 | H | 150 | 0.285 | I | 200 | 0.325 | | | |
| Chloroform | A | 1.0 | 0.865 | B | 2.0 | 0.772 | C | 5.0 | 0.799 | D | 10 | 0.779 | E | 20 | 0.844 |
| | F | 50 | 0.850 | G | 100 | 0.904 | H | 150 | 0.787 | I | 200 | 0.854 | | | |
| Chloromethane | A | 1.0 | 0.480 | B | 2.0 | 0.498 | C | 5.0 | 0.522 | D | 10 | 0.490 | E | 20 | 0.602 |
| | F | 50 | 0.595 | G | 100 | 0.630 | H | 150 | 0.530 | I | 200 | 0.616 | | | |
| cis-1,2-Dichloroethene | A | 1.0 | 0.521 | B | 2.0 | 0.547 | C | 5.0 | 0.560 | D | 10 | 0.524 | E | 20 | 0.600 |
| | F | 50 | 0.608 | G | 100 | 0.638 | H | 150 | 0.550 | I | 200 | 0.612 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | A | 1.0 | 1.59 | B | 2.0 | 1.51 | C | 5.0 | 1.57 | D | 10 | 1.55 | E | 20 | 1.74 |
| | F | 50 | 1.82 | G | 100 | 1.96 | H | 150 | 1.77 | I | 200 | 1.89 | | | |
| Cyclohexane | A | 1.0 | 0.520 | B | 2.0 | 0.584 | C | 5.0 | 0.628 | D | 10 | 0.623 | E | 20 | 0.741 |
| | F | 50 | 0.762 | G | 100 | 0.817 | H | 150 | 0.690 | I | 200 | 0.796 | | | |
| Dibromochloromethane | A | 1.0 | 0.936 | B | 2.0 | 0.974 | C | 5.0 | 1.04 | D | 10 | 1.01 | E | 20 | 1.10 |
| | F | 50 | 1.15 | G | 100 | 1.28 | H | 150 | 1.15 | I | 200 | 1.20 | | | |
| Dibromofluoromethane | A | 50 | 0.243 | B | 50 | 0.248 | C | 50 | 0.245 | D | 50 | 0.244 | E | 50 | 0.243 |
| | F | 50 | 0.240 | G | 50 | 0.232 | H | 50 | 0.237 | I | 50 | 0.232 | | | |
| Dichlorodifluoromethane | A | 1.0 | 0.485 | B | 2.0 | 0.502 | C | 5.0 | 0.513 | D | 10 | 0.488 | E | 20 | 0.600 |
| | F | 50 | 0.618 | G | 100 | 0.650 | H | 150 | 0.531 | I | 200 | 0.602 | | | |
| Ethylbenzene | A | 1.0 | 4.98 | B | 2.0 | 4.98 | C | 5.0 | 5.31 | D | 10 | 5.29 | E | 20 | 6.02 |
| | F | 50 | 6.24 | G | 100 | 6.74 | H | 150 | 5.77 | I | 200 | 6.43 | | | |
| Isopropylbenzene | A | 1.0 | 3.99 | B | 2.0 | 4.07 | C | 5.0 | 4.52 | D | 10 | 4.56 | E | 20 | 5.01 |
| | F | 50 | 5.26 | G | 100 | 5.79 | H | 150 | 5.23 | I | 200 | 5.74 | | | |
| m,p-Xylenes | A | 2.0 | 3.98 | B | 4.0 | 3.87 | C | 10 | 4.20 | D | 20 | 4.25 | E | 40 | 4.83 |
| | F | 100 | 4.88 | G | 200 | 5.27 | H | 300 | 4.48 | I | 400 | 4.97 | | | |
| Methyl Acetate | A | 1.0 | 0.534 | B | 2.0 | 0.515 | C | 5.0 | 0.528 | D | 10 | 0.519 | E | 20 | 0.510 |
| | F | 50 | 0.481 | G | 100 | 0.537 | H | 150 | 0.506 | I | 200 | 0.458 | | | |
| Methyl tert-Butyl Ether | A | 1.0 | 1.04 | B | 2.0 | 1.05 | C | 5.0 | 1.05 | D | 10 | 1.01 | E | 20 | 1.05 |
| | F | 50 | 1.10 | G | 100 | 1.17 | H | 150 | 1.11 | I | 200 | 1.10 | | | |
| Methylene Chloride | A | 1.0 | 0.840 | B | 2.0 | 0.616 | C | 5.0 | 0.514 | D | 10 | 0.453 | E | 20 | 0.512 |
| | F | 50 | 0.493 | G | 100 | 0.481 | H | 150 | 0.436 | I | 200 | 0.449 | | | |
| o-Xylene | A | 1.0 | 4.45 | B | 2.0 | 4.11 | C | 5.0 | 4.44 | D | 10 | 4.38 | E | 20 | 4.91 |
| | F | 50 | 5.04 | G | 100 | 5.37 | H | 150 | 4.67 | I | 200 | 5.10 | | | |
| Styrene | A | 1.0 | 2.66 | B | 2.0 | 3.13 | C | 5.0 | 3.22 | D | 10 | 3.25 | E | 20 | 3.70 |
| | F | 50 | 3.83 | G | 100 | 4.21 | H | 150 | 3.67 | I | 200 | 3.99 | | | |
| Tetrachloroethene (PCE) | A | 1.0 | 0.932 | B | 2.0 | 0.963 | C | 5.0 | 1.08 | D | 10 | 1.05 | E | 20 | 1.21 |
| | F | 50 | 1.23 | G | 100 | 1.32 | H | 150 | 1.11 | I | 200 | 1.27 | | | |
| Toluene | A | 1.0 | 4.59 | B | 2.0 | 4.55 | C | 5.0 | 4.69 | D | 10 | 4.68 | E | 20 | 5.27 |
| | F | 50 | 5.33 | G | 100 | 5.73 | H | 150 | 4.91 | I | 200 | 5.46 | | | |
| Toluene-d8 | A | 50 | 2.51 | B | 50 | 2.46 | C | 50 | 2.44 | D | 50 | 2.46 | E | 50 | 2.50 |
| | F | 50 | 2.47 | G | 50 | 2.52 | H | 50 | 2.45 | I | 50 | 2.52 | | | |
| trans-1,2-Dichloroethene | A | 1.0 | 0.580 | B | 2.0 | 0.560 | C | 5.0 | 0.577 | D | 10 | 0.557 | E | 20 | 0.650 |
| | F | 50 | 0.639 | G | 100 | 0.679 | H | 150 | 0.577 | I | 200 | 0.661 | | | |
| trans-1,3-Dichloropropene | A | 1.0 | 1.40 | B | 2.0 | 1.47 | C | 5.0 | 1.44 | D | 10 | 1.45 | E | 20 | 1.54 |
| | F | 50 | 1.64 | G | 100 | 1.85 | H | 150 | 1.67 | I | 200 | 1.74 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene (TCE) | A | 1.0 | 0.417 | B | 2.0 | 0.448 | C | 5.0 | 0.503 | D | 10 | 0.491 | E | 20 | 0.550 |
| | F | 50 | 0.557 | G | 100 | 0.591 | H | 150 | 0.512 | I | 200 | 0.578 | | | |
| Trichlorofluoromethane | A | 1.0 | 0.748 | B | 2.0 | 0.708 | C | 5.0 | 0.742 | D | 10 | 0.720 | E | 20 | 0.879 |
| | F | 50 | 0.881 | G | 100 | 0.938 | H | 150 | 0.779 | I | 200 | 0.893 | | | |
| Trichlorotrifluoroethane | A | 1.0 | 0.330 | B | 2.0 | 0.332 | C | 5.0 | 0.376 | D | 10 | 0.372 | E | 20 | 0.452 |
| | F | 50 | 0.462 | G | 100 | 0.471 | H | 150 | 0.393 | I | 200 | 0.453 | | | |
| Vinyl Chloride | A | 1.0 | 0.369 | B | 2.0 | 0.439 | C | 5.0 | 0.448 | D | 10 | 0.423 | E | 20 | 0.496 |
| | F | 50 | 0.465 | G | 100 | 0.461 | H | 150 | 0.365 | I | 200 | 0.444 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| 1,1,1,2-Tetrachloroethane | MS | AverageRF | % RSD | 10.3 | | ≤ 15 | 1.21 | | 0.01 |
| 1,1,1-Trichloroethane (TCA) | MS | AverageRF | % RSD | 12.3 | | ≤ 15 | 0.786 | | 0.01 |
| † 1,1,2,2-Tetrachloroethane | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 1.01 | | 0.3 |
| 1,1,2-Trichloroethane | MS | AverageRF | % RSD | 6.2 | | ≤ 15 | 0.675 | | 0.01 |
| † 1,1-Dichloroethane | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 0.745 | | 0.1 |
| ‡ 1,1-Dichloroethene | MS | AverageRF | % RSD | 12.4 | | ≤ 15 | 0.629 | | 0.01 |
| 1,2,3-Trichlorobenzene | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 1.69 | | 0.01 |
| 1,2,4-Trichlorobenzene | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 1.92 | | 0.01 |
| 1,2-Dibromo-3-chloropropane (DBCP) | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.232 | | 0.01 |
| 1,2-Dibromoethane (EDB) | MS | AverageRF | % RSD | 8.9 | | ≤ 15 | 0.878 | | 0.01 |
| 1,2-Dichlorobenzene | MS | AverageRF | % RSD | 7.7 | | ≤ 15 | 2.42 | | 0.01 |
| 1,2-Dichloroethane (EDC) | MS | AverageRF | % RSD | 7.1 | | ≤ 15 | 0.536 | | 0.01 |
| 1,2-Dichloroethane-d4 | SURR | AverageRF | % RSD | 4.2 | | ≤ 15 | 0.251 | | |
| ‡ 1,2-Dichloropropane | MS | AverageRF | % RSD | 10.1 | | ≤ 15 | 0.396 | | 0.01 |
| 1,3-Dichlorobenzene | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 2.67 | | 0.01 |
| 1,4-Dichlorobenzene | MS | AverageRF | % RSD | 5.3 | | ≤ 15 | 2.65 | | 0.01 |
| 2-Butanone (MEK) | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 0.126 | | 0.01 |
| 2-Hexanone | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.514 | | 0.01 |
| 4-Bromofluorobenzene | SURR | AverageRF | % RSD | 7.6 | | ≤ 15 | 0.918 | | |
| 4-Methyl-2-pentanone (MIBK) | MS | AverageRF | % RSD | 6.3 | | ≤ 15 | 0.729 | | 0.01 |
| Acetone | MS | Linear | R2 | 0.994 | | ≥ 0.99 | 0.0878 | | 0.01 |
| Benzene | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 1.74 | | 0.01 |
| Bromochloromethane | MS | AverageRF | % RSD | 7.0 | | ≤ 15 | 0.265 | | 0.01 |
| Bromodichloromethane | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.592 | | 0.01 |
| † Bromoform | MS | AverageRF | % RSD | 12.9 | | ≤ 15 | 0.693 | | 0.1 |
| Bromomethane | MS | AverageRF | % RSD | 13.5 | | ≤ 15 | 0.267 | | 0.01 |
| Carbon Disulfide | MS | AverageRF | % RSD | 8.9 | | ≤ 15 | 1.03 | | 0.01 |
| Carbon Tetrachloride | MS | Linear | R2 | 0.993 | | ≥ 0.99 | 0.667 | | 0.01 |
| † Chlorobenzene | MS | AverageRF | % RSD | 8.6 | | ≤ 15 | 3.32 | | 0.3 |
| Chloroethane | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 0.302 | | 0.01 |
| ‡ Chloroform | MS | AverageRF | % RSD | 5.5 | | ≤ 15 | 0.828 | | 0.01 |
| † Chloromethane | MS | AverageRF | % RSD | 10.7 | | ≤ 15 | 0.551 | | 0.1 |
| cis-1,2-Dichloroethene | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 0.573 | | 0.01 |
| cis-1,3-Dichloropropene | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 1.71 | | 0.01 |
| Cyclohexane | MS | AverageRF | % RSD | 14.9 | | ≤ 15 | 0.684 | | 0.01 |
| Dibromochloromethane | MS | AverageRF | % RSD | 10.2 | | ≤ 15 | 1.09 | | 0.01 |
| Dibromofluoromethane | SURR | AverageRF | % RSD | 2.3 | | ≤ 15 | 0.241 | | |
| Dichlorodifluoromethane | MS | AverageRF | % RSD | 11.4 | | ≤ 15 | 0.554 | | 0.01 |
| ‡ Ethylbenzene | MS | AverageRF | % RSD | 11.2 | | ≤ 15 | 5.75 | | 0.01 |
| Isopropylbenzene | MS | AverageRF | % RSD | 13.5 | | ≤ 15 | 4.91 | | 0.01 |
| m,p-Xylenes | MS | AverageRF | % RSD | 10.7 | | ≤ 15 | 4.53 | | 0.01 |
| Methyl Acetate | MS | AverageRF | % RSD | 5.1 | | ≤ 15 | 0.510 | | 0.01 |
| Methyl tert-Butyl Ether | MS | AverageRF | % RSD | 4.6 | | ≤ 15 | 1.08 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation: Fit Type | Eval. | Eval. Result | Q | Control Criteria | RRF Evaluation: Average RRF | Q | Minimum RRF |
|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | MS | Linear | R2 | 0.998 | | ≥ 0.99 | 0.533 | | 0.01 |
| o-Xylene | MS | AverageRF | % RSD | 8.7 | | ≤ 15 | 4.72 | | 0.01 |
| Styrene | MS | AverageRF | % RSD | 13.9 | | ≤ 15 | 3.52 | | 0.01 |
| Tetrachloroethene (PCE) | MS | AverageRF | % RSD | 12.1 | | ≤ 15 | 1.13 | | 0.01 |
| ‡ Toluene | MS | AverageRF | % RSD | 8.6 | | ≤ 15 | 5.02 | | 0.01 |
| Toluene-d8 | SURR | AverageRF | % RSD | 1.2 | | ≤ 15 | 2.48 | | |
| trans-1,2-Dichloroethene | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.609 | | 0.01 |
| trans-1,3-Dichloropropene | MS | AverageRF | % RSD | 9.7 | | ≤ 15 | 1.58 | | 0.01 |
| Trichloroethene (TCE) | MS | AverageRF | % RSD | 11.4 | | ≤ 15 | 0.516 | | 0.01 |
| Trichlorofluoromethane | MS | AverageRF | % RSD | 10.8 | | ≤ 15 | 0.810 | | 0.01 |
| Trichlorotrifluoroethane | MS | AverageRF | % RSD | 13.9 | | ≤ 15 | 0.405 | | 0.01 |
| ‡ Vinyl Chloride | MS | AverageRF | % RSD | 10.0 | | ≤ 15 | 0.434 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012
**Date Analyzed:** 02/27/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2756
**Units:** ug/L

**File ID:** J:\MS52\DATA\MS52-120227\0227-16.D

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 21 | 1.21 | 1.25 | 3 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 21 | 0.786 | 0.827 | 5 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 1.01 | 1.01 | 0 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 21 | 0.675 | 0.713 | 6 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 22 | 0.745 | 0.819 | 10 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.629 | 0.681 | 8 | NA | ± 30 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 20 | 1.69 | 1.66 | -2 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 19 | 1.92 | 1.85 | -4 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 18 | 0.232 | 0.212 | -9 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 21 | 0.878 | 0.906 | 3 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 20 | 2.42 | 2.47 | 2 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.536 | 0.540 | 1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.396 | 0.425 | 7 | NA | ± 30 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 2.67 | 2.72 | 2 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 21 | 2.65 | 2.73 | 3 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 97 | 0.126 | 0.122 | -3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.514 | 0.515 | 0 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 100 | 0.729 | 0.730 | 0 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.0878 | 0.0775 | NA | -7 | ± 30 % | Linear |
| Benzene | 20 | 21 | 1.74 | 1.85 | 6 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 22 | 0.265 | 0.292 | 10 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.592 | 0.612 | 3 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.693 | 0.665 | -4 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.267 | 0.258 | -3 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 1.03 | 1.12 | 8 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 19 | 0.667 | 0.697 | NA | -3 | ± 30 % | Linear |
| Chlorobenzene | 20 | 21 | 3.32 | 3.51 | 6 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 21 | 0.302 | 0.321 | 7 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.828 | 0.846 | 2 | NA | ± 30 % | AverageRF |
| Chloromethane | 20 | 21 | 0.551 | 0.569 | 3 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.573 | 0.605 | 6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 21 | 1.71 | 1.79 | 5 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 22 | 0.684 | 0.743 | 9 | NA | ± 30 % | AverageRF |
| Dibromochloromethane | 20 | 20 | 1.09 | 1.10 | 1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.554 | 0.589 | 6 | NA | ± 30 % | AverageRF |
| Ethylbenzene | 20 | 21 | 5.75 | 6.10 | 6 | NA | ± 30 % | AverageRF |
| Isopropylbenzene | 20 | 21 | 4.91 | 5.23 | 7 | NA | ± 30 % | AverageRF |
| m,p-Xylenes | 40 | 43 | 4.53 | 4.90 | 8 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.510 | 0.512 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 1.08 | 1.10 | 2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 26 | 0.533 | 0.618 | NA | 29 | ± 30 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012
**Date Analyzed:** 02/27/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2756
**Units:** ug/L

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| o-Xylene | 20 | 21 | 4.72 | 4.99 | 6 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 22 | 3.52 | 3.83 | 9 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 21 | 1.13 | 1.21 | 7 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 21 | 5.02 | 5.34 | 6 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 21 | 0.609 | 0.653 | 7 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 1.58 | 1.57 | 0 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 22 | 0.516 | 0.579 | 12 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 21 | 0.810 | 0.857 | 6 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 21 | 0.405 | 0.435 | 7 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 23 | 0.434 | 0.493 | 13 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Level ID | File ID |
|---|---|
| A | J:\MS53\DATA\MS53-120307\0307-03.D |
| B | J:\MS53\DATA\MS53-120307\0307-04.D |
| C | J:\MS53\DATA\MS53-120307\0307-05.D |
| D | J:\MS53\DATA\MS53-120307\0307-06.D |
| E | J:\MS53\DATA\MS53-120307\0307-08.D |
| F | J:\MS53\DATA\MS53-120307\0307-09.D |
| G | J:\MS53\DATA\MS53-120307\0307-10.D |
| H | J:\MS53\DATA\MS53-120307\0307-11.D |
| I | J:\MS53\DATA\MS53-120307\0307-15.D |

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | A | 1.0 | 0.493 | B | 2.0 | 0.424 | C | 5.0 | 0.487 | D | 10 | 0.500 | E | 50 | 0.524 |
| | F | 100 | 0.512 | G | 150 | 0.473 | H | 200 | 0.463 | I | 20 | 0.523 | | | |
| 1,1,1-Trichloroethane (TCA) | A | 1.0 | 0.186 | B | 2.0 | 0.173 | C | 5.0 | 0.216 | D | 10 | 0.207 | E | 50 | 0.253 |
| | F | 100 | 0.246 | G | 150 | 0.241 | H | 200 | 0.241 | I | 20 | 0.227 | | | |
| 1,1,2,2-Tetrachloroethane | A | 1.0 | 0.721 | B | 2.0 | 0.736 | C | 5.0 | 0.779 | D | 10 | 0.812 | E | 50 | 0.777 |
| | F | 100 | 0.734 | G | 150 | 0.659 | H | 200 | 0.569 | I | 20 | 0.763 | | | |
| 1,1,2-Trichloroethane | A | 1.0 | 0.374 | B | 2.0 | 0.341 | C | 5.0 | 0.369 | D | 10 | 0.374 | E | 50 | 0.363 |
| | F | 100 | 0.380 | G | 150 | 0.348 | H | 200 | 0.339 | I | 20 | 0.381 | | | |
| 1,1-Dichloroethane | A | 1.0 | 0.341 | B | 2.0 | 0.323 | C | 5.0 | 0.390 | D | 10 | 0.382 | E | 50 | 0.427 |
| | F | 100 | 0.421 | G | 150 | 0.422 | H | 200 | 0.411 | I | 20 | 0.406 | | | |
| 1,1-Dichloroethene | A | 1.0 | 0.218 | B | 2.0 | 0.195 | C | 5.0 | 0.247 | D | 10 | 0.227 | E | 50 | 0.266 |
| | F | 100 | 0.240 | G | 150 | 0.219 | H | 200 | 0.206 | I | 20 | 0.257 | | | |
| 1,2,3-Trichlorobenzene | | | | | | | | | | D | 10 | 0.342 | E | 50 | 0.343 |
| | F | 100 | 0.373 | G | 150 | 0.354 | H | 200 | 0.354 | I | 20 | 0.337 | | | |
| 1,2,4-Trichlorobenzene | | | | | | | | | | D | 10 | 0.485 | E | 50 | 0.533 |
| | F | 100 | 0.564 | G | 150 | 0.552 | H | 200 | 0.552 | I | 20 | 0.505 | | | |
| 1,2-Dibromo-3-chloropropane (DBCP | | | | | | | C | 5.0 | 0.0716 | D | 10 | 0.0723 | E | 50 | 0.0750 |
| | F | 100 | 0.0823 | G | 150 | 0.0817 | H | 200 | 0.0823 | I | 20 | 0.0665 | | | |
| 1,2-Dibromoethane (EDB) | A | 1.0 | 0.375 | B | 2.0 | 0.367 | C | 5.0 | 0.413 | D | 10 | 0.423 | E | 50 | 0.415 |
| | F | 100 | 0.425 | G | 150 | 0.406 | H | 200 | 0.382 | I | 20 | 0.421 | | | |
| 1,2-Dichlorobenzene | A | 1.0 | 1.10 | B | 2.0 | 0.997 | C | 5.0 | 1.15 | D | 10 | 1.09 | E | 50 | 1.12 |
| | F | 100 | 1.12 | G | 150 | 1.03 | H | 200 | 1.01 | I | 20 | 1.16 | | | |
| 1,2-Dichloroethane (EDC) | A | 1.0 | 0.136 | B | 2.0 | 0.117 | C | 5.0 | 0.138 | D | 10 | 0.137 | E | 50 | 0.147 |
| | F | 100 | 0.145 | G | 150 | 0.145 | H | 200 | 0.143 | I | 20 | 0.141 | | | |
| 1,2-Dichloroethane-d4 | A | 50 | 0.147 | B | 50 | 0.149 | C | 50 | 0.145 | D | 50 | 0.148 | E | 50 | 0.146 |
| | F | 50 | 0.144 | G | 50 | 0.146 | H | 50 | 0.141 | I | 50 | 0.141 | | | |
| 1,2-Dichloropropane | A | 1.0 | 0.207 | B | 2.0 | 0.201 | C | 5.0 | 0.223 | D | 10 | 0.224 | E | 50 | 0.245 |
| | F | 100 | 0.240 | G | 150 | 0.233 | H | 200 | 0.230 | I | 20 | 0.234 | | | |
| 1,3-Dichlorobenzene | A | 1.0 | 1.27 | B | 2.0 | 1.14 | C | 5.0 | 1.33 | D | 10 | 1.26 | E | 50 | 1.26 |
| | F | 100 | 1.16 | G | 150 | 1.06 | H | 200 | 0.987 | I | 20 | 1.31 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | A | 1.0 | 1.21 | B | 2.0 | 1.11 | C | 5.0 | 1.28 | D | 10 | 1.25 | E | 50 | 1.31 |
| | F | 100 | 1.24 | G | 150 | 1.18 | H | 200 | 1.09 | I | 20 | 1.36 | | | |
| 2-Butanone (MEK) | A | 5.0 | 0.00960 | B | 10 | 0.0116 | C | 25 | 0.0117 | D | 50 | 0.0121 | E | 250 | 0.0134 |
| | F | 500 | 0.0126 | G | 750 | 0.0128 | H | 1000 | 0.0131 | I | 100 | 0.0122 | | | |
| 2-Hexanone | | | | B | 10 | 0.293 | C | 25 | 0.288 | D | 50 | 0.283 | E | 250 | 0.263 |
| | F | 500 | 0.273 | G | 750 | 0.250 | H | 1000 | 0.238 | I | 100 | 0.278 | | | |
| 4-Bromofluorobenzene | A | 50 | 1.02 | B | 50 | 0.970 | C | 50 | 0.993 | D | 50 | 0.952 | E | 50 | 0.907 |
| | F | 50 | 0.857 | G | 50 | 0.815 | H | 50 | 0.793 | I | 50 | 0.954 | | | |
| 4-Methyl-2-pentanone (MIBK) | A | 5.0 | 0.422 | B | 10 | 0.421 | C | 25 | 0.431 | D | 50 | 0.435 | E | 250 | 0.405 |
| | F | 500 | 0.401 | G | 750 | 0.380 | H | 1000 | 0.364 | I | 100 | 0.428 | | | |
| Acetone | A | 5.0 | 0.0341 | B | 10 | 0.0312 | C | 25 | 0.0313 | D | 50 | 0.0309 | E | 250 | 0.0284 |
| | F | 500 | 0.0286 | G | 750 | 0.0280 | H | 1000 | 0.0265 | I | 100 | 0.0274 | | | |
| Benzene | A | 1.0 | 0.820 | B | 2.0 | 0.794 | C | 5.0 | 0.904 | D | 10 | 0.885 | E | 50 | 0.990 |
| | F | 100 | 0.952 | G | 150 | 0.913 | H | 200 | 0.875 | I | 20 | 0.955 | | | |
| Bromochloromethane | A | 1.0 | 0.114 | B | 2.0 | 0.111 | C | 5.0 | 0.133 | D | 10 | 0.136 | E | 50 | 0.146 |
| | F | 100 | 0.145 | G | 150 | 0.148 | H | 200 | 0.145 | I | 20 | 0.142 | | | |
| Bromodichloromethane | A | 1.0 | 0.207 | B | 2.0 | 0.202 | C | 5.0 | 0.227 | D | 10 | 0.231 | E | 50 | 0.252 |
| | F | 100 | 0.246 | G | 150 | 0.244 | H | 200 | 0.233 | I | 20 | 0.241 | | | |
| Bromoform | A | 1.0 | 0.172 | B | 2.0 | 0.166 | C | 5.0 | 0.209 | D | 10 | 0.224 | E | 50 | 0.249 |
| | F | 100 | 0.246 | G | 150 | 0.236 | H | 200 | 0.224 | I | 20 | 0.232 | | | |
| Bromomethane | A | 1.0 | 0.172 | B | 2.0 | 0.160 | C | 5.0 | 0.182 | D | 10 | 0.184 | E | 50 | 0.217 |
| | F | 100 | 0.173 | G | 150 | 0.157 | H | 200 | 0.147 | I | 20 | 0.190 | | | |
| Carbon Disulfide | A | 5.0 | 0.669 | B | 10 | 0.622 | C | 25 | 0.755 | D | 50 | 0.708 | E | 250 | 0.796 |
| | F | 500 | 0.685 | G | 750 | 0.613 | H | 1000 | 0.560 | I | 100 | 0.787 | | | |
| Carbon Tetrachloride | A | 1.0 | 0.132 | B | 2.0 | 0.133 | C | 5.0 | 0.168 | D | 10 | 0.158 | E | 50 | 0.198 |
| | F | 100 | 0.195 | G | 150 | 0.190 | H | 200 | 0.193 | I | 20 | 0.178 | | | |
| Chlorobenzene | A | 1.0 | 1.44 | B | 2.0 | 1.39 | C | 5.0 | 1.57 | D | 10 | 1.54 | E | 50 | 1.56 |
| | F | 100 | 1.52 | G | 150 | 1.37 | H | 200 | 1.29 | I | 20 | 1.64 | | | |
| Chloroethane | A | 1.0 | 0.154 | B | 2.0 | 0.143 | C | 5.0 | 0.161 | D | 10 | 0.167 | E | 50 | 0.188 |
| | F | 100 | 0.162 | G | 150 | 0.150 | H | 200 | 0.143 | I | 20 | 0.178 | | | |
| Chloroform | A | 1.0 | 0.323 | B | 2.0 | 0.293 | C | 5.0 | 0.343 | D | 10 | 0.328 | E | 50 | 0.370 |
| | F | 100 | 0.368 | G | 150 | 0.370 | H | 200 | 0.357 | I | 20 | 0.350 | | | |
| Chloromethane | A | 1.0 | 0.306 | B | 2.0 | 0.286 | C | 5.0 | 0.324 | D | 10 | 0.314 | E | 50 | 0.389 |
| | F | 100 | 0.331 | G | 150 | 0.310 | H | 200 | 0.296 | I | 20 | 0.350 | | | |
| cis-1,2-Dichloroethene | A | 1.0 | 0.246 | B | 2.0 | 0.242 | C | 5.0 | 0.291 | D | 10 | 0.285 | E | 50 | 0.315 |
| | F | 100 | 0.310 | G | 150 | 0.308 | H | 200 | 0.301 | I | 20 | 0.307 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | A | 1.0 | 0.867 | B | 2.0 | 0.838 | C | 5.0 | 0.964 | D | 10 | 0.976 | E | 50 | 0.970 |
| | F | 100 | 1.01 | G | 150 | 0.946 | H | 200 | 0.861 | I | 20 | 0.984 | | | |
| Cyclohexane | A | 1.0 | 0.302 | B | 2.0 | 0.267 | C | 5.0 | 0.366 | D | 10 | 0.311 | E | 50 | 0.419 |
| | F | 100 | 0.412 | G | 150 | 0.404 | H | 200 | 0.413 | I | 20 | 0.389 | | | |
| Dibromochloromethane | A | 1.0 | 0.442 | B | 2.0 | 0.394 | C | 5.0 | 0.445 | D | 10 | 0.461 | E | 50 | 0.462 |
| | F | 100 | 0.473 | G | 150 | 0.437 | H | 200 | 0.412 | I | 20 | 0.476 | | | |
| Dibromofluoromethane | A | 50 | 0.255 | B | 50 | 0.258 | C | 50 | 0.256 | D | 50 | 0.256 | E | 50 | 0.258 |
| | F | 50 | 0.260 | G | 50 | 0.261 | H | 50 | 0.255 | I | 50 | 0.256 | | | |
| Dichlorodifluoromethane | A | 1.0 | 0.110 | B | 2.0 | 0.138 | C | 5.0 | 0.165 | D | 10 | 0.155 | E | 50 | 0.201 |
| | F | 100 | 0.180 | G | 150 | 0.172 | H | 200 | 0.171 | I | 20 | 0.181 | | | |
| Ethylbenzene | A | 1.0 | 2.47 | B | 2.0 | 2.16 | C | 5.0 | 2.70 | D | 10 | 2.58 | E | 50 | 2.63 |
| | F | 100 | 2.56 | G | 150 | 2.23 | H | 200 | 2.03 | I | 20 | 2.78 | | | |
| Isopropylbenzene | A | 1.0 | 2.13 | B | 2.0 | 1.81 | C | 5.0 | 2.30 | D | 10 | 2.11 | E | 50 | 2.35 |
| | F | 100 | 2.21 | G | 150 | 2.04 | H | 200 | 1.94 | I | 20 | 2.39 | | | |
| m,p-Xylenes | A | 2.0 | 1.84 | B | 4.0 | 1.65 | C | 10 | 1.94 | D | 20 | 1.91 | E | 100 | 1.86 |
| | F | 200 | 1.67 | G | 300 | 1.42 | H | 400 | 1.26 | I | 40 | 2.04 | | | |
| Methyl Acetate | A | 1.0 | 0.314 | B | 2.0 | 0.285 | C | 5.0 | 0.285 | D | 10 | 0.294 | E | 50 | 0.296 |
| | F | 100 | 0.291 | G | 150 | 0.285 | H | 200 | 0.270 | I | 20 | 0.287 | | | |
| Methyl tert-Butyl Ether | A | 1.0 | 0.310 | B | 2.0 | 0.317 | C | 5.0 | 0.363 | D | 10 | 0.361 | E | 50 | 0.381 |
| | F | 100 | 0.376 | G | 150 | 0.374 | H | 200 | 0.377 | I | 20 | 0.359 | | | |
| Methylene Chloride | A | 1.0 | 0.228 | B | 2.0 | 0.210 | C | 5.0 | 0.255 | D | 10 | 0.243 | E | 50 | 0.278 |
| | F | 100 | 0.266 | G | 150 | 0.259 | H | 200 | 0.256 | I | 20 | 0.264 | | | |
| o-Xylene | A | 1.0 | 1.82 | B | 2.0 | 1.66 | C | 5.0 | 2.00 | D | 10 | 1.97 | E | 50 | 1.96 |
| | F | 100 | 1.85 | G | 150 | 1.63 | H | 200 | 1.43 | I | 20 | 2.02 | | | |
| Styrene | A | 1.0 | 1.51 | B | 2.0 | 1.37 | C | 5.0 | 1.63 | D | 10 | 1.63 | E | 50 | 1.61 |
| | F | 100 | 1.58 | G | 150 | 1.37 | H | 200 | 1.28 | I | 20 | 1.68 | | | |
| Tetrachloroethene (PCE) | A | 1.0 | 0.392 | B | 2.0 | 0.356 | C | 5.0 | 0.466 | D | 10 | 0.436 | E | 50 | 0.492 |
| | F | 100 | 0.500 | G | 150 | 0.461 | H | 200 | 0.441 | I | 20 | 0.511 | | | |
| Toluene | A | 1.0 | 2.37 | B | 2.0 | 2.18 | C | 5.0 | 2.58 | D | 10 | 2.43 | E | 50 | 2.54 |
| | F | 100 | 2.47 | G | 150 | 2.16 | H | 200 | 1.99 | I | 20 | 2.73 | | | |
| Toluene-d8 | A | 50 | 2.41 | B | 50 | 2.43 | C | 50 | 2.45 | D | 50 | 2.48 | E | 50 | 2.35 |
| | F | 50 | 2.44 | G | 50 | 2.41 | H | 50 | 2.34 | I | 50 | 2.48 | | | |
| trans-1,2-Dichloroethene | A | 1.0 | 0.258 | B | 2.0 | 0.248 | C | 5.0 | 0.305 | D | 10 | 0.285 | E | 50 | 0.345 |
| | F | 100 | 0.338 | G | 150 | 0.333 | H | 200 | 0.326 | I | 20 | 0.324 | | | |
| trans-1,3-Dichloropropene | A | 1.0 | 0.620 | B | 2.0 | 0.584 | C | 5.0 | 0.677 | D | 10 | 0.694 | E | 50 | 0.674 |
| | F | 100 | 0.714 | G | 150 | 0.664 | H | 200 | 0.623 | I | 20 | 0.697 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene (TCE) | A | 1.0 | 0.181 | B | 2.0 | 0.172 | C | 5.0 | 0.213 | D | 10 | 0.204 | E | 50 | 0.233 |
| | F | 100 | 0.228 | G | 150 | 0.221 | H | 200 | 0.209 | I | 20 | 0.224 | | | |
| Trichlorofluoromethane | | | | B | 2.0 | 0.137 | C | 5.0 | 0.190 | D | 10 | 0.176 | E | 50 | 0.225 |
| | F | 100 | 0.216 | G | 150 | 0.209 | H | 200 | 0.206 | I | 20 | 0.205 | | | |
| Trichlorotrifluoroethane | A | 1.0 | 0.154 | B | 2.0 | 0.138 | C | 5.0 | 0.181 | D | 10 | 0.175 | E | 50 | 0.223 |
| | F | 100 | 0.197 | G | 150 | 0.186 | H | 200 | 0.187 | I | 20 | 0.202 | | | |
| Vinyl Chloride | A | 1.0 | 0.208 | B | 2.0 | 0.198 | C | 5.0 | 0.254 | D | 10 | 0.242 | E | 50 | 0.277 |
| | | | | | | | | | | I | 20 | 0.272 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| 1,1,1,2-Tetrachloroethane | MS | AverageRF | % RSD | 6.6 | | ≤ 15 | 0.489 | | 0.01 |
| 1,1,1-Trichloroethane (TCA) | MS | AverageRF | % RSD | 12.6 | | ≤ 15 | 0.221 | | 0.01 |
| † 1,1,2,2-Tetrachloroethane | MS | AverageRF | % RSD | 10.1 | | ≤ 15 | 0.728 | | 0.3 |
| 1,1,2-Trichloroethane | MS | AverageRF | % RSD | 4.6 | | ≤ 15 | 0.363 | | 0.01 |
| † 1,1-Dichloroethane | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 0.391 | | 0.1 |
| ‡ 1,1-Dichloroethene | MS | AverageRF | % RSD | 10.3 | | ≤ 15 | 0.230 | | 0.01 |
| 1,2,3-Trichlorobenzene | MS | AverageRF | % RSD | 3.7 | | ≤ 15 | 0.351 | | 0.01 |
| 1,2,4-Trichlorobenzene | MS | AverageRF | % RSD | 5.8 | | ≤ 15 | 0.532 | | 0.01 |
| 1,2-Dibromo-3-chloropropane (DBCP) | MS | AverageRF | % RSD | 8.3 | | ≤ 15 | 0.0760 | | 0.01 |
| 1,2-Dibromoethane (EDB) | MS | AverageRF | % RSD | 5.6 | | ≤ 15 | 0.403 | | 0.01 |
| 1,2-Dichlorobenzene | MS | AverageRF | % RSD | 5.5 | | ≤ 15 | 1.09 | | 0.01 |
| 1,2-Dichloroethane (EDC) | MS | AverageRF | % RSD | 6.6 | | ≤ 15 | 0.139 | | 0.01 |
| 1,2-Dichloroethane-d4 | SURR | AverageRF | % RSD | 1.8 | | ≤ 15 | 0.145 | | |
| ‡ 1,2-Dichloropropane | MS | AverageRF | % RSD | 6.4 | | ≤ 15 | 0.227 | | 0.01 |
| 1,3-Dichlorobenzene | MS | AverageRF | % RSD | 9.8 | | ≤ 15 | 1.20 | | 0.01 |
| 1,4-Dichlorobenzene | MS | AverageRF | % RSD | 7.2 | | ≤ 15 | 1.22 | | 0.01 |
| 2-Butanone (MEK) | MS | AverageRF | % RSD | 9.2 | | ≤ 15 | 0.0121 | | 0.01 |
| 2-Hexanone | MS | AverageRF | % RSD | 7.0 | | ≤ 15 | 0.271 | | 0.01 |
| 4-Bromofluorobenzene | SURR | AverageRF | % RSD | 8.7 | | ≤ 15 | 0.917 | | |
| 4-Methyl-2-pentanone (MIBK) | MS | AverageRF | % RSD | 6.0 | | ≤ 15 | 0.410 | | 0.01 |
| Acetone | MS | AverageRF | % RSD | 8.2 | | ≤ 15 | 0.0296 | | 0.01 |
| Benzene | MS | AverageRF | % RSD | 7.1 | | ≤ 15 | 0.899 | | 0.01 |
| Bromochloromethane | MS | AverageRF | % RSD | 10.2 | | ≤ 15 | 0.135 | | 0.01 |
| Bromodichloromethane | MS | AverageRF | % RSD | 7.5 | | ≤ 15 | 0.231 | | 0.01 |
| † Bromoform | MS | AverageRF | % RSD | 13.8 | | ≤ 15 | 0.218 | | 0.1 |
| Bromomethane | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.176 | | 0.01 |
| Carbon Disulfide | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.689 | | 0.01 |
| Carbon Tetrachloride | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.172 | | 0.01 |
| † Chlorobenzene | MS | AverageRF | % RSD | 7.7 | | ≤ 15 | 1.48 | | 0.3 |
| Chloroethane | MS | AverageRF | % RSD | 9.6 | | ≤ 15 | 0.161 | | 0.01 |
| ‡ Chloroform | MS | AverageRF | % RSD | 7.5 | | ≤ 15 | 0.345 | | 0.01 |
| † Chloromethane | MS | AverageRF | % RSD | 9.7 | | ≤ 15 | 0.323 | | 0.1 |
| cis-1,2-Dichloroethene | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 0.290 | | 0.01 |
| cis-1,3-Dichloropropene | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 0.935 | | 0.01 |
| Cyclohexane | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.365 | | 0.01 |
| Dibromochloromethane | MS | AverageRF | % RSD | 6.2 | | ≤ 15 | 0.445 | | 0.01 |
| Dibromofluoromethane | SURR | AverageRF | % RSD | 0.8 | | ≤ 15 | 0.257 | | |
| Dichlorodifluoromethane | MS | Linear | R2 | 0.998 | | ≥ 0.99 | 0.164 | | 0.01 |
| ‡ Ethylbenzene | MS | AverageRF | % RSD | 10.6 | | ≤ 15 | 2.46 | | 0.01 |
| Isopropylbenzene | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 2.14 | | 0.01 |
| m,p-Xylenes | MS | AverageRF | % RSD | 14.9 | | ≤ 15 | 1.73 | | 0.01 |
| Methyl Acetate | MS | AverageRF | % RSD | 4.1 | | ≤ 15 | 0.290 | | 0.01 |
| Methyl tert-Butyl Ether | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 0.358 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| Methylene Chloride | MS | AverageRF | % RSD | 8.3 | | ≤ 15 | 0.251 | | 0.01 |
| o-Xylene | MS | AverageRF | % RSD | 11.2 | | ≤ 15 | 1.81 | | 0.01 |
| Styrene | MS | AverageRF | % RSD | 9.4 | | ≤ 15 | 1.52 | | 0.01 |
| Tetrachloroethene (PCE) | MS | AverageRF | % RSD | 11.3 | | ≤ 15 | 0.451 | | 0.01 |
| ‡ Toluene | MS | AverageRF | % RSD | 9.9 | | ≤ 15 | 2.38 | | 0.01 |
| Toluene-d8 | SURR | AverageRF | % RSD | 2.1 | | ≤ 15 | 2.42 | | |
| trans-1,2-Dichloroethene | MS | AverageRF | % RSD | 11.5 | | ≤ 15 | 0.307 | | 0.01 |
| trans-1,3-Dichloropropene | MS | AverageRF | % RSD | 6.5 | | ≤ 15 | 0.661 | | 0.01 |
| Trichloroethene (TCE) | MS | AverageRF | % RSD | 10.0 | | ≤ 15 | 0.209 | | 0.01 |
| Trichlorofluoromethane | MS | AverageRF | % RSD | 14.3 | | ≤ 15 | 0.196 | | 0.01 |
| Trichlorotrifluoroethane | MS | AverageRF | % RSD | 13.8 | | ≤ 15 | 0.183 | | 0.01 |
| ‡ Vinyl Chloride | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.242 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012
**Date Analyzed:** 03/07/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2752
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120307\0307-16.D

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 21 | 0.489 | 0.523 | 7 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 21 | 0.221 | 0.234 | 6 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 22 | 0.728 | 0.785 | 8 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 21 | 0.363 | 0.386 | 6 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 21 | 0.391 | 0.419 | 7 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 23 | 0.230 | 0.261 | 13 | NA | ± 30 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 20 | 0.351 | 0.349 | 0 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 20 | 0.532 | 0.523 | -2 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 19 | 0.0760 | 0.0717 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 21 | 0.403 | 0.427 | 6 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 22 | 1.09 | 1.19 | 10 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 21 | 0.139 | 0.142 | 3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.227 | 0.240 | 6 | NA | ± 30 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 22 | 1.20 | 1.35 | 12 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 22 | 1.22 | 1.33 | 9 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 110 | 0.0121 | 0.0131 | 8 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.271 | 0.280 | 3 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 110 | 0.410 | 0.432 | 5 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.0296 | 0.0276 | -7 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 22 | 0.899 | 0.979 | 9 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 21 | 0.135 | 0.143 | 6 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.231 | 0.244 | 5 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 22 | 0.218 | 0.239 | 10 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 22 | 0.176 | 0.192 | 9 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.689 | 0.795 | 15 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 19 | 0.172 | 0.181 | NA | -3 | ± 30 % | Linear |
| Chlorobenzene | 20 | 22 | 1.48 | 1.62 | 10 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 22 | 0.161 | 0.175 | 9 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 21 | 0.345 | 0.364 | 6 | NA | ± 30 % | AverageRF |
| Chloromethane | 20 | 22 | 0.323 | 0.351 | 9 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.290 | 0.306 | 6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 21 | 0.935 | 0.996 | 6 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.365 | 0.398 | NA | 0 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 21 | 0.445 | 0.478 | 7 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 18 | 0.164 | 0.164 | NA | -11 | ± 30 % | Linear |
| Ethylbenzene | 20 | 23 | 2.46 | 2.81 | 14 | NA | ± 30 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 2.14 | 2.41 | 13 | NA | ± 30 % | AverageRF |
| m,p-Xylenes | 40 | 47 | 1.73 | 2.03 | 17 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 21 | 0.290 | 0.301 | 4 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.358 | 0.363 | 2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 22 | 0.251 | 0.271 | 8 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012
**Date Analyzed:** 03/07/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2752
**Units:** ug/L

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| o-Xylene | 20 | 23 | 1.81 | 2.07 | 14 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 22 | 1.52 | 1.70 | 12 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 23 | 0.451 | 0.515 | 14 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 23 | 2.38 | 2.71 | 14 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 21 | 0.307 | 0.328 | 7 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 21 | 0.661 | 0.696 | 5 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 22 | 0.209 | 0.229 | 10 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 21 | 0.196 | 0.206 | 5 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 22 | 0.183 | 0.199 | 9 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.242 | 0.264 | NA | -2 | ± 30 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 02/27/2012
**ICAL ID:** CAL2756
**Analysis Lot:** JWG1200306
**Units:** ug/L

**File ID:** J:\MS52\DATA\MS52-120322\0322-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 18 | 0.01 | 1.21 | 1.10 | -9 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 18 | 0.01 | 0.786 | 0.715 | -9 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 1.01 | 0.998 | -1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.675 | 0.656 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 19 | 0.1 | 0.745 | 0.708 | -5 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 17 | 0.01 | 0.629 | 0.526 | -16 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 1.69 | 1.63 | -4 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 19 | 0.01 | 1.92 | 1.86 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 18 | 0.01 | 0.232 | 0.213 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.878 | 0.824 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 18 | 0.01 | 2.42 | 2.22 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 18 | 0.01 | 0.536 | 0.491 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 50 | | 0.251 | 0.251 | 0 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 19 | 0.01 | 0.396 | 0.378 | -4 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 19 | 0.01 | 2.67 | 2.49 | -7 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 18 | 0.01 | 2.65 | 2.44 | -8 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.126 | 0.129 | 3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.01 | 0.514 | 0.521 | 1 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 47 | | 0.918 | 0.861 | -6 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 100 | 0.01 | 0.729 | 0.733 | 1 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 98 | 0.01 | 0.0878 | 0.0782 | NA | -2 | ± 30 % | Linear |
| Benzene | 20 | 19 | 0.01 | 1.74 | 1.63 | -6 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 20 | 0.01 | 0.265 | 0.260 | -2 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 18 | 0.01 | 0.592 | 0.536 | -9 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 18 | 0.1 | 0.693 | 0.631 | -9 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.01 | 0.267 | 0.247 | -7 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.01 | 1.03 | 1.20 | 16 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 17 | 0.01 | 0.667 | 0.591 | NA | -17 | ± 30 % | Linear |
| Chlorobenzene | 20 | 19 | 0.3 | 3.32 | 3.19 | -4 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 19 | 0.01 | 0.302 | 0.288 | -4 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 18 | 0.01 | 0.828 | 0.729 | -12 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 17 | 0.1 | 0.551 | 0.480 | -13 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 19 | 0.01 | 0.573 | 0.541 | -6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 19 | 0.01 | 1.71 | 1.63 | -5 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.684 | 0.674 | -2 | NA | ± 30 % | AverageRF |
| Dibromochloromethane | 20 | 18 | 0.01 | 1.09 | 0.995 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 50 | | 0.241 | 0.238 | -1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 18 | 0.01 | 0.554 | 0.489 | -12 | NA | ± 30 % | AverageRF |
| Ethylbenzene | 20 | 19 | 0.01 | 5.75 | 5.57 | -3 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 21 | 0.01 | 4.91 | 5.09 | 4 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 02/27/2012
**ICAL ID:** CAL2756
**Analysis Lot:** JWG1200306
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 39 | 0.01 | 4.53 | 4.39 | -3 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.510 | 0.509 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 1.08 | 1.05 | -2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 17 | 0.01 | 0.533 | 0.395 | NA | -17 | ± 30 % | Linear |
| o-Xylene | 20 | 19 | 0.01 | 4.72 | 4.49 | -5 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 3.52 | 3.47 | -1 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 20 | 0.01 | 1.13 | 1.12 | -1 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 19 | 0.01 | 5.02 | 4.81 | -4 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 51 | | 2.48 | 2.51 | 1 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 18 | 0.01 | 0.609 | 0.556 | -9 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 18 | 0.01 | 1.58 | 1.46 | -8 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 19 | 0.01 | 0.516 | 0.490 | -5 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 18 | 0.01 | 0.810 | 0.722 | -11 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 17 | 0.01 | 0.405 | 0.353 | -13 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.01 | 0.434 | 0.432 | -1 | NA | ± 20 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200322
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120330\0330-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 19 | 0.01 | 0.489 | 0.459 | -6 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.208 | -6 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.719 | -1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.354 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 20 | 0.1 | 0.391 | 0.398 | 2 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.01 | 0.230 | 0.256 | 11 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 18 | 0.01 | 0.351 | 0.323 | -8 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.468 | -12 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 15 | 0.01 | 0.0760 | 0.0577 | -24 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.403 | 0.373 | -7 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 20 | 0.01 | 1.09 | 1.08 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.01 | 0.139 | 0.136 | -2 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 49 | | 0.145 | 0.144 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.238 | 5 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 0.01 | 1.20 | 1.22 | 2 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 21 | 0.01 | 1.22 | 1.26 | 3 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.0121 | 0.0127 | 5 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 94 | 0.01 | 0.271 | 0.254 | -6 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 54 | | 0.917 | 0.993 | 8 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.384 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.01 | 0.0296 | 0.0274 | -7 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 21 | 0.01 | 0.899 | 0.927 | 3 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.132 | -3 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 20 | 0.01 | 0.231 | 0.228 | -2 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 18 | 0.1 | 0.218 | 0.201 | -8 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 18 | 0.01 | 0.176 | 0.162 | -8 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 0.01 | 0.689 | 0.769 | 12 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 17 | 0.01 | 0.172 | 0.159 | NA | -15 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.45 | -2 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 20 | 0.01 | 0.161 | 0.160 | 0 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.01 | 0.345 | 0.338 | -2 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.378 | 17 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.290 | 0.296 | 2 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.934 | 0 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.387 | NA | -2 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 19 | 0.01 | 0.445 | 0.411 | -8 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 49 | | 0.257 | 0.254 | -1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.194 | NA | 6 | ± 30 % | Linear |
| Ethylbenzene | 20 | 20 | 0.01 | 2.46 | 2.49 | 1 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 0.01 | 2.14 | 2.50 | 17 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200322
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.76 | 2 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.290 | 0.290 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.357 | 0 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 20 | 0.01 | 0.251 | 0.252 | 0 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 20 | 0.01 | 1.81 | 1.80 | -1 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.50 | -1 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.428 | -5 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.33 | -2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.32 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.299 | -2 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 19 | 0.01 | 0.661 | 0.637 | -4 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.207 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.191 | -2 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 20 | 0.01 | 0.183 | 0.183 | 0 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 21 | 0.01 | 0.242 | 0.278 | NA | 3 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200326
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120402\0402-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 19 | 0.01 | 0.489 | 0.460 | -6 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.212 | -4 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.729 | 0 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.352 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 20 | 0.1 | 0.391 | 0.399 | 2 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 23 | 0.01 | 0.230 | 0.263 | 14 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 0.351 | 0.329 | -6 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.470 | -12 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 16 | 0.01 | 0.0760 | 0.0614 | -19 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 18 | 0.01 | 0.403 | 0.371 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 19 | 0.01 | 1.09 | 1.02 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 19 | 0.01 | 0.139 | 0.132 | -5 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 47 | | 0.145 | 0.137 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.237 | 5 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 0.01 | 1.20 | 1.21 | 1 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 20 | 0.01 | 1.22 | 1.21 | -1 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 97 | 0.01 | 0.0121 | 0.0118 | -3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 92 | 0.01 | 0.271 | 0.249 | -8 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 53 | | 0.917 | 0.967 | 5 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.386 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 88 | 0.01 | 0.0296 | 0.0261 | -12 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 21 | 0.01 | 0.899 | 0.965 | 7 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.129 | -5 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 20 | 0.01 | 0.231 | 0.234 | 1 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.1 | 0.218 | 0.211 | -3 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.01 | 0.176 | 0.165 | -6 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.01 | 0.689 | 0.804 | 17 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 18 | 0.01 | 0.172 | 0.170 | NA | -9 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.46 | -1 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 20 | 0.01 | 0.161 | 0.163 | 1 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.01 | 0.345 | 0.336 | -2 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.375 | 16 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.01 | 0.290 | 0.305 | 5 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.946 | 1 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.392 | NA | -1 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 18 | 0.01 | 0.445 | 0.407 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 50 | | 0.257 | 0.259 | 1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.191 | NA | 5 | ± 30 % | Linear |
| Ethylbenzene | 20 | 19 | 0.01 | 2.46 | 2.36 | -4 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 0.01 | 2.14 | 2.43 | 13 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200326
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.76 | 2 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.290 | 0.283 | -2 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.360 | 1 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 21 | 0.01 | 0.251 | 0.261 | 4 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 21 | 0.01 | 1.81 | 1.87 | 3 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.52 | 0 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.429 | -5 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.42 | 2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.32 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.309 | 1 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.661 | 0.653 | -1 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.208 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.194 | -1 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 20 | 0.01 | 0.183 | 0.186 | 2 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.01 | 0.242 | 0.276 | NA | 2 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200334
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120403\0403-03.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 18 | 0.01 | 0.489 | 0.451 | -8 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.210 | -5 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.734 | 1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.354 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 21 | 0.1 | 0.391 | 0.401 | 3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.01 | 0.230 | 0.251 | 9 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 0.351 | 0.329 | -6 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.481 | -10 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 16 | 0.01 | 0.0760 | 0.0607 | -20 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.403 | 0.375 | -7 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 19 | 0.01 | 1.09 | 1.05 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.01 | 0.139 | 0.137 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 48 | | 0.145 | 0.140 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.233 | 3 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 21 | 0.01 | 1.20 | 1.23 | 3 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 20 | 0.01 | 1.22 | 1.20 | -2 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.0121 | 0.0124 | 2 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 93 | 0.01 | 0.271 | 0.252 | -7 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 51 | | 0.917 | 0.942 | 3 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.385 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 92 | 0.01 | 0.0296 | 0.0273 | -8 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 20 | 0.01 | 0.899 | 0.915 | 2 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.128 | -5 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.01 | 0.231 | 0.238 | 3 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.1 | 0.218 | 0.202 | -7 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 18 | 0.01 | 0.176 | 0.157 | -11 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 0.01 | 0.689 | 0.769 | 12 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 18 | 0.01 | 0.172 | 0.166 | NA | -11 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.45 | -2 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 21 | 0.01 | 0.161 | 0.165 | 3 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 19 | 0.01 | 0.345 | 0.329 | -5 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.369 | 14 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.290 | 0.289 | 0 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.922 | -1 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.392 | NA | -1 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 18 | 0.01 | 0.445 | 0.406 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 48 | | 0.257 | 0.248 | -4 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.189 | NA | 4 | ± 30 % | Linear |
| Ethylbenzene | 20 | 20 | 0.01 | 2.46 | 2.51 | 2 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 22 | 0.01 | 2.14 | 2.38 | 11 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200334
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.78 | 3 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 19 | 0.01 | 0.290 | 0.272 | -6 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.358 | 0 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 20 | 0.01 | 0.251 | 0.246 | -2 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 20 | 0.01 | 1.81 | 1.82 | 0 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.51 | 0 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.420 | -7 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.44 | 2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.31 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.304 | -1 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.661 | 0.651 | -2 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.206 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.191 | -2 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 21 | 0.01 | 0.183 | 0.192 | 5 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 21 | 0.01 | 0.242 | 0.280 | NA | 3 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360

## Analysis Run Log
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260B

**Analysis Lot:** JWG1200306
**Instrument ID:** MS52

| File ID | Sample Name | Lab Code | Date Analysis Started | Start Time | Q | Date Analysis Finished | Finish Time |
|---|---|---|---|---|---|---|---|
| \0322-01.D | GC/MS Tuning - Bromofluorobenzene | JWG1200306-1 | 3/22/2012 | 09:17 | | 3/22/2012 | 09:32 |
| \0322-02.D | Continuing Calibration Verification | JWG1200306-2 | 3/22/2012 | 09:45 | | 3/22/2012 | 10:00 |
| \0322-03.D | Lab Control Sample | JWG1200305-1 | 3/22/2012 | 10:14 | | 3/22/2012 | 10:29 |
| \0322-05.D | Method Blank | JWG1200305-2 | 3/22/2012 | 11:28 | | 3/22/2012 | 11:43 |
| \0322-19.D | CRHE-188849-IDW-03212012 | J1201360-025 | 3/22/2012 | 18:20 | | 3/22/2012 | 18:35 |
| \0322-20.D | CRHE-188797-IDW-03212012 | J1201360-026 | 3/22/2012 | 18:48 | | 3/22/2012 | 19:03 |
| \0322-21.D | CRHE-188842-IDW-03212012 | J1201360-027 | 3/22/2012 | 19:17 | | 3/22/2012 | 19:32 |
| \0322-22.D | CRHE-188838-IDW-03212012 | J1201360-028 | 3/22/2012 | 19:45 | | 3/22/2012 | 20:00 |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Service Request:** J1201360

## Analysis Run Log
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200322
**Instrument ID:** MS53

| File ID | Sample Name | Lab Code | Date Analysis Started | Start Time | Q | Date Analysis Finished | Finish Time |
|---|---|---|---|---|---|---|---|
| \0330-01.D | GC/MS Tuning - Bromofluorobenzene | JWG1200322-1 | 3/30/2012 | 10:42 | | 3/30/2012 | 10:57 |
| \0330-02.D | Continuing Calibration Verification | JWG1200322-2 | 3/30/2012 | 11:12 | | 3/30/2012 | 11:27 |
| \0330-03.D | Lab Control Sample | JWG1200321-1 | 3/30/2012 | 11:42 | | 3/30/2012 | 11:57 |
| \0330-06.D | Method Blank | JWG1200321-2 | 3/30/2012 | 13:10 | | 3/30/2012 | 13:25 |
| \0330-07.D | CRHE-MW0032-045.0-03192012 | J1201360-001 | 3/30/2012 | 13:40 | | 3/30/2012 | 13:55 |
| \0330-08.D | CRHE-MW0030-010.0-03192012 | J1201360-002 | 3/30/2012 | 14:10 | | 3/30/2012 | 14:25 |
| \0330-09.D | CRHE-MW0023-065.0-03192012 | J1201360-003 | 3/30/2012 | 14:40 | | 3/30/2012 | 14:55 |
| \0330-10.D | CRHE-MW0031-045.0-03192012 | J1201360-004 | 3/30/2012 | 15:09 | | 3/30/2012 | 15:24 |
| \0330-11.D | CRHE-IW0020I-045.0-03192012 | J1201360-005 | 3/30/2012 | 15:39 | | 3/30/2012 | 15:54 |
| \0330-12.D | CRHE-MW0039-030.0-03192012 | J1201360-006 | 3/30/2012 | 16:09 | | 3/30/2012 | 16:24 |
| \0330-13.D | CRHE-MW0038-010.0-03192012 | J1201360-007 | 3/30/2012 | 16:39 | | 3/30/2012 | 16:54 |
| \0330-14.D | EB01-03192012 | J1201360-008 | 3/30/2012 | 17:09 | | 3/30/2012 | 17:24 |
| \0330-15.D | CRHE-IW0015I-040.0-03192012 | J1201360-009 | 3/30/2012 | 17:39 | | 3/30/2012 | 17:54 |
| \0330-16.D | CRHE-MW0034-038.5-03202012 | J1201360-010 | 3/30/2012 | 18:09 | | 3/30/2012 | 18:24 |
| \0330-17.D | CRHE-IW0019I-040.0-03202012 | J1201360-011 | 3/30/2012 | 18:39 | | 3/30/2012 | 18:54 |
| \0330-18.D | CRHE-MW0033-048.5-03202012 | J1201360-012 | 3/30/2012 | 19:09 | | 3/30/2012 | 19:24 |
| \0330-19.D | CRHE-IW0021I-045.0-03202012 | J1201360-013 | 3/30/2012 | 19:39 | | 3/30/2012 | 19:54 |
| \0330-20.D | CRHE-MW0035-045.0-03202012 | J1201360-014 | 3/30/2012 | 20:09 | | 3/30/2012 | 20:24 |
| \0330-21.D | CRHE-MW0028-040.0-03202012 | J1201360-015 | 3/30/2012 | 20:39 | | 3/30/2012 | 20:54 |
| \0330-22.D | CRHE-MW0037-030.0-03202012 | J1201360-016 | 3/30/2012 | 21:08 | | 3/30/2012 | 21:23 |
| \0330-23.D | CRHE-IW0017I-030.0-03202012 | J1201360-017 | 3/30/2012 | 21:38 | | 3/30/2012 | 21:53 |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Service Request:** J1201360

## Analysis Run Log
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200326
**Instrument ID:** MS53

| File ID | Sample Name | Lab Code | Date Analysis Started | Start Time | Q | Date Analysis Finished | Finish Time |
|---|---|---|---|---|---|---|---|
| \0402-01.D | GC/MS Tuning - Bromofluorobenzene | JWG1200326-1 | 4/2/2012 | 08:51 | | 4/2/2012 | 09:06 |
| \0402-02.D | Continuing Calibration Verification | JWG1200326-2 | 4/2/2012 | 09:21 | | 4/2/2012 | 09:36 |
| \0402-03.D | Lab Control Sample | JWG1200325-1 | 4/2/2012 | 09:51 | | 4/2/2012 | 10:06 |
| \0402-06.D | Method Blank | JWG1200325-2 | 4/2/2012 | 11:20 | | 4/2/2012 | 11:35 |
| \0402-07.D | Trip Blank | J1201360-029 | 4/2/2012 | 11:50 | | 4/2/2012 | 12:05 |
| \0402-08.D | CRHE-MW0032-045.0-03192012 | J1201360-001 | 4/2/2012 | 12:20 | | 4/2/2012 | 12:35 |
| \0402-09.D | CRHE-MW0031-045.0-03192012 | J1201360-004 | 4/2/2012 | 12:49 | | 4/2/2012 | 13:04 |
| \0402-10.D | CRHE-IW0020I-045.0-03192012 | J1201360-005 | 4/2/2012 | 13:20 | | 4/2/2012 | 13:35 |
| \0402-11.D | CRHE-MW0039-030.0-03192012 | J1201360-006 | 4/2/2012 | 13:50 | | 4/2/2012 | 14:05 |
| \0402-12.D | CRHE-MW0034-038.5-03202012 | J1201360-010 | 4/2/2012 | 14:20 | | 4/2/2012 | 14:35 |
| \0402-13.D | CRHE-IW0019I-040.0-03202012 | J1201360-011 | 4/2/2012 | 14:50 | | 4/2/2012 | 15:05 |
| \0402-14.D | CRHE-MW0035-045.0-03202012 | J1201360-014 | 4/2/2012 | 15:19 | | 4/2/2012 | 15:34 |
| \0402-15.D | CRHE-MW0028-040.0-03202012 | J1201360-015 | 4/2/2012 | 15:49 | | 4/2/2012 | 16:04 |
| \0402-16.D | CRHE-IW0017I-030.0-03202012 | J1201360-017 | 4/2/2012 | 16:19 | | 4/2/2012 | 16:34 |
| \0402-17.D | CRHE-MW0027-045.0-03212012 | J1201360-022 | 4/2/2012 | 16:49 | | 4/2/2012 | 17:04 |
| \0402-18.D | CRHE-MW0022-065.0-03212012 | J1201360-021 | 4/2/2012 | 17:19 | | 4/2/2012 | 17:34 |
| \0402-19.D | CRHE-MW0026-035.0-03212012 | J1201360-020 | 4/2/2012 | 17:49 | | 4/2/2012 | 18:04 |
| \0402-20.D | CRHE-MW0029-045.0-03212012 | J1201360-019 | 4/2/2012 | 18:19 | | 4/2/2012 | 18:34 |
| \0402-21.D | CRHE-IW0014I-040.0-03212012 | J1201360-018 | 4/2/2012 | 18:49 | | 4/2/2012 | 19:04 |
| \0402-22.D | CRHE-MW0024-010.0-03212012 | J1201360-023 | 4/2/2012 | 19:19 | | 4/2/2012 | 19:34 |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360

## Analysis Run Log
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260B

**Analysis Lot:** JWG1200334
**Instrument ID:** MS53

| File ID | Sample Name | Lab Code | Date Analysis Started | Start Time | Q | Date Analysis Finished | Finish Time |
|---|---|---|---|---|---|---|---|
| \0403-01.D | GC/MS Tuning - Bromofluorobenzene | JWG1200334-1 | 4/3/2012 | 10:53 | | 4/3/2012 | 11:08 |
| \0403-03.D | Continuing Calibration Verification | JWG1200334-2 | 4/3/2012 | 11:53 | | 4/3/2012 | 12:08 |
| \0403-04.D | Lab Control Sample | JWG1200333-3 | 4/3/2012 | 12:25 | | 4/3/2012 | 12:40 |
| \0403-07.D | Method Blank | JWG1200333-4 | 4/3/2012 | 13:53 | | 4/3/2012 | 14:08 |
| \0403-08.D | CRHE-IW0014I-040.0-03212012 | J1201360-018 | 4/3/2012 | 14:23 | | 4/3/2012 | 14:38 |
| \0403-09.D | CRHE-MW0022-065.0-03212012 | J1201360-021 | 4/3/2012 | 14:52 | | 4/3/2012 | 15:07 |
| \0403-10.D | CRHE-MW0029-045.0-03212012 | J1201360-019 | 4/3/2012 | 15:22 | | 4/3/2012 | 15:37 |
| \0403-11.D | CRHE-MW0026-035.0-03212012 | J1201360-020 | 4/3/2012 | 15:51 | | 4/3/2012 | 16:06 |
| \0403-12.D | CRHE-MW0027-045.0-03212012 | J1201360-022 | 4/3/2012 | 16:21 | | 4/3/2012 | 16:36 |
| \0403-13.D | CHRE-MW0036-010.0-03202012 | J1201360-030 | 4/3/2012 | 16:50 | | 4/3/2012 | 17:05 |
| \0403-14.D | CRHE-MW0025-030.0-03212012 | J1201360-024 | 4/3/2012 | 17:20 | | 4/3/2012 | 17:35 |
| \0403-16.D | CRHE-MW0025-030.0-03212012 | J1201360-024 | 4/3/2012 | 18:18 | | 4/3/2012 | 18:33 |
| \0403-17.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 18:48 | | 4/3/2012 | 19:03 |
| \0403-18.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 19:17 | | 4/3/2012 | 19:32 |
| \0403-19.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 19:46 | | 4/3/2012 | 20:01 |
| \0403-20.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 20:16 | | 4/3/2012 | 20:31 |
| \0403-21.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 20:46 | | 4/3/2012 | 21:01 |
| \0403-22.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 21:15 | | 4/3/2012 | 21:30 |
| \0403-23.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 21:45 | | 4/3/2012 | 22:00 |
| \0403-24.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 22:15 | | 4/3/2012 | 22:30 |
| \0403-26.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 23:14 | | 4/3/2012 | 23:29 |
| \0403-27.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 23:44 | | 4/3/2012 | 23:59 |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012

## Extraction Prep Log
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Extraction Lot:** JWG1200321
**Level:** Low

| Sample Name | Lab Code | Date Collected | Date Received | Sample Amount | Final Volume | % Solids | Note |
|---|---|---|---|---|---|---|---|
| CRHE-MW0032-045.0-03192C | J1201360-001 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0030-010.0-03192C | J1201360-002 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0023-065.0-03192C | J1201360-003 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0031-045.0-03192C | J1201360-004 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0020I-045.0-031920 | J1201360-005 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0039-030.0-03192C | J1201360-006 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0038-010.0-03192C | J1201360-007 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| EB01-03192012 | J1201360-008 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0015I-040.0-031920 | J1201360-009 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0034-038.5-03202C | J1201360-010 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0019I-040.0-032020 | J1201360-011 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0033-048.5-03202C | J1201360-012 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0021I-045.0-032020 | J1201360-013 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0035-045.0-03202C | J1201360-014 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0028-040.0-03202C | J1201360-015 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0037-030.0-03202C | J1201360-016 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0017I-030.0-032020 | J1201360-017 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| Method Blank | JWG1200321-2 | NA | NA | 10ml | 10ml | NA | |
| Lab Control Sample | JWG1200321-1 | NA | NA | 10ml | 10ml | NA | |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012

## Extraction Prep Log
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Extraction Lot:** JWG1200325
**Level:** Low

| Sample Name | Lab Code | Date Collected | Date Received | Sample Amount | Final Volume | % Solids | Note |
|---|---|---|---|---|---|---|---|
| CRHE-MW0032-045.0-03192( | J1201360-001 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0031-045.0-03192( | J1201360-004 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0020I-045.0-031920 | J1201360-005 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0039-030.0-03192( | J1201360-006 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0034-038.5-03202( | J1201360-010 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0019I-040.0-032020 | J1201360-011 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0035-045.0-03202( | J1201360-014 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0028-040.0-03202( | J1201360-015 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0017I-030.0-032020 | J1201360-017 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0014I-040.0-032120 | J1201360-018 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0029-045.0-03212( | J1201360-019 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0026-035.0-03212( | J1201360-020 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0022-065.0-03212( | J1201360-021 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0027-045.0-03212( | J1201360-022 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0024-010.0-03212( | J1201360-023 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| Trip Blank | J1201360-029 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| Method Blank | JWG1200325-2 | NA | NA | 10ml | 10ml | NA | |
| Lab Control Sample | JWG1200325-1 | NA | NA | 10ml | 10ml | NA | |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012

## Extraction Prep Log
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Extraction Lot:** JWG1200333
**Level:** Low

| Sample Name | Lab Code | Date Collected | Date Received | Sample Amount | Final Volume | % Solids | Note |
|---|---|---|---|---|---|---|---|
| CRHE-IW0014I-040.0-032120 | J1201360-018 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0029-045.0-03212C | J1201360-019 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0026-035.0-03212C | J1201360-020 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0022-065.0-03212C | J1201360-021 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0027-045.0-03212C | J1201360-022 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0025-030.0-03212C | J1201360-024 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0025-030.0-03212C | J1201360-024 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CHRE-MW0036-010.0-03202C | J1201360-030 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| Method Blank | JWG1200333-4 | NA | NA | 10ml | 10ml | NA | |
| Lab Control Sample | JWG1200333-3 | NA | NA | 10ml | 10ml | NA | |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012

## Extraction Prep Log
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Extraction Lot:** JWG1200305
**Level:** Low

| Sample Name | Lab Code | Date Collected | Date Received | Sample Amount | Final Volume | % Solids | Note |
|---|---|---|---|---|---|---|---|
| CRHE-188849-IDW-03212012 | J1201360-025 | 03/21/12 | 03/22/12 | 5.9300g | 5mL | 84 | |
| CRHE-188797-IDW-03212012 | J1201360-026 | 03/21/12 | 03/22/12 | 5.1200g | 5mL | 88 | |
| CRHE-188842-IDW-03212012 | J1201360-027 | 03/21/12 | 03/22/12 | 5.9600g | 5mL | 83 | |
| CRHE-188838-IDW-03212012 | J1201360-028 | 03/21/12 | 03/22/12 | 5.3500g | 5mL | 81 | |
| Method Blank | JWG1200305-2 | NA | NA | 5.00g | 5ml | 100 | |
| Lab Control Sample | JWG1200305-1 | NA | NA | 5.00g | 5ml | 100 | |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

Columbia Analytical Services™

# Validation Package

9143 Philips Highway, Suite 200
Jacksonville, Florida 32256
Phone: (904) 739-2277 Fax (904) 739-2011
www.caslab.com

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Validation Package



p:\Stealth\Crystal.rpt\DividerB.rpt

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Validation Package

## QC Reports



p:\Stealth\Crystal.rpt\DividerC.rpt

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360

## Surrogate Recovery Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 | Sur2 | Sur3 | Sur4 |
|---|---|---|---|---|---|
| CRHE-MW0032-045.0-03192012 | J1201360-001 | 97 | 109 | 99 | 98 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | 98 | 106 | 98 | 101 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | 100 | 107 | 99 | 96 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | 97 | 106 | 100 | 98 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | 96 | 107 | 100 | 99 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | 99 | 113 | 99 | 97 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | 100 | 109 | 100 | 100 |
| EB01-03192012 | J1201360-008 | 97 | 106 | 99 | 101 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | 101 | 107 | 99 | 100 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | 99 | 109 | 101 | 98 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | 98 | 105 | 97 | 102 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | 96 | 109 | 96 | 103 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | 99 | 109 | 99 | 99 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | 99 | 108 | 98 | 96 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | 95 | 110 | 98 | 98 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | 97 | 107 | 99 | 98 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | 97 | 108 | 99 | 100 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | 94 | 107 | 97 | 99 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | 98 | 112 | 99 | 100 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | 99 | 108 | 95 | 96 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | 99 | 107 | 99 | 98 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | 96 | 107 | 98 | 96 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | 98 | 107 | 99 | 98 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | 97 | 111 | 92 | 98 |
| Trip Blank | J1201360-029 | 94 | 111 | 97 | 96 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | 97 | 111 | 97 | 100 |
| Method Blank | JWG1200321-2 | 98 | 105 | 100 | 95 |
| Method Blank | JWG1200325-2 | 99 | 105 | 99 | 98 |
| Method Blank | JWG1200333-4 | 96 | 103 | 97 | 96 |
| Lab Control Sample | JWG1200321-1 | 99 | 107 | 99 | 100 |
| Lab Control Sample | JWG1200325-1 | 94 | 104 | 98 | 97 |
| Lab Control Sample | JWG1200333-3 | 95 | 109 | 97 | 96 |

**Surrogate Recovery Control Limits (%)**

| | | |
|---|---|---|
| Sur1 = | 1,2-Dichloroethane-d4 | 72-121 |
| Sur2 = | 4-Bromofluorobenzene | 86-113 |
| Sur3 = | Dibromofluoromethane | 86-112 |
| Sur4 = | Toluene-d8 | 88-115 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360

## Surrogate Recovery Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 | Sur2 | Sur3 | Sur4 |
|---|---|---|---|---|---|
| CRHE-188849-IDW-03212012 | J1201360-025 | 94 | 99 | 96 | 101 |
| CRHE-188797-IDW-03212012 | J1201360-026 | 92 | 102 | 96 | 105 |
| CRHE-188842-IDW-03212012 | J1201360-027 | 90 | 103 | 91 | 105 |
| CRHE-188838-IDW-03212012 | J1201360-028 | 94 | 116 | 99 | 108 |
| Method Blank | JWG1200305-2 | 94 | 95 | 96 | 102 |
| Lab Control Sample | JWG1200305-1 | 94 | 97 | 98 | 101 |

**Surrogate Recovery Control Limits (%)**

| | |
|---|---|
| Sur1 = 1,2-Dichloroethane-d4 | 80-120 |
| Sur2 = 4-Bromofluorobenzene | 64-135 |
| Sur3 = Dibromofluoromethane | 74-125 |
| Sur4 = Toluene-d8 | 46-156 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 09:45

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS52\DATA\MS52-120322\0322-02.D
**Instrument ID:** MS52
**Analysis Method:** 8260B

**Lab Code:** JWG1200306-2
**Analysis Lot:** JWG1200306

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 53,457 | 11.60 | 47,863 | 9.16 | 122,997 | 6.17 |
| | **Upper Limit ==>** | 106,914 | 12.10 | 95,726 | 9.66 | 245,994 | 6.67 |
| | **Lower Limit ==>** | 26,729 | 11.10 | 23,932 | 8.66 | 61,499 | 5.67 |
| | **ICAL Result ==>** | 48,766 | 11.60 | 43,592 | 9.16 | 110,750 | 6.17 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200305-1 | 52,658 | 11.60 | 48,614 | 9.16 | 125,564 | 6.17 |
| Method Blank | JWG1200305-2 | 50,853 | 11.59 | 47,975 | 9.16 | 125,218 | 6.17 |
| CRHE-188849-IDW-03212012 | J1201360-025 | 45,168 | 11.60 | 46,360 | 9.16 | 121,432 | 6.17 |
| CRHE-188797-IDW-03212012 | J1201360-026 | 40,555 | 11.60 | 43,358 | 9.16 | 116,772 | 6.17 |
| CRHE-188842-IDW-03212012 | J1201360-027 | 40,415 | 11.60 | 42,767 | 9.17 | 117,887 | 6.17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | 35,955 | 11.60 | 42,626 | 9.16 | 118,248 | 6.18 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 11:12

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120330\0330-02.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200322-2
**Analysis Lot:** JWG1200322

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| **Results ==>** | | 328,039 | 11.12 | 413,475 | 8.80 | 1,184,883 | 5.51 |
| **Upper Limit ==>** | | 656,078 | 11.62 | 826,950 | 9.30 | 2,369,766 | 6.01 |
| **Lower Limit ==>** | | 164,020 | 10.62 | 206,738 | 8.30 | 592,442 | 5.01 |
| **ICAL Result ==>** | | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200321-1 | 318,654 | 11.12 | 397,222 | 8.80 | 1,171,291 | 5.51 |
| Method Blank | JWG1200321-2 | 337,907 | 11.13 | 403,441 | 8.80 | 1,145,808 | 5.51 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | 315,754 | 11.13 | 399,126 | 8.80 | 1,148,047 | 5.51 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | 323,166 | 11.13 | 392,864 | 8.80 | 1,177,874 | 5.51 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | 322,551 | 11.13 | 384,128 | 8.80 | 1,104,427 | 5.52 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | 331,420 | 11.13 | 396,550 | 8.80 | 1,156,645 | 5.51 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | 322,585 | 11.13 | 393,897 | 8.80 | 1,164,407 | 5.51 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | 319,516 | 11.13 | 401,946 | 8.80 | 1,172,242 | 5.51 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | 327,430 | 11.13 | 405,589 | 8.80 | 1,173,486 | 5.51 |
| EB01-03192012 | J1201360-008 | 330,521 | 11.13 | 389,632 | 8.80 | 1,146,764 | 5.51 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | 332,367 | 11.13 | 389,217 | 8.80 | 1,147,109 | 5.52 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | 321,006 | 11.13 | 397,996 | 8.80 | 1,125,602 | 5.52 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | 316,893 | 11.13 | 382,659 | 8.80 | 1,133,176 | 5.51 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | 324,878 | 11.13 | 388,136 | 8.80 | 1,169,094 | 5.52 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | 320,327 | 11.13 | 393,071 | 8.80 | 1,149,686 | 5.51 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | 330,706 | 11.12 | 409,470 | 8.80 | 1,174,443 | 5.52 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | 319,532 | 11.13 | 409,711 | 8.80 | 1,202,891 | 5.51 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | 322,399 | 11.13 | 400,508 | 8.80 | 1,144,939 | 5.51 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | 326,036 | 11.12 | 400,878 | 8.80 | 1,158,793 | 5.51 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 09:21

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120402\0402-02.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200326-2
**Analysis Lot:** JWG1200326

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 338,282 | 11.13 | 419,066 | 8.80 | 1,182,437 | 5.51 |
| | **Upper Limit ==>** | 676,564 | 11.63 | 838,132 | 9.30 | 2,364,874 | 6.01 |
| | **Lower Limit ==>** | 169,141 | 10.63 | 209,533 | 8.30 | 591,219 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200325-1 | 322,206 | 11.13 | 386,918 | 8.80 | 1,106,267 | 5.51 |
| Method Blank | JWG1200325-2 | 322,051 | 11.13 | 383,241 | 8.80 | 1,093,788 | 5.51 |
| Trip Blank | J1201360-029 | 314,454 | 11.13 | 402,969 | 8.80 | 1,172,678 | 5.51 |
| CRHE-MW0032-045.0-03192012D | J1201360-001 | 317,812 | 11.13 | 379,377 | 8.80 | 1,119,988 | 5.51 |
| CRHE-MW0031-045.0-03192012D | J1201360-004 | 322,770 | 11.13 | 395,883 | 8.80 | 1,159,224 | 5.51 |
| CRHE-IW0020I-045.0-03192012D | J1201360-005 | 319,432 | 11.13 | 390,271 | 8.80 | 1,120,582 | 5.51 |
| CRHE-MW0039-030.0-03192012D | J1201360-006 | 325,142 | 11.13 | 389,370 | 8.80 | 1,108,624 | 5.51 |
| CRHE-MW0034-038.5-03202012D | J1201360-010 | 327,008 | 11.13 | 395,803 | 8.80 | 1,096,028 | 5.51 |
| CRHE-IW0019I-040.0-03202012D | J1201360-011 | 319,532 | 11.13 | 392,191 | 8.80 | 1,116,694 | 5.51 |
| CRHE-MW0035-045.0-03202012D | J1201360-014 | 317,749 | 11.13 | 383,466 | 8.80 | 1,119,903 | 5.52 |
| CRHE-MW0028-040.0-03202012D | J1201360-015 | 320,292 | 11.13 | 385,204 | 8.80 | 1,151,728 | 5.51 |
| CRHE-IW0017I-030.0-03202012D | J1201360-017 | 313,536 | 11.13 | 395,840 | 8.80 | 1,123,689 | 5.51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | 316,218 | 11.13 | 402,165 | 8.80 | 1,116,092 | 5.52 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | 332,100 | 11.13 | 405,929 | 8.80 | 1,179,725 | 5.52 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | 326,026 | 11.13 | 414,330 | 8.80 | 1,170,714 | 5.52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | 314,676 | 11.13 | 399,293 | 8.80 | 1,157,084 | 5.52 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | 324,993 | 11.13 | 393,830 | 8.80 | 1,133,953 | 5.52 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | 318,409 | 11.13 | 384,678 | 8.80 | 1,105,383 | 5.52 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 11:53

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120403\0403-03.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200334-2
**Analysis Lot:** JWG1200334

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| | **Results ==>** | 317,277 | 11.13 | 383,361 | 8.80 | 1,079,939 | 5.51 |
| | **Upper Limit ==>** | 634,554 | 11.63 | 766,722 | 9.30 | 2,159,878 | 6.01 |
| | **Lower Limit ==>** | 158,639 | 10.63 | 191,681 | 8.30 | 539,970 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200333-3 | 309,433 | 11.13 | 402,331 | 8.80 | 1,130,474 | 5.51 |
| Method Blank | JWG1200333-4 | 316,138 | 11.13 | 389,420 | 8.80 | 1,095,457 | 5.51 |
| CRHE-IW0014I-040.0-03212012RI | J1201360-018 | 316,659 | 11.13 | 370,802 | 8.80 | 1,091,211 | 5.51 |
| CRHE-MW0022-065.0-03212012R | J1201360-021 | 315,576 | 11.13 | 390,002 | 8.80 | 1,108,138 | 5.51 |
| CRHE-MW0029-045.0-03212012D | J1201360-019 | 301,400 | 11.13 | 375,955 | 8.80 | 1,085,571 | 5.51 |
| CRHE-MW0026-035.0-03212012D | J1201360-020 | 304,045 | 11.12 | 375,196 | 8.80 | 1,067,834 | 5.51 |
| CRHE-MW0027-045.0-03212012D | J1201360-022 | 304,830 | 11.12 | 381,443 | 8.80 | 1,056,074 | 5.51 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | 307,096 | 11.13 | 380,864 | 8.80 | 1,120,196 | 5.51 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | 305,472 | 11.13 | 384,814 | 8.80 | 1,106,582 | 5.51 |
| CRHE-MW0025-030.0-03212012D | J1201360-024 | 313,276 | 11.13 | 402,002 | 8.80 | 1,159,827 | 5.52 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200321

| Analyte Name | Lab Control Sample JWG1200321-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.8 | 20.0 | 99 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 19.6 | 20.0 | 98 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 20.3 | 20.0 | 102 | 66-135 |
| 1,1,2-Trichloroethane | 19.6 | 20.0 | 98 | 75-122 |
| 1,1-Dichloroethane | 20.5 | 20.0 | 103 | 79-117 |
| 1,1-Dichloroethene | 23.0 | 20.0 | 115 | 72-128 |
| 1,2,3-Trichlorobenzene | 20.7 | 20.0 | 104 | 62-136 |
| 1,2,4-Trichlorobenzene | 19.2 | 20.0 | 96 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.5 | 20.0 | 82 | 60-122 |
| 1,2-Dibromoethane (EDB) | 18.7 | 20.0 | 93 | 76-118 |
| 1,2-Dichlorobenzene | 20.5 | 20.0 | 103 | 81-115 |
| 1,2-Dichloroethane (EDC) | 19.9 | 20.0 | 100 | 70-117 |
| 1,2-Dichloropropane | 21.6 | 20.0 | 108 | 79-117 |
| 1,3-Dichlorobenzene | 21.5 | 20.0 | 107 | 82-116 |
| 1,4-Dichlorobenzene | 20.9 | 20.0 | 105 | 82-115 |
| 2-Butanone (MEK) | 102 | 100 | 102 | 62-138 |
| 2-Hexanone | 93.2 | 100 | 93 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 96.1 | 100 | 96 | 77-120 |
| Acetone | 88.3 | 100 | 88 | 42-161 |
| Benzene | 21.4 | 20.0 | 107 | 80-117 |
| Bromochloromethane | 19.6 | 20.0 | 98 | 78-118 |
| Bromodichloromethane | 20.2 | 20.0 | 101 | 75-118 |
| Bromoform | 19.2 | 20.0 | 96 | 63-121 |
| Bromomethane | 19.1 | 20.0 | 95 | 31-153 |
| Carbon Disulfide | 119 | 100 | 119 | 72-128 |
| Carbon Tetrachloride | 18.3 | 20.0 | 91 | 67-124 |
| Chlorobenzene | 20.7 | 20.0 | 103 | 83-118 |
| Chloroethane | 21.5 | 20.0 | 107 | 68-132 |
| Chloroform | 19.6 | 20.0 | 98 | 77-116 |
| Chloromethane | 24.8 | 20.0 | 124 | 60-128 |
| cis-1,2-Dichloroethene | 21.5 | 20.0 | 108 | 78-117 |
| cis-1,3-Dichloropropene | 20.9 | 20.0 | 105 | 80-119 |
| Cyclohexane | 20.3 | 20.0 | 102 | 75-124 |
| Dibromochloromethane | 19.4 | 20.0 | 97 | 74-121 |
| Dichlorodifluoromethane | 22.1 | 20.0 | 111 | 49-132 |
| Ethylbenzene | 21.8 | 20.0 | 109 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200321

| Analyte Name | Lab Control Sample JWG1200321-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| Isopropylbenzene | 24.0 | 20.0 | 120 * | 78-119 |
| m,p-Xylenes | 44.3 | 40.0 | 111 | 79-122 |
| Methyl Acetate | 19.4 | 20.0 | 97 | 50-137 |
| Methyl tert-Butyl Ether | 20.0 | 20.0 | 100 | 73-118 |
| Methylene Chloride | 20.5 | 20.0 | 103 | 75-123 |
| o-Xylene | 21.3 | 20.0 | 106 | 80-119 |
| Styrene | 20.9 | 20.0 | 105 | 80-121 |
| Tetrachloroethene (PCE) | 20.2 | 20.0 | 101 | 75-126 |
| Toluene | 21.1 | 20.0 | 105 | 52-152 |
| trans-1,2-Dichloroethene | 20.9 | 20.0 | 104 | 75-121 |
| trans-1,3-Dichloropropene | 19.7 | 20.0 | 98 | 76-118 |
| Trichloroethene (TCE) | 20.6 | 20.0 | 103 | 78-122 |
| Trichlorofluoromethane | 20.3 | 20.0 | 101 | 58-134 |
| Trichlorotrifluoroethane | 21.4 | 20.0 | 107 | 77-128 |
| Vinyl Chloride | 21.4 | 20.0 | 107 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200325

| | Lab Control Sample JWG1200325-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| 1,1,1,2-Tetrachloroethane | 19.4 | 20.0 | 97 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 20.2 | 20.0 | 101 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 21.1 | 20.0 | 106 | 66-135 |
| 1,1,2-Trichloroethane | 19.6 | 20.0 | 98 | 75-122 |
| 1,1-Dichloroethane | 21.2 | 20.0 | 106 | 79-117 |
| 1,1-Dichloroethene | 23.6 | 20.0 | 118 | 72-128 |
| 1,2,3-Trichlorobenzene | 19.5 | 20.0 | 98 | 62-136 |
| 1,2,4-Trichlorobenzene | 18.7 | 20.0 | 93 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.7 | 20.0 | 83 | 60-122 |
| 1,2-Dibromoethane (EDB) | 19.1 | 20.0 | 96 | 76-118 |
| 1,2-Dichlorobenzene | 20.3 | 20.0 | 101 | 81-115 |
| 1,2-Dichloroethane (EDC) | 19.8 | 20.0 | 99 | 70-117 |
| 1,2-Dichloropropane | 21.5 | 20.0 | 108 | 79-117 |
| 1,3-Dichlorobenzene | 21.0 | 20.0 | 105 | 82-116 |
| 1,4-Dichlorobenzene | 21.0 | 20.0 | 105 | 82-115 |
| 2-Butanone (MEK) | 99.8 | 100 | 100 | 62-138 |
| 2-Hexanone | 94.3 | 100 | 94 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 95.0 | 100 | 95 | 77-120 |
| Acetone | 86.2 | 100 | 86 | 42-161 |
| Benzene | 21.4 | 20.0 | 107 | 80-117 |
| Bromochloromethane | 19.4 | 20.0 | 97 | 78-118 |
| Bromodichloromethane | 20.9 | 20.0 | 104 | 75-118 |
| Bromoform | 20.2 | 20.0 | 101 | 63-121 |
| Bromomethane | 19.4 | 20.0 | 97 | 31-153 |
| Carbon Disulfide | 121 | 100 | 121 | 72-128 |
| Carbon Tetrachloride | 19.3 | 20.0 | 96 | 67-124 |
| Chlorobenzene | 20.3 | 20.0 | 101 | 83-118 |
| Chloroethane | 22.3 | 20.0 | 112 | 68-132 |
| Chloroform | 20.5 | 20.0 | 102 | 77-116 |
| Chloromethane | 25.2 | 20.0 | 126 | 60-128 |
| cis-1,2-Dichloroethene | 21.7 | 20.0 | 108 | 78-117 |
| cis-1,3-Dichloropropene | 20.7 | 20.0 | 104 | 80-119 |
| Cyclohexane | 20.8 | 20.0 | 104 | 75-124 |
| Dibromochloromethane | 19.5 | 20.0 | 97 | 74-121 |
| Dichlorodifluoromethane | 22.3 | 20.0 | 111 | 49-132 |
| Ethylbenzene | 21.1 | 20.0 | 105 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200325

| | Lab Control Sample JWG1200325-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| Isopropylbenzene | 23.8 | 20.0 | 119 | 78-119 |
| m,p-Xylenes | 44.3 | 40.0 | 111 | 79-122 |
| Methyl Acetate | 18.4 | 20.0 | 92 | 50-137 |
| Methyl tert-Butyl Ether | 20.8 | 20.0 | 104 | 73-118 |
| Methylene Chloride | 21.2 | 20.0 | 106 | 75-123 |
| o-Xylene | 21.4 | 20.0 | 107 | 80-119 |
| Styrene | 21.2 | 20.0 | 106 | 80-121 |
| Tetrachloroethene (PCE) | 20.2 | 20.0 | 101 | 75-126 |
| Toluene | 21.1 | 20.0 | 105 | 52-152 |
| trans-1,2-Dichloroethene | 21.2 | 20.0 | 106 | 75-121 |
| trans-1,3-Dichloropropene | 19.9 | 20.0 | 100 | 76-118 |
| Trichloroethene (TCE) | 20.8 | 20.0 | 104 | 78-122 |
| Trichlorofluoromethane | 21.2 | 20.0 | 106 | 58-134 |
| Trichlorotrifluoroethane | 22.4 | 20.0 | 112 | 77-128 |
| Vinyl Chloride | 22.0 | 20.0 | 110 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200333

| | Lab Control Sample JWG1200333-3 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| 1,1,1,2-Tetrachloroethane | 18.9 | 20.0 | 95 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 19.5 | 20.0 | 97 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 19.6 | 20.0 | 98 | 66-135 |
| 1,1,2-Trichloroethane | 19.4 | 20.0 | 97 | 75-122 |
| 1,1-Dichloroethane | 20.4 | 20.0 | 102 | 79-117 |
| 1,1-Dichloroethene | 22.4 | 20.0 | 112 | 72-128 |
| 1,2,3-Trichlorobenzene | 19.2 | 20.0 | 96 | 62-136 |
| 1,2,4-Trichlorobenzene | 17.9 | 20.0 | 89 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.1 | 20.0 | 81 | 60-122 |
| 1,2-Dibromoethane (EDB) | 18.2 | 20.0 | 91 | 76-118 |
| 1,2-Dichlorobenzene | 19.6 | 20.0 | 98 | 81-115 |
| 1,2-Dichloroethane (EDC) | 20.0 | 20.0 | 100 | 70-117 |
| 1,2-Dichloropropane | 21.1 | 20.0 | 105 | 79-117 |
| 1,3-Dichlorobenzene | 20.9 | 20.0 | 105 | 82-116 |
| 1,4-Dichlorobenzene | 20.4 | 20.0 | 102 | 82-115 |
| 2-Butanone (MEK) | 98.5 | 100 | 99 | 62-138 |
| 2-Hexanone | 91.0 | 100 | 91 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 92.1 | 100 | 92 | 77-120 |
| Acetone | 90.0 | 100 | 90 | 42-161 |
| Benzene | 20.5 | 20.0 | 102 | 80-117 |
| Bromochloromethane | 18.7 | 20.0 | 94 | 78-118 |
| Bromodichloromethane | 20.6 | 20.0 | 103 | 75-118 |
| Bromoform | 18.3 | 20.0 | 92 | 63-121 |
| Bromomethane | 17.8 | 20.0 | 89 | 31-153 |
| Carbon Disulfide | 114 | 100 | 114 | 72-128 |
| Carbon Tetrachloride | 17.7 | 20.0 | 88 | 67-124 |
| Chlorobenzene | 19.7 | 20.0 | 98 | 83-118 |
| Chloroethane | 19.9 | 20.0 | 100 | 68-132 |
| Chloroform | 19.7 | 20.0 | 98 | 77-116 |
| Chloromethane | 21.6 | 20.0 | 108 | 60-128 |
| cis-1,2-Dichloroethene | 20.9 | 20.0 | 104 | 78-117 |
| cis-1,3-Dichloropropene | 19.6 | 20.0 | 98 | 80-119 |
| Cyclohexane | 19.8 | 20.0 | 99 | 75-124 |
| Dibromochloromethane | 18.4 | 20.0 | 92 | 74-121 |
| Dichlorodifluoromethane | 19.8 | 20.0 | 99 | 49-132 |
| Ethylbenzene | 20.8 | 20.0 | 104 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200333

| | Lab Control Sample JWG1200333-3 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| Isopropylbenzene | 24.1 | 20.0 | 120 * | 78-119 |
| m,p-Xylenes | 41.0 | 40.0 | 102 | 79-122 |
| Methyl Acetate | 19.1 | 20.0 | 95 | 50-137 |
| Methyl tert-Butyl Ether | 19.8 | 20.0 | 99 | 73-118 |
| Methylene Chloride | 20.0 | 20.0 | 100 | 75-123 |
| o-Xylene | 20.2 | 20.0 | 101 | 80-119 |
| Styrene | 19.9 | 20.0 | 99 | 80-121 |
| Tetrachloroethene (PCE) | 18.9 | 20.0 | 94 | 75-126 |
| Toluene | 20.0 | 20.0 | 100 | 52-152 |
| trans-1,2-Dichloroethene | 20.1 | 20.0 | 100 | 75-121 |
| trans-1,3-Dichloropropene | 19.3 | 20.0 | 96 | 76-118 |
| Trichloroethene (TCE) | 20.3 | 20.0 | 101 | 78-122 |
| Trichlorofluoromethane | 18.9 | 20.0 | 95 | 58-134 |
| Trichlorotrifluoroethane | 20.0 | 20.0 | 100 | 77-128 |
| Vinyl Chloride | 19.6 | 20.0 | 98 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry
**Level:** Low
**Extraction Lot:** JWG1200305

| | Lab Control Sample JWG1200305-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| 1,1,1,2-Tetrachloroethane | 18.1 | 20.0 | 90 | 71-124 |
| 1,1,1-Trichloroethane (TCA) | 17.4 | 20.0 | 87 | 72-131 |
| 1,1,2,2-Tetrachloroethane | 17.4 | 20.0 | 87 | 51-136 |
| 1,1,2-Trichloroethane | 18.4 | 20.0 | 92 | 74-113 |
| 1,1-Dichloroethane | 18.3 | 20.0 | 92 | 74-124 |
| 1,1-Dichloroethene | 16.0 | 20.0 | 80 | 67-128 |
| 1,2,3-Trichlorobenzene | 18.9 | 20.0 | 94 | 64-129 |
| 1,2,4-Trichlorobenzene | 18.7 | 20.0 | 93 | 61-135 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 17.4 | 20.0 | 87 | 54-129 |
| 1,2-Dibromoethane (EDB) | 18.2 | 20.0 | 91 | 74-114 |
| 1,2-Dichlorobenzene | 18.6 | 20.0 | 93 | 74-111 |
| 1,2-Dichloroethane (EDC) | 17.7 | 20.0 | 88 | 74-120 |
| 1,2-Dichloropropane | 18.3 | 20.0 | 91 | 77-119 |
| 1,3-Dichlorobenzene | 18.5 | 20.0 | 93 | 74-114 |
| 1,4-Dichlorobenzene | 18.7 | 20.0 | 93 | 72-112 |
| 2-Butanone (MEK) | 87.5 | 100 | 87 | 55-136 |
| 2-Hexanone | 88.0 | 100 | 88 | 60-127 |
| 4-Methyl-2-pentanone (MIBK) | 90.1 | 100 | 90 | 64-122 |
| Acetone | 83.4 | 100 | 83 | 30-164 |
| Benzene | 18.2 | 20.0 | 91 | 76-123 |
| Bromochloromethane | 19.0 | 20.0 | 95 | 75-124 |
| Bromodichloromethane | 17.1 | 20.0 | 85 | 74-124 |
| Bromoform | 16.8 | 20.0 | 84 | 58-126 |
| Bromomethane | 18.5 | 20.0 | 92 | 25-175 |
| Carbon Disulfide | 110 | 100 | 110 | 62-134 |
| Carbon Tetrachloride | 16.0 | 20.0 | 80 | 68-134 |
| Chlorobenzene | 19.0 | 20.0 | 95 | 74-116 |
| Chloroethane | 17.5 | 20.0 | 88 | 64-131 |
| Chloroform | 17.1 | 20.0 | 86 | 75-120 |
| Chloromethane | 16.6 | 20.0 | 83 | 59-138 |
| cis-1,2-Dichloroethene | 18.4 | 20.0 | 92 | 74-122 |
| cis-1,3-Dichloropropene | 18.5 | 20.0 | 93 | 75-115 |
| Cyclohexane | 19.3 | 20.0 | 96 | 70-127 |
| Dibromochloromethane | 16.7 | 20.0 | 83 | 67-123 |
| Dichlorodifluoromethane | 17.1 | 20.0 | 86 | 51-150 |
| Ethylbenzene | 18.9 | 20.0 | 95 | 71-122 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry
**Level:** Low
**Extraction Lot:** JWG1200305

| Analyte Name | Lab Control Sample JWG1200305-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| Isopropylbenzene | 20.9 | 20.0 | 105 | 67-124 |
| m,p-Xylenes | 38.0 | 40.0 | 95 | 71-122 |
| Methyl Acetate | 16.6 | 20.0 | 83 | 25-160 |
| Methyl tert-Butyl Ether | 18.1 | 20.0 | 90 | 72-121 |
| Methylene Chloride | 16.6 | 20.0 | 83 | 60-140 |
| o-Xylene | 18.3 | 20.0 | 92 | 71-120 |
| Styrene | 19.1 | 20.0 | 95 | 70-122 |
| Tetrachloroethene (PCE) | 18.9 | 20.0 | 95 | 69-124 |
| Toluene | 18.7 | 20.0 | 93 | 72-118 |
| trans-1,2-Dichloroethene | 17.6 | 20.0 | 88 | 71-127 |
| trans-1,3-Dichloropropene | 17.6 | 20.0 | 88 | 73-115 |
| Trichloroethene (TCE) | 18.4 | 20.0 | 92 | 70-129 |
| Trichlorofluoromethane | 17.4 | 20.0 | 87 | 67-129 |
| Trichlorotrifluoroethane | 17.7 | 20.0 | 89 | 66-131 |
| Vinyl Chloride | 18.9 | 20.0 | 95 | 62-137 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 13:10

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120330\0330-06.D

**Level:** Low
**Extraction Lot:** JWG1200321

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200321-1 | J:\MS53\DATA\MS53-120330\0330-03.D | 03/30/12 | 11:42 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/12 | 13:40 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/12 | 14:10 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/12 | 14:40 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/12 | 15:09 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/12 | 15:39 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/12 | 16:09 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/12 | 16:39 |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/12 | 17:09 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/12 | 17:39 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/12 | 18:09 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/12 | 18:39 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/12 | 19:09 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/12 | 19:39 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/12 | 20:09 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/12 | 20:39 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/12 | 21:08 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/12 | 21:38 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 11:20

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120402\0402-06.D

**Level:** Low
**Extraction Lot:** JWG1200325

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200325-1 | J:\MS53\DATA\MS53-120402\0402-03.D | 04/02/12 | 09:51 |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/12 | 11:50 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/12 | 12:20 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/12 | 12:49 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/12 | 13:20 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/12 | 13:50 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/12 | 14:20 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/12 | 14:50 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/12 | 15:19 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/12 | 15:49 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/12 | 16:19 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/12 | 16:49 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/12 | 17:19 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/12 | 17:49 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/12 | 18:19 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/12 | 18:49 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/12 | 19:19 |

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Extracted:** | 04/03/2012 |
| **Sample Matrix:** | Water | **Date Analyzed:** | 04/03/2012 |
| | | **Time Analyzed:** | 13:53 |

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Instrument ID:** | MS53 |
| **Lab Code:** | JWG1200333-4 | **File ID:** | J:\MS53\DATA\MS53-120403\0403-07.D |
| **Extraction Method:** | EPA 5030B | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | JWG1200333 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200333-3 | J:\MS53\DATA\MS53-120403\0403-04.D | 04/03/12 | 12:25 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/12 | 14:23 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/12 | 14:52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/12 | 15:22 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/12 | 15:51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/12 | 16:21 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/12 | 16:50 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/12 | 17:20 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/12 | 18:18 |

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Extracted:** | 03/22/2012 |
| **Sample Matrix:** | Soil | **Date Analyzed:** | 03/22/2012 |
| | | **Time Analyzed:** | 11:28 |

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Instrument ID:** | MS52 |
| **Lab Code:** | JWG1200305-2 | **File ID:** | J:\MS52\DATA\MS52-120322\0322-05.D |
| **Extraction Method:** | EPA 5035 | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | JWG1200305 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200305-1 | J:\MS52\DATA\MS52-120322\0322-03.D | 03/22/12 | 10:14 |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/12 | 18:20 |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/12 | 18:48 |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/12 | 19:17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/12 | 19:45 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 11:42

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200321-1

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120330\0330-03.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200321

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200321-2 | J:\MS53\DATA\MS53-120330\0330-06.D | 03/30/12 | 13:10 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/12 | 13:40 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/12 | 14:10 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/12 | 14:40 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/12 | 15:09 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/12 | 15:39 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/12 | 16:09 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/12 | 16:39 |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/12 | 17:09 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/12 | 17:39 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/12 | 18:09 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/12 | 18:39 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/12 | 19:09 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/12 | 19:39 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/12 | 20:09 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/12 | 20:39 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/12 | 21:08 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/12 | 21:38 |

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Extracted:** | 04/02/2012 |
| **Sample Matrix:** | Water | **Date Analyzed:** | 04/02/2012 |
| | | **Time Analyzed:** | 09:51 |

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | Lab Control Sample | **Instrument ID:** | MS53 |
| **Lab Code:** | JWG1200325-1 | **File ID:** | J:\MS53\DATA\MS53-120402\0402-03.D |
| **Extraction Method:** | EPA 5030B | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | JWG1200325 |

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200325-2 | J:\MS53\DATA\MS53-120402\0402-06.D | 04/02/12 | 11:20 |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/12 | 11:50 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/12 | 12:20 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/12 | 12:49 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/12 | 13:20 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/12 | 13:50 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/12 | 14:20 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/12 | 14:50 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/12 | 15:19 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/12 | 15:49 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/12 | 16:19 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/12 | 16:49 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/12 | 17:19 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/12 | 17:49 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/12 | 18:19 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/12 | 18:49 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/12 | 19:19 |

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Extracted:** | 04/03/2012 |
| **Sample Matrix:** | Water | **Date Analyzed:** | 04/03/2012 |
| | | **Time Analyzed:** | 12:25 |

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | Lab Control Sample | **Instrument ID:** | MS53 |
| **Lab Code:** | JWG1200333-3 | **File ID:** | J:\MS53\DATA\MS53-120403\0403-04.D |
| **Extraction Method:** | EPA 5030B | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | JWG1200333 |

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200333-4 | J:\MS53\DATA\MS53-120403\0403-07.D | 04/03/12 | 13:53 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/12 | 14:23 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/12 | 14:52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/12 | 15:22 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/12 | 15:51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/12 | 16:21 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/12 | 16:50 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/12 | 17:20 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/12 | 18:18 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 10:14

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200305-1

**Instrument ID:** MS52
**File ID:** J:\MS52\DATA\MS52-120322\0322-03.D

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200305

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200305-2 | J:\MS52\DATA\MS52-120322\0322-05.D | 03/22/12 | 11:28 |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/12 | 18:20 |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/12 | 18:48 |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/12 | 19:17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/12 | 19:45 |

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Validation Package

## Raw Data



p:\Stealth\Crystal.rpt\DividerD.rpt

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0032-045.0-03192012
**Lab Code:** J1201360-001

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.54** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | **0.57** | I | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.62** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **6.6** | | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **13** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | **0.31** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0032-045.0-03192012
**Lab Code:** J1201360-001

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.30** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.71** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **8.2** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **83** | | 20 | 4.4 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0030-010.0-03192012
**Lab Code:** J1201360-002

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | **5.9** | I | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0030-010.0-03192012
**Lab Code:** J1201360-002

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 101 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0023-065.0-03192012
**Lab Code:** J1201360-003

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **0.70** | I | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.46** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0023-065.0-03192012
**Lab Code:** J1201360-003

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.21** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0031-045.0-03192012
**Lab Code:** J1201360-004

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **59** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0031-045.0-03192012
**Lab Code:** J1201360-004

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **6.0** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | **1.5** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **200** | | 10 | 2.2 | 10 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0020I-045.0-03192012
**Lab Code:** J1201360-005

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.25** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.49** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **33** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **0.92** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **79** | | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0020I-045.0-03192012
**Lab Code:** J1201360-005

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.27** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **130** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0039-030.0-03192012
**Lab Code:** J1201360-006

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.49** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **0.96** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0039-030.0-03192012
**Lab Code:** J1201360-006

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.50** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.43** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **92** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 113 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 97 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0038-010.0-03192012
**Lab Code:** J1201360-007

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0038-010.0-03192012
**Lab Code:** J1201360-007

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** EB01-03192012
**Lab Code:** J1201360-008

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** EB01-03192012
**Lab Code:** J1201360-008

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 101 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0015I-040.0-03192012
**Lab Code:** J1201360-009

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **2.0** | | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.21** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **76** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0015I-040.0-03192012
**Lab Code:** J1201360-009

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **27** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0034-038.5-03202012
**Lab Code:** J1201360-010

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.36** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **3.4** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **12** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **1.2** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **140** | | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0034-038.5-03202012
**Lab Code:** J1201360-010

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **150** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 101 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0019I-040.0-03202012
**Lab Code:** J1201360-011

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | **4.1** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.48** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **1.3** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **1000** | | 20 | 7.2 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **1.3** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0019I-040.0-03202012
**Lab Code:** J1201360-011

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.25** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **18** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **530** | | 20 | 4.4 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 102 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0033-048.5-03202012
**Lab Code:** J1201360-012

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.92** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | **9.9** | I | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.42** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **99** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **3.0** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0033-048.5-03202012
**Lab Code:** J1201360-012

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **1.4** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | **0.52** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **33** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 96 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 103 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0021I-045.0-03202012
**Lab Code:** J1201360-013

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.98** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0021I-045.0-03202012
**Lab Code:** J1201360-013

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0035-045.0-03202012
**Lab Code:** J1201360-014

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.26** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.55** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0035-045.0-03202012
**Lab Code:** J1201360-014

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.23** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.44** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **130** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0028-040.0-03202012
**Lab Code:** J1201360-015

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.59** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.31** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **4.2** | | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **3.5** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0028-040.0-03202012
**Lab Code:** J1201360-015

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.55** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **4.1** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **180** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 95 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 110 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0037-030.0-03202012
**Lab Code:** J1201360-016

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.25** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **1.2** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.44** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **8.0** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0037-030.0-03202012
**Lab Code:** J1201360-016

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.20** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **19** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0017I-030.0-03202012
**Lab Code:** J1201360-017

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.32** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.52** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0017I-030.0-03202012
**Lab Code:** J1201360-017

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.27** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **90** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0014I-040.0-03212012
**Lab Code:** J1201360-018

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | **4.0** | I | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0014I-040.0-03212012
**Lab Code:** J1201360-018

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | **3.6** | | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0029-045.0-03212012
**Lab Code:** J1201360-019

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **1.4** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | **1.4** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **420** | | 10 | 3.6 | 10 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0029-045.0-03212012
**Lab Code:** J1201360-019

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **13** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **140** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **100** | | 10 | 2.2 | 10 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 112 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0026-035.0-03212012
**Lab Code:** J1201360-020

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | **3.5** | | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **9.1** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | **6.4** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | **0.41** | I | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **3600** | | 100 | 36 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0026-035.0-03212012
**Lab Code:** J1201360-020

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | **0.22** | I | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | **0.36** | I | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **34** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **1000** | | 100 | 16 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **2000** | | 100 | 22 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 95 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0022-065.0-03212012
**Lab Code:** J1201360-021

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | **0.51** | I | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | **1.5** | | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0022-065.0-03212012
**Lab Code:** J1201360-021

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | **0.22** | I | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0027-045.0-03212012
**Lab Code:** J1201360-022

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | **0.96** | I | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **2.7** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **790** | | 100 | 36 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0027-045.0-03212012
**Lab Code:** J1201360-022

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | **0.22** | I | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **14** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **1.3** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **1700** | | 100 | 22 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0024-010.0-03212012
**Lab Code:** J1201360-023

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | 11 | | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0024-010.0-03212012
**Lab Code:** J1201360-023

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **0.74** | I | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **13** | | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0025-030.0-03212012
**Lab Code:** J1201360-024

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | **2.2** | | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | **15** | | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | **9700** | | 200 | 72 | 200 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0025-030.0-03212012
**Lab Code:** J1201360-024

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | **0.41** | I | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | **75** | | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | **0.60** | I | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | **7600** | | 200 | 44 | 200 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 92 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** Trip Blank
**Lab Code:** J1201360-029

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** Trip Blank
**Lab Code:** J1201360-029

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CHRE-MW0036-010.0-03202012
**Lab Code:** J1201360-030

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CHRE-MW0036-010.0-03202012
**Lab Code:** J1201360-030

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 95 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200333-4

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200333-4

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 103 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200321-1

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | **19.8** | | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | **19.6** | | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | **20.3** | | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | **19.6** | | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **20.5** | | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | **23.0** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | **20.7** | | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | **19.2** | | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | **16.5** | | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | **18.7** | | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | **20.5** | | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | **19.9** | | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | **21.6** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | **21.5** | | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | **20.9** | | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | **102** | | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | **93.2** | | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | **96.1** | | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | **88.3** | | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **21.4** | | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | **19.6** | | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | **20.2** | | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | **19.2** | | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | **19.1** | | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | **119** | | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | **18.3** | | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **20.7** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | **21.5** | | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **19.6** | | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | **24.8** | | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **21.5** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | **20.9** | | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **20.3** | | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | **19.4** | | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **22.1** | | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200321-1

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | **21.8** | | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | **24.0** | | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| m,p-Xylenes | **44.3** | | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | **19.4** | | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | **20.0** | | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **20.5** | | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | **21.3** | | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | **20.9** | | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | **20.2** | | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **21.1** | | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **20.9** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | **19.7** | | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | **20.6** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | **20.3** | | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | **21.4** | | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **21.4** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200325-1

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | **19.4** | | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | **20.2** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | **21.1** | | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | **19.6** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | **21.2** | | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **23.6** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | **19.5** | | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | **18.7** | | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | **16.7** | | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | **19.1** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | **20.3** | | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | **19.8** | | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | **21.5** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | **21.0** | | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | **21.0** | | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | **99.8** | | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | **94.3** | | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | **95.0** | | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | **86.2** | | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | **21.4** | | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | **19.4** | | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | **20.9** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | **20.2** | | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | **19.4** | | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | **121** | | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | **19.3** | | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | **20.3** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | **22.3** | | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | **20.5** | | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | **25.2** | | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **21.7** | | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | **20.7** | | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | **20.8** | | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | **19.5** | | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | **22.3** | | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200325-1

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | **21.1** | | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | **23.8** | | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | **44.3** | | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | **18.4** | | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | **20.8** | | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | **21.2** | | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | **21.4** | | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | **21.2** | | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | **20.2** | | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | **21.1** | | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **21.2** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | **19.9** | | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **20.8** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | **21.2** | | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | **22.4** | | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **22.0** | | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 104 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 97 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200333-3

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | **18.9** | | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | **19.5** | | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | **19.6** | | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | **19.4** | | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | **20.4** | | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | **22.4** | | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | **19.2** | | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | **17.9** | | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | **16.1** | | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | **18.2** | | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | **19.6** | | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | **20.0** | | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | **21.1** | | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | **20.9** | | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | **20.4** | | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | **98.5** | | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | **91.0** | | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | **92.1** | | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | **90.0** | | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | **20.5** | | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | **18.7** | | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | **20.6** | | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | **18.3** | | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | **17.8** | | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | **114** | | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | **17.7** | | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | **19.7** | | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | **19.9** | | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | **19.7** | | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | **21.6** | | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | **20.9** | | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | **19.6** | | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | **19.8** | | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | **18.4** | | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | **19.8** | I | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200333-3

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | **20.8** | | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | **24.1** | | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| m,p-Xylenes | **41.0** | | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | **19.1** | | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | **19.8** | | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | **20.0** | | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | **20.2** | | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | **19.9** | | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | **18.9** | | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | **20.0** | | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | **20.1** | | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | **19.3** | | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | **20.3** | | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | **18.9** | I | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | **20.0** | | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | **19.6** | | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 95 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188849-IDW-03212012
**Lab Code:** J1201360-025

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.1 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.1 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.1 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 11 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 11 | 0.40 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 26 | 0.91 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 11 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 11 | 0.59 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 130 | 3.6 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.1 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 11 | 0.42 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.1 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.1 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 11 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 110 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188849-IDW-03212012
**Lab Code:** J1201360-025

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 11 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.1 | 0.064 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 51 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.1 | 0.074 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.1 | 0.51 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.1 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 21 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 21 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.1 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 99 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 101 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188797-IDW-03212012
**Lab Code:** J1201360-026

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.6 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.6 | 0.33 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.6 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 12 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 12 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 12 | 0.44 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.6 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.6 | 0.067 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.6 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 28 | 1.0 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 12 | 0.62 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 12 | 0.65 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 140 | 3.9 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.6 | 0.077 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 12 | 0.46 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.6 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.6 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.6 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 12 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 120 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188797-IDW-03212012
**Lab Code:** J1201360-026

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.6 | 0.067 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 12 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 12 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.6 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | **2.0** | I | 56 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.6 | 0.082 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.6 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.6 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.6 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 23 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 23 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.6 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 92 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 102 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 105 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188842-IDW-03212012
**Lab Code:** J1201360-027

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.1 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.1 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.1 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 11 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 11 | 0.40 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 26 | 0.91 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 11 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 11 | 0.59 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | 22 | I | 130 | 3.6 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.1 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 11 | 0.42 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.1 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.1 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 11 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 110 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188842-IDW-03212012
**Lab Code:** J1201360-027

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 11 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.1 | 0.064 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 51 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.1 | 0.074 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.1 | 0.51 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.1 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 21 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 21 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.1 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 90 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 103 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 91 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 105 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188838-IDW-03212012
**Lab Code:** J1201360-028

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.8 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.8 | 0.34 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.8 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 12 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 12 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 12 | 0.45 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.8 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.8 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.8 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 29 | 1.1 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 12 | 0.64 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 12 | 0.67 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | **17** | I | 150 | 4.1 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.8 | 0.080 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | **2.1** | I | 12 | 0.48 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.8 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.8 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.8 | 0.32 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 12 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 120 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188838-IDW-03212012
**Lab Code:** J1201360-028

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.8 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 12 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 12 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.8 | 0.073 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 58 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.8 | 0.085 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.8 | 0.58 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.8 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.8 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 24 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 24 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.8 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 116 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 99 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 108 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200305-2

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.0 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.0 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.0 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 10 | 0.39 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 25 | 0.90 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 10 | 0.55 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 10 | 0.58 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 130 | 3.5 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.0 | 0.069 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 10 | 0.41 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.0 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.0 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 10 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 100 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200305-2

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 10 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.0 | 0.063 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 50 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.0 | 0.073 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.0 | 0.50 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.0 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 20 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.0 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 95 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 102 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200305-1

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | **18.1** | | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | **17.4** | | 5.0 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | **17.4** | | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | **18.4** | | 5.0 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | **18.3** | | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | **16.0** | | 5.0 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | **18.9** | | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | **18.7** | | 10 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | **17.4** | | 10 | 0.39 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | **18.2** | | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | **18.6** | | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | **17.7** | | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | **18.3** | | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | **18.5** | | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | **18.7** | | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | **87.5** | | 25 | 0.90 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | **88.0** | | 10 | 0.55 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | **90.1** | | 10 | 0.58 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | **83.4** | I | 130 | 3.5 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | **18.2** | | 5.0 | 0.069 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | **19.0** | | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | **17.1** | | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | **16.8** | | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | **18.5** | | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | **110** | | 10 | 0.41 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | **16.0** | | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | **19.0** | | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | **17.5** | | 5.0 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | **17.1** | | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | **16.6** | | 5.0 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | **18.4** | | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | **18.5** | | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | **19.3** | | 10 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | **16.7** | | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | **17.1** | I | 100 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200305-1

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | **18.9** | | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | **20.9** | | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | **38.0** | | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | **16.6** | | 10 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | **18.1** | | 5.0 | 0.063 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | **16.6** | I | 50 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | **18.3** | | 5.0 | 0.073 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | **19.1** | | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | **18.9** | | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | **18.7** | | 5.0 | 0.50 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | **17.6** | | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | **17.6** | | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | **18.4** | | 5.0 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | **17.4** | I | 20 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | **17.7** | I | 20 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | **18.9** | | 5.0 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 97 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 98 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 101 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Validation Package

## Standards Data



n:\Stealth\Crystal.rpt\DividerE.rpt

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 09:17

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS52\DATA\MS52-120322\0322-01.D
**Instrument ID:** MS52
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200306

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 15.1 | 3056 | PASS |
| 75 | 95 | 30 | 60 | 44.7 | 9053 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 20275 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 1378 | PASS |
| 173 | 174 | 0 | 2 | 0.4 | 78 | PASS |
| 174 | 95 | 50 | 120 | 93.5 | 18957 | PASS |
| 175 | 174 | 5 | 9 | 7.2 | 1370 | PASS |
| 176 | 174 | 95 | 101 | 98.9 | 18742 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 1226 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200306-2 | J:\MS52\DATA\MS52-120322\0322-02.D | 03/22/2012 | 09:45 | |
| Lab Control Sample | JWG1200305-1 | J:\MS52\DATA\MS52-120322\0322-03.D | 03/22/2012 | 10:14 | |
| Method Blank | JWG1200305-2 | J:\MS52\DATA\MS52-120322\0322-05.D | 03/22/2012 | 11:28 | |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/2012 | 18:20 | |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/2012 | 18:48 | |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/2012 | 19:17 | |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/2012 | 19:45 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 10:42

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120330\0330-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200322

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 15.2 | 25176 | PASS |
| 75 | 95 | 30 | 60 | 33.7 | 55912 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 166080 | PASS |
| 96 | 95 | 5 | 9 | 6.4 | 10595 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 90.7 | 150592 | PASS |
| 175 | 174 | 5 | 9 | 7.5 | 11247 | PASS |
| 176 | 174 | 95 | 101 | 95.4 | 143616 | PASS |
| 177 | 176 | 5 | 9 | 6.0 | 8649 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200322-2 | J:\MS53\DATA\MS53-120330\0330-02.D | 03/30/2012 | 11:12 | |
| Lab Control Sample | JWG1200321-1 | J:\MS53\DATA\MS53-120330\0330-03.D | 03/30/2012 | 11:42 | |
| Method Blank | JWG1200321-2 | J:\MS53\DATA\MS53-120330\0330-06.D | 03/30/2012 | 13:10 | |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/2012 | 13:40 | |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/2012 | 14:10 | |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/2012 | 14:40 | |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/2012 | 15:09 | |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/2012 | 15:39 | |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/2012 | 16:09 | |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/2012 | 16:39 | |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/2012 | 17:09 | |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/2012 | 17:39 | |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/2012 | 18:09 | |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/2012 | 18:39 | |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/2012 | 19:09 | |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/2012 | 19:39 | |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/2012 | 20:09 | |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/2012 | 20:39 | |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/2012 | 21:08 | |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/2012 | 21:38 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 08:51

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120402\0402-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200326

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.4 | 37064 | PASS |
| 75 | 95 | 30 | 60 | 35.7 | 80421 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 225429 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 14647 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 79.9 | 180139 | PASS |
| 175 | 174 | 5 | 9 | 7.7 | 13885 | PASS |
| 176 | 174 | 95 | 101 | 96.2 | 173248 | PASS |
| 177 | 176 | 5 | 9 | 6.3 | 10928 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200326-2 | J:\MS53\DATA\MS53-120402\0402-02.D | 04/02/2012 | 09:21 | |
| Lab Control Sample | JWG1200325-1 | J:\MS53\DATA\MS53-120402\0402-03.D | 04/02/2012 | 09:51 | |
| Method Blank | JWG1200325-2 | J:\MS53\DATA\MS53-120402\0402-06.D | 04/02/2012 | 11:20 | |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/2012 | 11:50 | |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/2012 | 12:20 | |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/2012 | 12:49 | |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/2012 | 13:20 | |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/2012 | 13:50 | |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/2012 | 14:20 | |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/2012 | 14:50 | |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/2012 | 15:19 | |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/2012 | 15:49 | |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/2012 | 16:19 | |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/2012 | 16:49 | |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/2012 | 17:19 | |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/2012 | 17:49 | |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/2012 | 18:19 | |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/2012 | 18:49 | |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/2012 | 19:19 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 10:53

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120403\0403-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200334

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.8 | 34616 | PASS |
| 75 | 95 | 30 | 60 | 36.5 | 75304 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 206165 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 13426 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 74.0 | 152600 | PASS |
| 175 | 174 | 5 | 9 | 8.1 | 12319 | PASS |
| 176 | 174 | 95 | 101 | 95.9 | 146363 | PASS |
| 177 | 176 | 5 | 9 | 6.7 | 9745 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200334-2 | J:\MS53\DATA\MS53-120403\0403-03.D | 04/03/2012 | 11:53 | |
| Lab Control Sample | JWG1200333-3 | J:\MS53\DATA\MS53-120403\0403-04.D | 04/03/2012 | 12:25 | |
| Method Blank | JWG1200333-4 | J:\MS53\DATA\MS53-120403\0403-07.D | 04/03/2012 | 13:53 | |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/2012 | 14:23 | |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/2012 | 14:52 | |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/2012 | 15:22 | |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/2012 | 15:51 | |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/2012 | 16:21 | |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/2012 | 16:50 | |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/2012 | 17:20 | |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/2012 | 18:18 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\MS52\DATA\MS52-120227\0227-04.D | F | J:\MS52\DATA\MS52-120227\0227-09.D |
| B | J:\MS52\DATA\MS52-120227\0227-05.D | G | J:\MS52\DATA\MS52-120227\0227-10.D |
| C | J:\MS52\DATA\MS52-120227\0227-06.D | H | J:\MS52\DATA\MS52-120227\0227-11.D |
| D | J:\MS52\DATA\MS52-120227\0227-07.D | I | J:\MS52\DATA\MS52-120227\0227-12.D |
| E | J:\MS52\DATA\MS52-120227\0227-08.D | | |

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | A | 1.0 | 1.06 | B | 2.0 | 1.07 | C | 5.0 | 1.09 | D | 10 | 1.16 | E | 20 | 1.24 |
| | F | 50 | 1.29 | G | 100 | 1.41 | H | 150 | 1.24 | I | 200 | 1.35 | | | |
| 1,1,1-Trichloroethane (TCA) | A | 1.0 | 0.672 | B | 2.0 | 0.693 | C | 5.0 | 0.706 | D | 10 | 0.709 | E | 20 | 0.843 |
| | F | 50 | 0.863 | G | 100 | 0.927 | H | 150 | 0.774 | I | 200 | 0.890 | | | |
| 1,1,2,2-Tetrachloroethane | A | 1.0 | 0.996 | B | 2.0 | 0.870 | C | 5.0 | 0.993 | D | 10 | 0.943 | E | 20 | 0.984 |
| | F | 50 | 1.03 | G | 100 | 1.16 | H | 150 | 1.08 | I | 200 | 1.03 | | | |
| 1,1,2-Trichloroethane | A | 1.0 | 0.650 | B | 2.0 | 0.651 | C | 5.0 | 0.608 | D | 10 | 0.664 | E | 20 | 0.665 |
| | F | 50 | 0.704 | G | 100 | 0.758 | H | 150 | 0.685 | I | 200 | 0.694 | | | |
| 1,1-Dichloroethane | A | 1.0 | 0.636 | B | 2.0 | 0.665 | C | 5.0 | 0.745 | D | 10 | 0.712 | E | 20 | 0.795 |
| | F | 50 | 0.787 | G | 100 | 0.830 | H | 150 | 0.727 | I | 200 | 0.812 | | | |
| 1,1-Dichloroethene | A | 1.0 | 0.518 | B | 2.0 | 0.546 | C | 5.0 | 0.598 | D | 10 | 0.564 | E | 20 | 0.676 |
| | F | 50 | 0.699 | G | 100 | 0.729 | H | 150 | 0.616 | I | 200 | 0.713 | | | |
| 1,2,3-Trichlorobenzene | | | | | | | C | 5.0 | 1.51 | D | 10 | 1.53 | E | 20 | 1.65 |
| | F | 50 | 1.68 | G | 100 | 1.88 | H | 150 | 1.79 | I | 200 | 1.79 | | | |
| 1,2,4-Trichlorobenzene | | | | | | | C | 5.0 | 1.78 | D | 10 | 1.65 | E | 20 | 1.85 |
| | F | 50 | 1.95 | G | 100 | 2.14 | H | 150 | 2.02 | I | 200 | 2.06 | | | |
| 1,2-Dibromo-3-chloropropane (DBCP | | | | | | | C | 5.0 | 0.201 | D | 10 | 0.207 | E | 20 | 0.215 |
| | F | 50 | 0.224 | G | 100 | 0.265 | H | 150 | 0.268 | I | 200 | 0.246 | | | |
| 1,2-Dibromoethane (EDB) | A | 1.0 | 0.828 | B | 2.0 | 0.746 | C | 5.0 | 0.831 | D | 10 | 0.838 | E | 20 | 0.879 |
| | F | 50 | 0.910 | G | 100 | 1.02 | H | 150 | 0.922 | I | 200 | 0.926 | | | |
| 1,2-Dichlorobenzene | A | 1.0 | 2.20 | B | 2.0 | 2.23 | C | 5.0 | 2.29 | D | 10 | 2.27 | E | 20 | 2.42 |
| | F | 50 | 2.48 | G | 100 | 2.75 | H | 150 | 2.54 | I | 200 | 2.57 | | | |
| 1,2-Dichloroethane (EDC) | A | 1.0 | 0.451 | B | 2.0 | 0.543 | C | 5.0 | 0.534 | D | 10 | 0.526 | E | 20 | 0.550 |
| | F | 50 | 0.559 | G | 100 | 0.594 | H | 150 | 0.529 | I | 200 | 0.541 | | | |
| 1,2-Dichloroethane-d4 | A | 50 | 0.259 | B | 50 | 0.263 | C | 50 | 0.260 | D | 50 | 0.257 | E | 50 | 0.250 |
| | F | 50 | 0.246 | G | 50 | 0.250 | H | 50 | 0.238 | I | 50 | 0.232 | | | |
| 1,2-Dichloropropane | A | 1.0 | 0.317 | B | 2.0 | 0.359 | C | 5.0 | 0.385 | D | 10 | 0.389 | E | 20 | 0.419 |
| | F | 50 | 0.414 | G | 100 | 0.449 | H | 150 | 0.398 | I | 200 | 0.432 | | | |
| 1,3-Dichlorobenzene | A | 1.0 | 2.49 | B | 2.0 | 2.45 | C | 5.0 | 2.50 | D | 10 | 2.50 | E | 20 | 2.68 |
| | F | 50 | 2.78 | G | 100 | 2.98 | H | 150 | 2.75 | I | 200 | 2.89 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | A | 1.0 | 2.55 | B | 2.0 | 2.49 | C | 5.0 | 2.54 | D | 10 | 2.51 | E | 20 | 2.68 |
| | F | 50 | 2.71 | G | 100 | 2.93 | H | 150 | 2.66 | I | 200 | 2.76 | | | |
| 2-Butanone (MEK) | A | 5.0 | 0.110 | B | 10 | 0.121 | C | 25 | 0.134 | D | 50 | 0.129 | E | 100 | 0.122 |
| | F | 250 | 0.126 | G | 500 | 0.137 | H | 750 | 0.133 | I | 1000 | 0.120 | | | |
| 2-Hexanone | A | 5.0 | 0.483 | B | 10 | 0.458 | C | 25 | 0.508 | D | 50 | 0.502 | E | 100 | 0.493 |
| | F | 250 | 0.519 | G | 500 | 0.587 | H | 750 | 0.567 | I | 1000 | 0.513 | | | |
| 4-Bromofluorobenzene | A | 50 | 0.871 | B | 50 | 0.864 | C | 50 | 0.864 | D | 50 | 0.885 | E | 50 | 0.872 |
| | F | 50 | 0.901 | G | 50 | 0.940 | H | 50 | 1.01 | I | 50 | 1.05 | | | |
| 4-Methyl-2-pentanone (MIBK) | A | 5.0 | 0.687 | B | 10 | 0.676 | C | 25 | 0.718 | D | 50 | 0.734 | E | 100 | 0.712 |
| | F | 250 | 0.727 | G | 500 | 0.822 | H | 750 | 0.779 | I | 1000 | 0.708 | | | |
| Acetone | A | 5.0 | 0.109 | B | 10 | 0.114 | C | 25 | 0.0910 | D | 50 | 0.0862 | E | 100 | 0.0760 |
| | F | 250 | 0.0764 | G | 500 | 0.0848 | H | 750 | 0.0801 | I | 1000 | 0.0729 | | | |
| Benzene | A | 1.0 | 1.64 | B | 2.0 | 1.61 | C | 5.0 | 1.72 | D | 10 | 1.63 | E | 20 | 1.81 |
| | F | 50 | 1.84 | G | 100 | 1.93 | H | 150 | 1.66 | I | 200 | 1.84 | | | |
| Bromochloromethane | A | 1.0 | 0.229 | B | 2.0 | 0.251 | C | 5.0 | 0.275 | D | 10 | 0.266 | E | 20 | 0.289 |
| | F | 50 | 0.281 | G | 100 | 0.280 | H | 150 | 0.254 | I | 200 | 0.262 | | | |
| Bromodichloromethane | A | 1.0 | 0.550 | B | 2.0 | 0.529 | C | 5.0 | 0.562 | D | 10 | 0.550 | E | 20 | 0.610 |
| | F | 50 | 0.623 | G | 100 | 0.668 | H | 150 | 0.599 | I | 200 | 0.632 | | | |
| Bromoform | A | 1.0 | 0.578 | B | 2.0 | 0.610 | C | 5.0 | 0.604 | D | 10 | 0.656 | E | 20 | 0.670 |
| | F | 50 | 0.738 | G | 100 | 0.832 | H | 150 | 0.780 | I | 200 | 0.769 | | | |
| Bromomethane | A | 1.0 | 0.210 | B | 2.0 | 0.245 | C | 5.0 | 0.239 | D | 10 | 0.240 | E | 20 | 0.289 |
| | F | 50 | 0.312 | G | 100 | 0.316 | H | 150 | 0.267 | I | 200 | 0.285 | | | |
| Carbon Disulfide | A | 5.0 | 0.950 | B | 10 | 0.925 | C | 25 | 0.995 | D | 50 | 0.961 | E | 100 | 1.11 |
| | F | 250 | 1.12 | G | 500 | 1.16 | H | 750 | 0.967 | I | 1000 | 1.12 | | | |
| Carbon Tetrachloride | A | 1.0 | 0.499 | B | 2.0 | 0.583 | C | 5.0 | 0.602 | D | 10 | 0.603 | E | 20 | 0.705 |
| | F | 50 | 0.755 | G | 100 | 0.804 | H | 150 | 0.676 | I | 200 | 0.775 | | | |
| Chlorobenzene | A | 1.0 | 2.91 | B | 2.0 | 3.04 | C | 5.0 | 3.14 | D | 10 | 3.18 | E | 20 | 3.41 |
| | F | 50 | 3.49 | G | 100 | 3.79 | H | 150 | 3.26 | I | 200 | 3.61 | | | |
| Chloroethane | A | 1.0 | 0.284 | B | 2.0 | 0.292 | C | 5.0 | 0.287 | D | 10 | 0.265 | E | 20 | 0.321 |
| | F | 50 | 0.322 | G | 100 | 0.335 | H | 150 | 0.285 | I | 200 | 0.325 | | | |
| Chloroform | A | 1.0 | 0.865 | B | 2.0 | 0.772 | C | 5.0 | 0.799 | D | 10 | 0.779 | E | 20 | 0.844 |
| | F | 50 | 0.850 | G | 100 | 0.904 | H | 150 | 0.787 | I | 200 | 0.854 | | | |
| Chloromethane | A | 1.0 | 0.480 | B | 2.0 | 0.498 | C | 5.0 | 0.522 | D | 10 | 0.490 | E | 20 | 0.602 |
| | F | 50 | 0.595 | G | 100 | 0.630 | H | 150 | 0.530 | I | 200 | 0.616 | | | |
| cis-1,2-Dichloroethene | A | 1.0 | 0.521 | B | 2.0 | 0.547 | C | 5.0 | 0.560 | D | 10 | 0.524 | E | 20 | 0.600 |
| | F | 50 | 0.608 | G | 100 | 0.638 | H | 150 | 0.550 | I | 200 | 0.612 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | A | 1.0 | 1.59 | B | 2.0 | 1.51 | C | 5.0 | 1.57 | D | 10 | 1.55 | E | 20 | 1.74 |
| | F | 50 | 1.82 | G | 100 | 1.96 | H | 150 | 1.77 | I | 200 | 1.89 | | | |
| Cyclohexane | A | 1.0 | 0.520 | B | 2.0 | 0.584 | C | 5.0 | 0.628 | D | 10 | 0.623 | E | 20 | 0.741 |
| | F | 50 | 0.762 | G | 100 | 0.817 | H | 150 | 0.690 | I | 200 | 0.796 | | | |
| Dibromochloromethane | A | 1.0 | 0.936 | B | 2.0 | 0.974 | C | 5.0 | 1.04 | D | 10 | 1.01 | E | 20 | 1.10 |
| | F | 50 | 1.15 | G | 100 | 1.28 | H | 150 | 1.15 | I | 200 | 1.20 | | | |
| Dibromofluoromethane | A | 50 | 0.243 | B | 50 | 0.248 | C | 50 | 0.245 | D | 50 | 0.244 | E | 50 | 0.243 |
| | F | 50 | 0.240 | G | 50 | 0.232 | H | 50 | 0.237 | I | 50 | 0.232 | | | |
| Dichlorodifluoromethane | A | 1.0 | 0.485 | B | 2.0 | 0.502 | C | 5.0 | 0.513 | D | 10 | 0.488 | E | 20 | 0.600 |
| | F | 50 | 0.618 | G | 100 | 0.650 | H | 150 | 0.531 | I | 200 | 0.602 | | | |
| Ethylbenzene | A | 1.0 | 4.98 | B | 2.0 | 4.98 | C | 5.0 | 5.31 | D | 10 | 5.29 | E | 20 | 6.02 |
| | F | 50 | 6.24 | G | 100 | 6.74 | H | 150 | 5.77 | I | 200 | 6.43 | | | |
| Isopropylbenzene | A | 1.0 | 3.99 | B | 2.0 | 4.07 | C | 5.0 | 4.52 | D | 10 | 4.56 | E | 20 | 5.01 |
| | F | 50 | 5.26 | G | 100 | 5.79 | H | 150 | 5.23 | I | 200 | 5.74 | | | |
| m,p-Xylenes | A | 2.0 | 3.98 | B | 4.0 | 3.87 | C | 10 | 4.20 | D | 20 | 4.25 | E | 40 | 4.83 |
| | F | 100 | 4.88 | G | 200 | 5.27 | H | 300 | 4.48 | I | 400 | 4.97 | | | |
| Methyl Acetate | A | 1.0 | 0.534 | B | 2.0 | 0.515 | C | 5.0 | 0.528 | D | 10 | 0.519 | E | 20 | 0.510 |
| | F | 50 | 0.481 | G | 100 | 0.537 | H | 150 | 0.506 | I | 200 | 0.458 | | | |
| Methyl tert-Butyl Ether | A | 1.0 | 1.04 | B | 2.0 | 1.05 | C | 5.0 | 1.05 | D | 10 | 1.01 | E | 20 | 1.05 |
| | F | 50 | 1.10 | G | 100 | 1.17 | H | 150 | 1.11 | I | 200 | 1.10 | | | |
| Methylene Chloride | A | 1.0 | 0.840 | B | 2.0 | 0.616 | C | 5.0 | 0.514 | D | 10 | 0.453 | E | 20 | 0.512 |
| | F | 50 | 0.493 | G | 100 | 0.481 | H | 150 | 0.436 | I | 200 | 0.449 | | | |
| o-Xylene | A | 1.0 | 4.45 | B | 2.0 | 4.11 | C | 5.0 | 4.44 | D | 10 | 4.38 | E | 20 | 4.91 |
| | F | 50 | 5.04 | G | 100 | 5.37 | H | 150 | 4.67 | I | 200 | 5.10 | | | |
| Styrene | A | 1.0 | 2.66 | B | 2.0 | 3.13 | C | 5.0 | 3.22 | D | 10 | 3.25 | E | 20 | 3.70 |
| | F | 50 | 3.83 | G | 100 | 4.21 | H | 150 | 3.67 | I | 200 | 3.99 | | | |
| Tetrachloroethene (PCE) | A | 1.0 | 0.932 | B | 2.0 | 0.963 | C | 5.0 | 1.08 | D | 10 | 1.05 | E | 20 | 1.21 |
| | F | 50 | 1.23 | G | 100 | 1.32 | H | 150 | 1.11 | I | 200 | 1.27 | | | |
| Toluene | A | 1.0 | 4.59 | B | 2.0 | 4.55 | C | 5.0 | 4.69 | D | 10 | 4.68 | E | 20 | 5.27 |
| | F | 50 | 5.33 | G | 100 | 5.73 | H | 150 | 4.91 | I | 200 | 5.46 | | | |
| Toluene-d8 | A | 50 | 2.51 | B | 50 | 2.46 | C | 50 | 2.44 | D | 50 | 2.46 | E | 50 | 2.50 |
| | F | 50 | 2.47 | G | 50 | 2.52 | H | 50 | 2.45 | I | 50 | 2.52 | | | |
| trans-1,2-Dichloroethene | A | 1.0 | 0.580 | B | 2.0 | 0.560 | C | 5.0 | 0.577 | D | 10 | 0.557 | E | 20 | 0.650 |
| | F | 50 | 0.639 | G | 100 | 0.679 | H | 150 | 0.577 | I | 200 | 0.661 | | | |
| trans-1,3-Dichloropropene | A | 1.0 | 1.40 | B | 2.0 | 1.47 | C | 5.0 | 1.44 | D | 10 | 1.45 | E | 20 | 1.54 |
| | F | 50 | 1.64 | G | 100 | 1.85 | H | 150 | 1.67 | I | 200 | 1.74 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene (TCE) | A | 1.0 | 0.417 | B | 2.0 | 0.448 | C | 5.0 | 0.503 | D | 10 | 0.491 | E | 20 | 0.550 |
| | F | 50 | 0.557 | G | 100 | 0.591 | H | 150 | 0.512 | I | 200 | 0.578 | | | |
| Trichlorofluoromethane | A | 1.0 | 0.748 | B | 2.0 | 0.708 | C | 5.0 | 0.742 | D | 10 | 0.720 | E | 20 | 0.879 |
| | F | 50 | 0.881 | G | 100 | 0.938 | H | 150 | 0.779 | I | 200 | 0.893 | | | |
| Trichlorotrifluoroethane | A | 1.0 | 0.330 | B | 2.0 | 0.332 | C | 5.0 | 0.376 | D | 10 | 0.372 | E | 20 | 0.452 |
| | F | 50 | 0.462 | G | 100 | 0.471 | H | 150 | 0.393 | I | 200 | 0.453 | | | |
| Vinyl Chloride | A | 1.0 | 0.369 | B | 2.0 | 0.439 | C | 5.0 | 0.448 | D | 10 | 0.423 | E | 20 | 0.496 |
| | F | 50 | 0.465 | G | 100 | 0.461 | H | 150 | 0.365 | I | 200 | 0.444 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| 1,1,1,2-Tetrachloroethane | MS | AverageRF | % RSD | 10.3 | | ≤ 15 | 1.21 | | 0.01 |
| 1,1,1-Trichloroethane (TCA) | MS | AverageRF | % RSD | 12.3 | | ≤ 15 | 0.786 | | 0.01 |
| † 1,1,2,2-Tetrachloroethane | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 1.01 | | 0.3 |
| 1,1,2-Trichloroethane | MS | AverageRF | % RSD | 6.2 | | ≤ 15 | 0.675 | | 0.01 |
| † 1,1-Dichloroethane | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 0.745 | | 0.1 |
| ‡ 1,1-Dichloroethene | MS | AverageRF | % RSD | 12.4 | | ≤ 15 | 0.629 | | 0.01 |
| 1,2,3-Trichlorobenzene | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 1.69 | | 0.01 |
| 1,2,4-Trichlorobenzene | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 1.92 | | 0.01 |
| 1,2-Dibromo-3-chloropropane (DBCP) | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.232 | | 0.01 |
| 1,2-Dibromoethane (EDB) | MS | AverageRF | % RSD | 8.9 | | ≤ 15 | 0.878 | | 0.01 |
| 1,2-Dichlorobenzene | MS | AverageRF | % RSD | 7.7 | | ≤ 15 | 2.42 | | 0.01 |
| 1,2-Dichloroethane (EDC) | MS | AverageRF | % RSD | 7.1 | | ≤ 15 | 0.536 | | 0.01 |
| 1,2-Dichloroethane-d4 | SURR | AverageRF | % RSD | 4.2 | | ≤ 15 | 0.251 | | |
| ‡ 1,2-Dichloropropane | MS | AverageRF | % RSD | 10.1 | | ≤ 15 | 0.396 | | 0.01 |
| 1,3-Dichlorobenzene | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 2.67 | | 0.01 |
| 1,4-Dichlorobenzene | MS | AverageRF | % RSD | 5.3 | | ≤ 15 | 2.65 | | 0.01 |
| 2-Butanone (MEK) | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 0.126 | | 0.01 |
| 2-Hexanone | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.514 | | 0.01 |
| 4-Bromofluorobenzene | SURR | AverageRF | % RSD | 7.6 | | ≤ 15 | 0.918 | | |
| 4-Methyl-2-pentanone (MIBK) | MS | AverageRF | % RSD | 6.3 | | ≤ 15 | 0.729 | | 0.01 |
| Acetone | MS | Linear | R2 | 0.994 | | ≥ 0.99 | 0.0878 | | 0.01 |
| Benzene | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 1.74 | | 0.01 |
| Bromochloromethane | MS | AverageRF | % RSD | 7.0 | | ≤ 15 | 0.265 | | 0.01 |
| Bromodichloromethane | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.592 | | 0.01 |
| † Bromoform | MS | AverageRF | % RSD | 12.9 | | ≤ 15 | 0.693 | | 0.1 |
| Bromomethane | MS | AverageRF | % RSD | 13.5 | | ≤ 15 | 0.267 | | 0.01 |
| Carbon Disulfide | MS | AverageRF | % RSD | 8.9 | | ≤ 15 | 1.03 | | 0.01 |
| Carbon Tetrachloride | MS | Linear | R2 | 0.993 | | ≥ 0.99 | 0.667 | | 0.01 |
| † Chlorobenzene | MS | AverageRF | % RSD | 8.6 | | ≤ 15 | 3.32 | | 0.3 |
| Chloroethane | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 0.302 | | 0.01 |
| ‡ Chloroform | MS | AverageRF | % RSD | 5.5 | | ≤ 15 | 0.828 | | 0.01 |
| † Chloromethane | MS | AverageRF | % RSD | 10.7 | | ≤ 15 | 0.551 | | 0.1 |
| cis-1,2-Dichloroethene | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 0.573 | | 0.01 |
| cis-1,3-Dichloropropene | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 1.71 | | 0.01 |
| Cyclohexane | MS | AverageRF | % RSD | 14.9 | | ≤ 15 | 0.684 | | 0.01 |
| Dibromochloromethane | MS | AverageRF | % RSD | 10.2 | | ≤ 15 | 1.09 | | 0.01 |
| Dibromofluoromethane | SURR | AverageRF | % RSD | 2.3 | | ≤ 15 | 0.241 | | |
| Dichlorodifluoromethane | MS | AverageRF | % RSD | 11.4 | | ≤ 15 | 0.554 | | 0.01 |
| ‡ Ethylbenzene | MS | AverageRF | % RSD | 11.2 | | ≤ 15 | 5.75 | | 0.01 |
| Isopropylbenzene | MS | AverageRF | % RSD | 13.5 | | ≤ 15 | 4.91 | | 0.01 |
| m,p-Xylenes | MS | AverageRF | % RSD | 10.7 | | ≤ 15 | 4.53 | | 0.01 |
| Methyl Acetate | MS | AverageRF | % RSD | 5.1 | | ≤ 15 | 0.510 | | 0.01 |
| Methyl tert-Butyl Ether | MS | AverageRF | % RSD | 4.6 | | ≤ 15 | 1.08 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| Methylene Chloride | MS | Linear | R2 | 0.998 | | ≥ 0.99 | 0.533 | | 0.01 |
| o-Xylene | MS | AverageRF | % RSD | 8.7 | | ≤ 15 | 4.72 | | 0.01 |
| Styrene | MS | AverageRF | % RSD | 13.9 | | ≤ 15 | 3.52 | | 0.01 |
| Tetrachloroethene (PCE) | MS | AverageRF | % RSD | 12.1 | | ≤ 15 | 1.13 | | 0.01 |
| ‡ Toluene | MS | AverageRF | % RSD | 8.6 | | ≤ 15 | 5.02 | | 0.01 |
| Toluene-d8 | SURR | AverageRF | % RSD | 1.2 | | ≤ 15 | 2.48 | | |
| trans-1,2-Dichloroethene | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.609 | | 0.01 |
| trans-1,3-Dichloropropene | MS | AverageRF | % RSD | 9.7 | | ≤ 15 | 1.58 | | 0.01 |
| Trichloroethene (TCE) | MS | AverageRF | % RSD | 11.4 | | ≤ 15 | 0.516 | | 0.01 |
| Trichlorofluoromethane | MS | AverageRF | % RSD | 10.8 | | ≤ 15 | 0.810 | | 0.01 |
| Trichlorotrifluoroethane | MS | AverageRF | % RSD | 13.9 | | ≤ 15 | 0.405 | | 0.01 |
| ‡ Vinyl Chloride | MS | AverageRF | % RSD | 10.0 | | ≤ 15 | 0.434 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012
**Date Analyzed:** 02/27/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2756
**Units:** ug/L

**File ID:** J:\MS52\DATA\MS52-120227\0227-16.D

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 21 | 1.21 | 1.25 | 3 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 21 | 0.786 | 0.827 | 5 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 1.01 | 1.01 | 0 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 21 | 0.675 | 0.713 | 6 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 22 | 0.745 | 0.819 | 10 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.629 | 0.681 | 8 | NA | ± 30 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 20 | 1.69 | 1.66 | -2 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 19 | 1.92 | 1.85 | -4 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 18 | 0.232 | 0.212 | -9 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 21 | 0.878 | 0.906 | 3 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 20 | 2.42 | 2.47 | 2 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.536 | 0.540 | 1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.396 | 0.425 | 7 | NA | ± 30 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 2.67 | 2.72 | 2 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 21 | 2.65 | 2.73 | 3 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 97 | 0.126 | 0.122 | -3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.514 | 0.515 | 0 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 100 | 0.729 | 0.730 | 0 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.0878 | 0.0775 | NA | -7 | ± 30 % | Linear |
| Benzene | 20 | 21 | 1.74 | 1.85 | 6 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 22 | 0.265 | 0.292 | 10 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.592 | 0.612 | 3 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.693 | 0.665 | -4 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.267 | 0.258 | -3 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 1.03 | 1.12 | 8 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 19 | 0.667 | 0.697 | NA | -3 | ± 30 % | Linear |
| Chlorobenzene | 20 | 21 | 3.32 | 3.51 | 6 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 21 | 0.302 | 0.321 | 7 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.828 | 0.846 | 2 | NA | ± 30 % | AverageRF |
| Chloromethane | 20 | 21 | 0.551 | 0.569 | 3 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.573 | 0.605 | 6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 21 | 1.71 | 1.79 | 5 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 22 | 0.684 | 0.743 | 9 | NA | ± 30 % | AverageRF |
| Dibromochloromethane | 20 | 20 | 1.09 | 1.10 | 1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.554 | 0.589 | 6 | NA | ± 30 % | AverageRF |
| Ethylbenzene | 20 | 21 | 5.75 | 6.10 | 6 | NA | ± 30 % | AverageRF |
| Isopropylbenzene | 20 | 21 | 4.91 | 5.23 | 7 | NA | ± 30 % | AverageRF |
| m,p-Xylenes | 40 | 43 | 4.53 | 4.90 | 8 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.510 | 0.512 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 1.08 | 1.10 | 2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 26 | 0.533 | 0.618 | NA | 29 | ± 30 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012
**Date Analyzed:** 02/27/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2756
**Units:** ug/L

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| o-Xylene | 20 | 21 | 4.72 | 4.99 | 6 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 22 | 3.52 | 3.83 | 9 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 21 | 1.13 | 1.21 | 7 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 21 | 5.02 | 5.34 | 6 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 21 | 0.609 | 0.653 | 7 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 1.58 | 1.57 | 0 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 22 | 0.516 | 0.579 | 12 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 21 | 0.810 | 0.857 | 6 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 21 | 0.405 | 0.435 | 7 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 23 | 0.434 | 0.493 | 13 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**† SPCC Compound** **‡ CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\MS53\DATA\MS53-120307\0307-03.D | F | J:\MS53\DATA\MS53-120307\0307-09.D |
| B | J:\MS53\DATA\MS53-120307\0307-04.D | G | J:\MS53\DATA\MS53-120307\0307-10.D |
| C | J:\MS53\DATA\MS53-120307\0307-05.D | H | J:\MS53\DATA\MS53-120307\0307-11.D |
| D | J:\MS53\DATA\MS53-120307\0307-06.D | I | J:\MS53\DATA\MS53-120307\0307-15.D |
| E | J:\MS53\DATA\MS53-120307\0307-08.D | | |

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | A | 1.0 | 0.493 | B | 2.0 | 0.424 | C | 5.0 | 0.487 | D | 10 | 0.500 | E | 50 | 0.524 |
| | F | 100 | 0.512 | G | 150 | 0.473 | H | 200 | 0.463 | I | 20 | 0.523 | | | |
| 1,1,1-Trichloroethane (TCA) | A | 1.0 | 0.186 | B | 2.0 | 0.173 | C | 5.0 | 0.216 | D | 10 | 0.207 | E | 50 | 0.253 |
| | F | 100 | 0.246 | G | 150 | 0.241 | H | 200 | 0.241 | I | 20 | 0.227 | | | |
| 1,1,2,2-Tetrachloroethane | A | 1.0 | 0.721 | B | 2.0 | 0.736 | C | 5.0 | 0.779 | D | 10 | 0.812 | E | 50 | 0.777 |
| | F | 100 | 0.734 | G | 150 | 0.659 | H | 200 | 0.569 | I | 20 | 0.763 | | | |
| 1,1,2-Trichloroethane | A | 1.0 | 0.374 | B | 2.0 | 0.341 | C | 5.0 | 0.369 | D | 10 | 0.374 | E | 50 | 0.363 |
| | F | 100 | 0.380 | G | 150 | 0.348 | H | 200 | 0.339 | I | 20 | 0.381 | | | |
| 1,1-Dichloroethane | A | 1.0 | 0.341 | B | 2.0 | 0.323 | C | 5.0 | 0.390 | D | 10 | 0.382 | E | 50 | 0.427 |
| | F | 100 | 0.421 | G | 150 | 0.422 | H | 200 | 0.411 | I | 20 | 0.406 | | | |
| 1,1-Dichloroethene | A | 1.0 | 0.218 | B | 2.0 | 0.195 | C | 5.0 | 0.247 | D | 10 | 0.227 | E | 50 | 0.266 |
| | F | 100 | 0.240 | G | 150 | 0.219 | H | 200 | 0.206 | I | 20 | 0.257 | | | |
| 1,2,3-Trichlorobenzene | | | | | | | | | | D | 10 | 0.342 | E | 50 | 0.343 |
| | F | 100 | 0.373 | G | 150 | 0.354 | H | 200 | 0.354 | I | 20 | 0.337 | | | |
| 1,2,4-Trichlorobenzene | | | | | | | | | | D | 10 | 0.485 | E | 50 | 0.533 |
| | F | 100 | 0.564 | G | 150 | 0.552 | H | 200 | 0.552 | I | 20 | 0.505 | | | |
| 1,2-Dibromo-3-chloropropane (DBCP | | | | | | | C | 5.0 | 0.0716 | D | 10 | 0.0723 | E | 50 | 0.0750 |
| | F | 100 | 0.0823 | G | 150 | 0.0817 | H | 200 | 0.0823 | I | 20 | 0.0665 | | | |
| 1,2-Dibromoethane (EDB) | A | 1.0 | 0.375 | B | 2.0 | 0.367 | C | 5.0 | 0.413 | D | 10 | 0.423 | E | 50 | 0.415 |
| | F | 100 | 0.425 | G | 150 | 0.406 | H | 200 | 0.382 | I | 20 | 0.421 | | | |
| 1,2-Dichlorobenzene | A | 1.0 | 1.10 | B | 2.0 | 0.997 | C | 5.0 | 1.15 | D | 10 | 1.09 | E | 50 | 1.12 |
| | F | 100 | 1.12 | G | 150 | 1.03 | H | 200 | 1.01 | I | 20 | 1.16 | | | |
| 1,2-Dichloroethane (EDC) | A | 1.0 | 0.136 | B | 2.0 | 0.117 | C | 5.0 | 0.138 | D | 10 | 0.137 | E | 50 | 0.147 |
| | F | 100 | 0.145 | G | 150 | 0.145 | H | 200 | 0.143 | I | 20 | 0.141 | | | |
| 1,2-Dichloroethane-d4 | A | 50 | 0.147 | B | 50 | 0.149 | C | 50 | 0.145 | D | 50 | 0.148 | E | 50 | 0.146 |
| | F | 50 | 0.144 | G | 50 | 0.146 | H | 50 | 0.141 | I | 50 | 0.141 | | | |
| 1,2-Dichloropropane | A | 1.0 | 0.207 | B | 2.0 | 0.201 | C | 5.0 | 0.223 | D | 10 | 0.224 | E | 50 | 0.245 |
| | F | 100 | 0.240 | G | 150 | 0.233 | H | 200 | 0.230 | I | 20 | 0.234 | | | |
| 1,3-Dichlorobenzene | A | 1.0 | 1.27 | B | 2.0 | 1.14 | C | 5.0 | 1.33 | D | 10 | 1.26 | E | 50 | 1.26 |
| | F | 100 | 1.16 | G | 150 | 1.06 | H | 200 | 0.987 | I | 20 | 1.31 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | A | 1.0 | 1.21 | B | 2.0 | 1.11 | C | 5.0 | 1.28 | D | 10 | 1.25 | E | 50 | 1.31 |
| | F | 100 | 1.24 | G | 150 | 1.18 | H | 200 | 1.09 | I | 20 | 1.36 | | | |
| 2-Butanone (MEK) | A | 5.0 | 0.00960 | B | 10 | 0.0116 | C | 25 | 0.0117 | D | 50 | 0.0121 | E | 250 | 0.0134 |
| | F | 500 | 0.0126 | G | 750 | 0.0128 | H | 1000 | 0.0131 | I | 100 | 0.0122 | | | |
| 2-Hexanone | | | | B | 10 | 0.293 | C | 25 | 0.288 | D | 50 | 0.283 | E | 250 | 0.263 |
| | F | 500 | 0.273 | G | 750 | 0.250 | H | 1000 | 0.238 | I | 100 | 0.278 | | | |
| 4-Bromofluorobenzene | A | 50 | 1.02 | B | 50 | 0.970 | C | 50 | 0.993 | D | 50 | 0.952 | E | 50 | 0.907 |
| | F | 50 | 0.857 | G | 50 | 0.815 | H | 50 | 0.793 | I | 50 | 0.954 | | | |
| 4-Methyl-2-pentanone (MIBK) | A | 5.0 | 0.422 | B | 10 | 0.421 | C | 25 | 0.431 | D | 50 | 0.435 | E | 250 | 0.405 |
| | F | 500 | 0.401 | G | 750 | 0.380 | H | 1000 | 0.364 | I | 100 | 0.428 | | | |
| Acetone | A | 5.0 | 0.0341 | B | 10 | 0.0312 | C | 25 | 0.0313 | D | 50 | 0.0309 | E | 250 | 0.0284 |
| | F | 500 | 0.0286 | G | 750 | 0.0280 | H | 1000 | 0.0265 | I | 100 | 0.0274 | | | |
| Benzene | A | 1.0 | 0.820 | B | 2.0 | 0.794 | C | 5.0 | 0.904 | D | 10 | 0.885 | E | 50 | 0.990 |
| | F | 100 | 0.952 | G | 150 | 0.913 | H | 200 | 0.875 | I | 20 | 0.955 | | | |
| Bromochloromethane | A | 1.0 | 0.114 | B | 2.0 | 0.111 | C | 5.0 | 0.133 | D | 10 | 0.136 | E | 50 | 0.146 |
| | F | 100 | 0.145 | G | 150 | 0.148 | H | 200 | 0.145 | I | 20 | 0.142 | | | |
| Bromodichloromethane | A | 1.0 | 0.207 | B | 2.0 | 0.202 | C | 5.0 | 0.227 | D | 10 | 0.231 | E | 50 | 0.252 |
| | F | 100 | 0.246 | G | 150 | 0.244 | H | 200 | 0.233 | I | 20 | 0.241 | | | |
| Bromoform | A | 1.0 | 0.172 | B | 2.0 | 0.166 | C | 5.0 | 0.209 | D | 10 | 0.224 | E | 50 | 0.249 |
| | F | 100 | 0.246 | G | 150 | 0.236 | H | 200 | 0.224 | I | 20 | 0.232 | | | |
| Bromomethane | A | 1.0 | 0.172 | B | 2.0 | 0.160 | C | 5.0 | 0.182 | D | 10 | 0.184 | E | 50 | 0.217 |
| | F | 100 | 0.173 | G | 150 | 0.157 | H | 200 | 0.147 | I | 20 | 0.190 | | | |
| Carbon Disulfide | A | 5.0 | 0.669 | B | 10 | 0.622 | C | 25 | 0.755 | D | 50 | 0.708 | E | 250 | 0.796 |
| | F | 500 | 0.685 | G | 750 | 0.613 | H | 1000 | 0.560 | I | 100 | 0.787 | | | |
| Carbon Tetrachloride | A | 1.0 | 0.132 | B | 2.0 | 0.133 | C | 5.0 | 0.168 | D | 10 | 0.158 | E | 50 | 0.198 |
| | F | 100 | 0.195 | G | 150 | 0.190 | H | 200 | 0.193 | I | 20 | 0.178 | | | |
| Chlorobenzene | A | 1.0 | 1.44 | B | 2.0 | 1.39 | C | 5.0 | 1.57 | D | 10 | 1.54 | E | 50 | 1.56 |
| | F | 100 | 1.52 | G | 150 | 1.37 | H | 200 | 1.29 | I | 20 | 1.64 | | | |
| Chloroethane | A | 1.0 | 0.154 | B | 2.0 | 0.143 | C | 5.0 | 0.161 | D | 10 | 0.167 | E | 50 | 0.188 |
| | F | 100 | 0.162 | G | 150 | 0.150 | H | 200 | 0.143 | I | 20 | 0.178 | | | |
| Chloroform | A | 1.0 | 0.323 | B | 2.0 | 0.293 | C | 5.0 | 0.343 | D | 10 | 0.328 | E | 50 | 0.370 |
| | F | 100 | 0.368 | G | 150 | 0.370 | H | 200 | 0.357 | I | 20 | 0.350 | | | |
| Chloromethane | A | 1.0 | 0.306 | B | 2.0 | 0.286 | C | 5.0 | 0.324 | D | 10 | 0.314 | E | 50 | 0.389 |
| | F | 100 | 0.331 | G | 150 | 0.310 | H | 200 | 0.296 | I | 20 | 0.350 | | | |
| cis-1,2-Dichloroethene | A | 1.0 | 0.246 | B | 2.0 | 0.242 | C | 5.0 | 0.291 | D | 10 | 0.285 | E | 50 | 0.315 |
| | F | 100 | 0.310 | G | 150 | 0.308 | H | 200 | 0.301 | I | 20 | 0.307 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | A | 1.0 | 0.867 | B | 2.0 | 0.838 | C | 5.0 | 0.964 | D | 10 | 0.976 | E | 50 | 0.970 |
| | F | 100 | 1.01 | G | 150 | 0.946 | H | 200 | 0.861 | I | 20 | 0.984 | | | |
| Cyclohexane | A | 1.0 | 0.302 | B | 2.0 | 0.267 | C | 5.0 | 0.366 | D | 10 | 0.311 | E | 50 | 0.419 |
| | F | 100 | 0.412 | G | 150 | 0.404 | H | 200 | 0.413 | I | 20 | 0.389 | | | |
| Dibromochloromethane | A | 1.0 | 0.442 | B | 2.0 | 0.394 | C | 5.0 | 0.445 | D | 10 | 0.461 | E | 50 | 0.462 |
| | F | 100 | 0.473 | G | 150 | 0.437 | H | 200 | 0.412 | I | 20 | 0.476 | | | |
| Dibromofluoromethane | A | 50 | 0.255 | B | 50 | 0.258 | C | 50 | 0.256 | D | 50 | 0.256 | E | 50 | 0.258 |
| | F | 50 | 0.260 | G | 50 | 0.261 | H | 50 | 0.255 | I | 50 | 0.256 | | | |
| Dichlorodifluoromethane | A | 1.0 | 0.110 | B | 2.0 | 0.138 | C | 5.0 | 0.165 | D | 10 | 0.155 | E | 50 | 0.201 |
| | F | 100 | 0.180 | G | 150 | 0.172 | H | 200 | 0.171 | I | 20 | 0.181 | | | |
| Ethylbenzene | A | 1.0 | 2.47 | B | 2.0 | 2.16 | C | 5.0 | 2.70 | D | 10 | 2.58 | E | 50 | 2.63 |
| | F | 100 | 2.56 | G | 150 | 2.23 | H | 200 | 2.03 | I | 20 | 2.78 | | | |
| Isopropylbenzene | A | 1.0 | 2.13 | B | 2.0 | 1.81 | C | 5.0 | 2.30 | D | 10 | 2.11 | E | 50 | 2.35 |
| | F | 100 | 2.21 | G | 150 | 2.04 | H | 200 | 1.94 | I | 20 | 2.39 | | | |
| m,p-Xylenes | A | 2.0 | 1.84 | B | 4.0 | 1.65 | C | 10 | 1.94 | D | 20 | 1.91 | E | 100 | 1.86 |
| | F | 200 | 1.67 | G | 300 | 1.42 | H | 400 | 1.26 | I | 40 | 2.04 | | | |
| Methyl Acetate | A | 1.0 | 0.314 | B | 2.0 | 0.285 | C | 5.0 | 0.285 | D | 10 | 0.294 | E | 50 | 0.296 |
| | F | 100 | 0.291 | G | 150 | 0.285 | H | 200 | 0.270 | I | 20 | 0.287 | | | |
| Methyl tert-Butyl Ether | A | 1.0 | 0.310 | B | 2.0 | 0.317 | C | 5.0 | 0.363 | D | 10 | 0.361 | E | 50 | 0.381 |
| | F | 100 | 0.376 | G | 150 | 0.374 | H | 200 | 0.377 | I | 20 | 0.359 | | | |
| Methylene Chloride | A | 1.0 | 0.228 | B | 2.0 | 0.210 | C | 5.0 | 0.255 | D | 10 | 0.243 | E | 50 | 0.278 |
| | F | 100 | 0.266 | G | 150 | 0.259 | H | 200 | 0.256 | I | 20 | 0.264 | | | |
| o-Xylene | A | 1.0 | 1.82 | B | 2.0 | 1.66 | C | 5.0 | 2.00 | D | 10 | 1.97 | E | 50 | 1.96 |
| | F | 100 | 1.85 | G | 150 | 1.63 | H | 200 | 1.43 | I | 20 | 2.02 | | | |
| Styrene | A | 1.0 | 1.51 | B | 2.0 | 1.37 | C | 5.0 | 1.63 | D | 10 | 1.63 | E | 50 | 1.61 |
| | F | 100 | 1.58 | G | 150 | 1.37 | H | 200 | 1.28 | I | 20 | 1.68 | | | |
| Tetrachloroethene (PCE) | A | 1.0 | 0.392 | B | 2.0 | 0.356 | C | 5.0 | 0.466 | D | 10 | 0.436 | E | 50 | 0.492 |
| | F | 100 | 0.500 | G | 150 | 0.461 | H | 200 | 0.441 | I | 20 | 0.511 | | | |
| Toluene | A | 1.0 | 2.37 | B | 2.0 | 2.18 | C | 5.0 | 2.58 | D | 10 | 2.43 | E | 50 | 2.54 |
| | F | 100 | 2.47 | G | 150 | 2.16 | H | 200 | 1.99 | I | 20 | 2.73 | | | |
| Toluene-d8 | A | 50 | 2.41 | B | 50 | 2.43 | C | 50 | 2.45 | D | 50 | 2.48 | E | 50 | 2.35 |
| | F | 50 | 2.44 | G | 50 | 2.41 | H | 50 | 2.34 | I | 50 | 2.48 | | | |
| trans-1,2-Dichloroethene | A | 1.0 | 0.258 | B | 2.0 | 0.248 | C | 5.0 | 0.305 | D | 10 | 0.285 | E | 50 | 0.345 |
| | F | 100 | 0.338 | G | 150 | 0.333 | H | 200 | 0.326 | I | 20 | 0.324 | | | |
| trans-1,3-Dichloropropene | A | 1.0 | 0.620 | B | 2.0 | 0.584 | C | 5.0 | 0.677 | D | 10 | 0.694 | E | 50 | 0.674 |
| | F | 100 | 0.714 | G | 150 | 0.664 | H | 200 | 0.623 | I | 20 | 0.697 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene (TCE) | A | 1.0 | 0.181 | B | 2.0 | 0.172 | C | 5.0 | 0.213 | D | 10 | 0.204 | E | 50 | 0.233 |
| | F | 100 | 0.228 | G | 150 | 0.221 | H | 200 | 0.209 | I | 20 | 0.224 | | | |
| Trichlorofluoromethane | | | | B | 2.0 | 0.137 | C | 5.0 | 0.190 | D | 10 | 0.176 | E | 50 | 0.225 |
| | F | 100 | 0.216 | G | 150 | 0.209 | H | 200 | 0.206 | I | 20 | 0.205 | | | |
| Trichlorotrifluoroethane | A | 1.0 | 0.154 | B | 2.0 | 0.138 | C | 5.0 | 0.181 | D | 10 | 0.175 | E | 50 | 0.223 |
| | F | 100 | 0.197 | G | 150 | 0.186 | H | 200 | 0.187 | I | 20 | 0.202 | | | |
| Vinyl Chloride | A | 1.0 | 0.208 | B | 2.0 | 0.198 | C | 5.0 | 0.254 | D | 10 | 0.242 | E | 50 | 0.277 |
| | | | | | | | | | | I | 20 | 0.272 | | | |

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† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| 1,1,1,2-Tetrachloroethane | MS | AverageRF | % RSD | 6.6 | | ≤ 15 | 0.489 | | 0.01 |
| 1,1,1-Trichloroethane (TCA) | MS | AverageRF | % RSD | 12.6 | | ≤ 15 | 0.221 | | 0.01 |
| † 1,1,2,2-Tetrachloroethane | MS | AverageRF | % RSD | 10.1 | | ≤ 15 | 0.728 | | 0.3 |
| 1,1,2-Trichloroethane | MS | AverageRF | % RSD | 4.6 | | ≤ 15 | 0.363 | | 0.01 |
| † 1,1-Dichloroethane | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 0.391 | | 0.1 |
| ‡ 1,1-Dichloroethene | MS | AverageRF | % RSD | 10.3 | | ≤ 15 | 0.230 | | 0.01 |
| 1,2,3-Trichlorobenzene | MS | AverageRF | % RSD | 3.7 | | ≤ 15 | 0.351 | | 0.01 |
| 1,2,4-Trichlorobenzene | MS | AverageRF | % RSD | 5.8 | | ≤ 15 | 0.532 | | 0.01 |
| 1,2-Dibromo-3-chloropropane (DBCP) | MS | AverageRF | % RSD | 8.3 | | ≤ 15 | 0.0760 | | 0.01 |
| 1,2-Dibromoethane (EDB) | MS | AverageRF | % RSD | 5.6 | | ≤ 15 | 0.403 | | 0.01 |
| 1,2-Dichlorobenzene | MS | AverageRF | % RSD | 5.5 | | ≤ 15 | 1.09 | | 0.01 |
| 1,2-Dichloroethane (EDC) | MS | AverageRF | % RSD | 6.6 | | ≤ 15 | 0.139 | | 0.01 |
| 1,2-Dichloroethane-d4 | SURR | AverageRF | % RSD | 1.8 | | ≤ 15 | 0.145 | | |
| ‡ 1,2-Dichloropropane | MS | AverageRF | % RSD | 6.4 | | ≤ 15 | 0.227 | | 0.01 |
| 1,3-Dichlorobenzene | MS | AverageRF | % RSD | 9.8 | | ≤ 15 | 1.20 | | 0.01 |
| 1,4-Dichlorobenzene | MS | AverageRF | % RSD | 7.2 | | ≤ 15 | 1.22 | | 0.01 |
| 2-Butanone (MEK) | MS | AverageRF | % RSD | 9.2 | | ≤ 15 | 0.0121 | | 0.01 |
| 2-Hexanone | MS | AverageRF | % RSD | 7.0 | | ≤ 15 | 0.271 | | 0.01 |
| 4-Bromofluorobenzene | SURR | AverageRF | % RSD | 8.7 | | ≤ 15 | 0.917 | | |
| 4-Methyl-2-pentanone (MIBK) | MS | AverageRF | % RSD | 6.0 | | ≤ 15 | 0.410 | | 0.01 |
| Acetone | MS | AverageRF | % RSD | 8.2 | | ≤ 15 | 0.0296 | | 0.01 |
| Benzene | MS | AverageRF | % RSD | 7.1 | | ≤ 15 | 0.899 | | 0.01 |
| Bromochloromethane | MS | AverageRF | % RSD | 10.2 | | ≤ 15 | 0.135 | | 0.01 |
| Bromodichloromethane | MS | AverageRF | % RSD | 7.5 | | ≤ 15 | 0.231 | | 0.01 |
| † Bromoform | MS | AverageRF | % RSD | 13.8 | | ≤ 15 | 0.218 | | 0.1 |
| Bromomethane | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.176 | | 0.01 |
| Carbon Disulfide | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.689 | | 0.01 |
| Carbon Tetrachloride | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.172 | | 0.01 |
| † Chlorobenzene | MS | AverageRF | % RSD | 7.7 | | ≤ 15 | 1.48 | | 0.3 |
| Chloroethane | MS | AverageRF | % RSD | 9.6 | | ≤ 15 | 0.161 | | 0.01 |
| ‡ Chloroform | MS | AverageRF | % RSD | 7.5 | | ≤ 15 | 0.345 | | 0.01 |
| † Chloromethane | MS | AverageRF | % RSD | 9.7 | | ≤ 15 | 0.323 | | 0.1 |
| cis-1,2-Dichloroethene | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 0.290 | | 0.01 |
| cis-1,3-Dichloropropene | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 0.935 | | 0.01 |
| Cyclohexane | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.365 | | 0.01 |
| Dibromochloromethane | MS | AverageRF | % RSD | 6.2 | | ≤ 15 | 0.445 | | 0.01 |
| Dibromofluoromethane | SURR | AverageRF | % RSD | 0.8 | | ≤ 15 | 0.257 | | |
| Dichlorodifluoromethane | MS | Linear | R2 | 0.998 | | ≥ 0.99 | 0.164 | | 0.01 |
| ‡ Ethylbenzene | MS | AverageRF | % RSD | 10.6 | | ≤ 15 | 2.46 | | 0.01 |
| Isopropylbenzene | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 2.14 | | 0.01 |
| m,p-Xylenes | MS | AverageRF | % RSD | 14.9 | | ≤ 15 | 1.73 | | 0.01 |
| Methyl Acetate | MS | AverageRF | % RSD | 4.1 | | ≤ 15 | 0.290 | | 0.01 |
| Methyl tert-Butyl Ether | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 0.358 | | 0.01 |

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† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| Methylene Chloride | MS | AverageRF | % RSD | 8.3 | | ≤ 15 | 0.251 | | 0.01 |
| o-Xylene | MS | AverageRF | % RSD | 11.2 | | ≤ 15 | 1.81 | | 0.01 |
| Styrene | MS | AverageRF | % RSD | 9.4 | | ≤ 15 | 1.52 | | 0.01 |
| Tetrachloroethene (PCE) | MS | AverageRF | % RSD | 11.3 | | ≤ 15 | 0.451 | | 0.01 |
| ‡ Toluene | MS | AverageRF | % RSD | 9.9 | | ≤ 15 | 2.38 | | 0.01 |
| Toluene-d8 | SURR | AverageRF | % RSD | 2.1 | | ≤ 15 | 2.42 | | |
| trans-1,2-Dichloroethene | MS | AverageRF | % RSD | 11.5 | | ≤ 15 | 0.307 | | 0.01 |
| trans-1,3-Dichloropropene | MS | AverageRF | % RSD | 6.5 | | ≤ 15 | 0.661 | | 0.01 |
| Trichloroethene (TCE) | MS | AverageRF | % RSD | 10.0 | | ≤ 15 | 0.209 | | 0.01 |
| Trichlorofluoromethane | MS | AverageRF | % RSD | 14.3 | | ≤ 15 | 0.196 | | 0.01 |
| Trichlorotrifluoroethane | MS | AverageRF | % RSD | 13.8 | | ≤ 15 | 0.183 | | 0.01 |
| ‡ Vinyl Chloride | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.242 | | 0.01 |

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† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012
**Date Analyzed:** 03/07/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2752
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120307\0307-16.D

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 21 | 0.489 | 0.523 | 7 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 21 | 0.221 | 0.234 | 6 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 22 | 0.728 | 0.785 | 8 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 21 | 0.363 | 0.386 | 6 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 21 | 0.391 | 0.419 | 7 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 23 | 0.230 | 0.261 | 13 | NA | ± 30 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 20 | 0.351 | 0.349 | 0 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 20 | 0.532 | 0.523 | -2 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 19 | 0.0760 | 0.0717 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 21 | 0.403 | 0.427 | 6 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 22 | 1.09 | 1.19 | 10 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 21 | 0.139 | 0.142 | 3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.227 | 0.240 | 6 | NA | ± 30 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 22 | 1.20 | 1.35 | 12 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 22 | 1.22 | 1.33 | 9 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 110 | 0.0121 | 0.0131 | 8 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.271 | 0.280 | 3 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 110 | 0.410 | 0.432 | 5 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.0296 | 0.0276 | -7 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 22 | 0.899 | 0.979 | 9 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 21 | 0.135 | 0.143 | 6 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.231 | 0.244 | 5 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 22 | 0.218 | 0.239 | 10 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 22 | 0.176 | 0.192 | 9 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.689 | 0.795 | 15 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 19 | 0.172 | 0.181 | NA | -3 | ± 30 % | Linear |
| Chlorobenzene | 20 | 22 | 1.48 | 1.62 | 10 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 22 | 0.161 | 0.175 | 9 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 21 | 0.345 | 0.364 | 6 | NA | ± 30 % | AverageRF |
| Chloromethane | 20 | 22 | 0.323 | 0.351 | 9 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.290 | 0.306 | 6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 21 | 0.935 | 0.996 | 6 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.365 | 0.398 | NA | 0 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 21 | 0.445 | 0.478 | 7 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 18 | 0.164 | 0.164 | NA | -11 | ± 30 % | Linear |
| Ethylbenzene | 20 | 23 | 2.46 | 2.81 | 14 | NA | ± 30 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 2.14 | 2.41 | 13 | NA | ± 30 % | AverageRF |
| m,p-Xylenes | 40 | 47 | 1.73 | 2.03 | 17 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 21 | 0.290 | 0.301 | 4 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.358 | 0.363 | 2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 22 | 0.251 | 0.271 | 8 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012
**Date Analyzed:** 03/07/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2752
**Units:** ug/L

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| o-Xylene | 20 | 23 | 1.81 | 2.07 | 14 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 22 | 1.52 | 1.70 | 12 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 23 | 0.451 | 0.515 | 14 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 23 | 2.38 | 2.71 | 14 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 21 | 0.307 | 0.328 | 7 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 21 | 0.661 | 0.696 | 5 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 22 | 0.209 | 0.229 | 10 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 21 | 0.196 | 0.206 | 5 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 22 | 0.183 | 0.199 | 9 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.242 | 0.264 | NA | -2 | ± 30 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 02/27/2012
**ICAL ID:** CAL2756
**Analysis Lot:** JWG1200306
**Units:** ug/L

**File ID:** J:\MS52\DATA\MS52-120322\0322-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 18 | 0.01 | 1.21 | 1.10 | -9 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 18 | 0.01 | 0.786 | 0.715 | -9 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 1.01 | 0.998 | -1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.675 | 0.656 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 19 | 0.1 | 0.745 | 0.708 | -5 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 17 | 0.01 | 0.629 | 0.526 | -16 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 1.69 | 1.63 | -4 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 19 | 0.01 | 1.92 | 1.86 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 18 | 0.01 | 0.232 | 0.213 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.878 | 0.824 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 18 | 0.01 | 2.42 | 2.22 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 18 | 0.01 | 0.536 | 0.491 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 50 | | 0.251 | 0.251 | 0 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 19 | 0.01 | 0.396 | 0.378 | -4 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 19 | 0.01 | 2.67 | 2.49 | -7 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 18 | 0.01 | 2.65 | 2.44 | -8 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.126 | 0.129 | 3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.01 | 0.514 | 0.521 | 1 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 47 | | 0.918 | 0.861 | -6 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 100 | 0.01 | 0.729 | 0.733 | 1 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 98 | 0.01 | 0.0878 | 0.0782 | NA | -2 | ± 30 % | Linear |
| Benzene | 20 | 19 | 0.01 | 1.74 | 1.63 | -6 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 20 | 0.01 | 0.265 | 0.260 | -2 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 18 | 0.01 | 0.592 | 0.536 | -9 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 18 | 0.1 | 0.693 | 0.631 | -9 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.01 | 0.267 | 0.247 | -7 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.01 | 1.03 | 1.20 | 16 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 17 | 0.01 | 0.667 | 0.591 | NA | -17 | ± 30 % | Linear |
| Chlorobenzene | 20 | 19 | 0.3 | 3.32 | 3.19 | -4 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 19 | 0.01 | 0.302 | 0.288 | -4 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 18 | 0.01 | 0.828 | 0.729 | -12 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 17 | 0.1 | 0.551 | 0.480 | -13 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 19 | 0.01 | 0.573 | 0.541 | -6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 19 | 0.01 | 1.71 | 1.63 | -5 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.684 | 0.674 | -2 | NA | ± 30 % | AverageRF |
| Dibromochloromethane | 20 | 18 | 0.01 | 1.09 | 0.995 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 50 | | 0.241 | 0.238 | -1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 18 | 0.01 | 0.554 | 0.489 | -12 | NA | ± 30 % | AverageRF |
| Ethylbenzene | 20 | 19 | 0.01 | 5.75 | 5.57 | -3 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 21 | 0.01 | 4.91 | 5.09 | 4 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 02/27/2012
**ICAL ID:** CAL2756
**Analysis Lot:** JWG1200306
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 39 | 0.01 | 4.53 | 4.39 | -3 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.510 | 0.509 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 1.08 | 1.05 | -2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 17 | 0.01 | 0.533 | 0.395 | NA | -17 | ± 30 % | Linear |
| o-Xylene | 20 | 19 | 0.01 | 4.72 | 4.49 | -5 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 3.52 | 3.47 | -1 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 20 | 0.01 | 1.13 | 1.12 | -1 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 19 | 0.01 | 5.02 | 4.81 | -4 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 51 | | 2.48 | 2.51 | 1 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 18 | 0.01 | 0.609 | 0.556 | -9 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 18 | 0.01 | 1.58 | 1.46 | -8 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 19 | 0.01 | 0.516 | 0.490 | -5 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 18 | 0.01 | 0.810 | 0.722 | -11 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 17 | 0.01 | 0.405 | 0.353 | -13 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.01 | 0.434 | 0.432 | -1 | NA | ± 20 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200322
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120330\0330-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 19 | 0.01 | 0.489 | 0.459 | -6 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.208 | -6 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.719 | -1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.354 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 20 | 0.1 | 0.391 | 0.398 | 2 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.01 | 0.230 | 0.256 | 11 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 18 | 0.01 | 0.351 | 0.323 | -8 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.468 | -12 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 15 | 0.01 | 0.0760 | 0.0577 | -24 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.403 | 0.373 | -7 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 20 | 0.01 | 1.09 | 1.08 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.01 | 0.139 | 0.136 | -2 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 49 | | 0.145 | 0.144 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.238 | 5 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 0.01 | 1.20 | 1.22 | 2 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 21 | 0.01 | 1.22 | 1.26 | 3 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.0121 | 0.0127 | 5 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 94 | 0.01 | 0.271 | 0.254 | -6 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 54 | | 0.917 | 0.993 | 8 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.384 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.01 | 0.0296 | 0.0274 | -7 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 21 | 0.01 | 0.899 | 0.927 | 3 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.132 | -3 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 20 | 0.01 | 0.231 | 0.228 | -2 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 18 | 0.1 | 0.218 | 0.201 | -8 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 18 | 0.01 | 0.176 | 0.162 | -8 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 0.01 | 0.689 | 0.769 | 12 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 17 | 0.01 | 0.172 | 0.159 | NA | -15 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.45 | -2 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 20 | 0.01 | 0.161 | 0.160 | 0 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.01 | 0.345 | 0.338 | -2 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.378 | 17 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.290 | 0.296 | 2 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.934 | 0 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.387 | NA | -2 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 19 | 0.01 | 0.445 | 0.411 | -8 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 49 | | 0.257 | 0.254 | -1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.194 | NA | 6 | ± 30 % | Linear |
| Ethylbenzene | 20 | 20 | 0.01 | 2.46 | 2.49 | 1 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 0.01 | 2.14 | 2.50 | 17 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200322
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.76 | 2 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.290 | 0.290 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.357 | 0 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 20 | 0.01 | 0.251 | 0.252 | 0 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 20 | 0.01 | 1.81 | 1.80 | -1 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.50 | -1 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.428 | -5 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.33 | -2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.32 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.299 | -2 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 19 | 0.01 | 0.661 | 0.637 | -4 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.207 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.191 | -2 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 20 | 0.01 | 0.183 | 0.183 | 0 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 21 | 0.01 | 0.242 | 0.278 | NA | 3 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200326
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120402\0402-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 19 | 0.01 | 0.489 | 0.460 | -6 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.212 | -4 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.729 | 0 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.352 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 20 | 0.1 | 0.391 | 0.399 | 2 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 23 | 0.01 | 0.230 | 0.263 | 14 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 0.351 | 0.329 | -6 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.470 | -12 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 16 | 0.01 | 0.0760 | 0.0614 | -19 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 18 | 0.01 | 0.403 | 0.371 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 19 | 0.01 | 1.09 | 1.02 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 19 | 0.01 | 0.139 | 0.132 | -5 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 47 | | 0.145 | 0.137 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.237 | 5 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 0.01 | 1.20 | 1.21 | 1 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 20 | 0.01 | 1.22 | 1.21 | -1 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 97 | 0.01 | 0.0121 | 0.0118 | -3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 92 | 0.01 | 0.271 | 0.249 | -8 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 53 | | 0.917 | 0.967 | 5 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.386 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 88 | 0.01 | 0.0296 | 0.0261 | -12 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 21 | 0.01 | 0.899 | 0.965 | 7 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.129 | -5 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 20 | 0.01 | 0.231 | 0.234 | 1 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.1 | 0.218 | 0.211 | -3 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.01 | 0.176 | 0.165 | -6 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.01 | 0.689 | 0.804 | 17 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 18 | 0.01 | 0.172 | 0.170 | NA | -9 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.46 | -1 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 20 | 0.01 | 0.161 | 0.163 | 1 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.01 | 0.345 | 0.336 | -2 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.375 | 16 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.01 | 0.290 | 0.305 | 5 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.946 | 1 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.392 | NA | -1 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 18 | 0.01 | 0.445 | 0.407 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 50 | | 0.257 | 0.259 | 1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.191 | NA | 5 | ± 30 % | Linear |
| Ethylbenzene | 20 | 19 | 0.01 | 2.46 | 2.36 | -4 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 0.01 | 2.14 | 2.43 | 13 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200326
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.76 | 2 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.290 | 0.283 | -2 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.360 | 1 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 21 | 0.01 | 0.251 | 0.261 | 4 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 21 | 0.01 | 1.81 | 1.87 | 3 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.52 | 0 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.429 | -5 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.42 | 2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.32 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.309 | 1 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.661 | 0.653 | -1 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.208 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.194 | -1 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 20 | 0.01 | 0.183 | 0.186 | 2 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.01 | 0.242 | 0.276 | NA | 2 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200334
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120403\0403-03.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 18 | 0.01 | 0.489 | 0.451 | -8 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.210 | -5 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.734 | 1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.354 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 21 | 0.1 | 0.391 | 0.401 | 3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.01 | 0.230 | 0.251 | 9 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 0.351 | 0.329 | -6 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.481 | -10 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 16 | 0.01 | 0.0760 | 0.0607 | -20 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.403 | 0.375 | -7 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 19 | 0.01 | 1.09 | 1.05 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.01 | 0.139 | 0.137 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 48 | | 0.145 | 0.140 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.233 | 3 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 21 | 0.01 | 1.20 | 1.23 | 3 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 20 | 0.01 | 1.22 | 1.20 | -2 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.0121 | 0.0124 | 2 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 93 | 0.01 | 0.271 | 0.252 | -7 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 51 | | 0.917 | 0.942 | 3 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.385 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 92 | 0.01 | 0.0296 | 0.0273 | -8 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 20 | 0.01 | 0.899 | 0.915 | 2 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.128 | -5 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.01 | 0.231 | 0.238 | 3 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.1 | 0.218 | 0.202 | -7 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 18 | 0.01 | 0.176 | 0.157 | -11 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 0.01 | 0.689 | 0.769 | 12 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 18 | 0.01 | 0.172 | 0.166 | NA | -11 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.45 | -2 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 21 | 0.01 | 0.161 | 0.165 | 3 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 19 | 0.01 | 0.345 | 0.329 | -5 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.369 | 14 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.290 | 0.289 | 0 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.922 | -1 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.392 | NA | -1 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 18 | 0.01 | 0.445 | 0.406 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 48 | | 0.257 | 0.248 | -4 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.189 | NA | 4 | ± 30 % | Linear |
| Ethylbenzene | 20 | 20 | 0.01 | 2.46 | 2.51 | 2 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 22 | 0.01 | 2.14 | 2.38 | 11 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200334
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.78 | 3 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 19 | 0.01 | 0.290 | 0.272 | -6 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.358 | 0 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 20 | 0.01 | 0.251 | 0.246 | -2 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 20 | 0.01 | 1.81 | 1.82 | 0 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.51 | 0 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.420 | -7 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.44 | 2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.31 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.304 | -1 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.661 | 0.651 | -2 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.206 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.191 | -2 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 21 | 0.01 | 0.183 | 0.192 | 5 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 21 | 0.01 | 0.242 | 0.280 | NA | 3 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Validation Package

## Sample Prep and Screen Data



p:\Stealth\Crystal.rpt\DividerF.rpt

# *Preparation Information*

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200305 | **Prep Method:** | EPA 5035 | **Prep Date:** | 03/22/12 09:17 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Client ID | Product | Matrix | Amt. Ext. | Final Vol. | Solids |
|---|---|---|---|---|---|---|
| J1201360-025 | CRHE-188849-IDW-0321201 | 8260B | SOIL | 5.9300g | 5mL | 84 |
| J1201360-026 | CRHE-188797-IDW-0321201 | 8260B | SOIL | 5.1200g | 5mL | 88 |
| J1201360-027 | CRHE-188842-IDW-0321201 | 8260B | SOIL | 5.9600g | 5mL | 83 |
| J1201360-028 | CRHE-188838-IDW-0321201 | 8260B | SOIL | 5.3500g | 5mL | 81 |
| JWG1200305-1 | Lab Control Sample | 8260B | SOIL | 5.00g | 5ml | 100 |
| JWG1200305-2 | Method Blank | 8260B | SOIL | 5.00g | 5ml | 100 |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201360-025 | 264703 | 42346 | 1uL | | | |
| J1201360-026 | 264704 | 42346 | 1uL | | | |
| J1201360-027 | 264705 | 42346 | 1uL | | | |
| J1201360-028 | 264706 | 42346 | 1uL | | | |
| JWG1200305-1 | 264707 | 42346 | 1uL | 42183/40123 | 20uL | |
| JWG1200305-2 | 264708 | 42346 | 1uL | | | |

**Comments:**

Started By: SAllen Assisted By: _____ Training: Yes No

Completed By: SAllen Assisted By: _____ Yes No

Reviewed By: _____ Date: _____ Storage: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined: Yes No

Received By: _____ Date: _____

# *Preparation Information*

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200321 | **Prep Method:** | EPA 5030B | **Prep Date:** | 03/30/12 10:42 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Client ID | Product | Matrix | Amt. Ext. | Final Vol. |
|---|---|---|---|---|---|
| J1201360-001 | CRHE-MW0032-045.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-002 | CRHE-MW0030-010.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-003 | CRHE-MW0023-065.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-004 | CRHE-MW0031-045.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-005 | CRHE-IW0020I-045.0-03192 | 8260B | WATER | 10ml | 10ml |
| J1201360-006 | CRHE-MW0039-030.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-007 | CRHE-MW0038-010.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-008 | EB01-03192012 | 8260B | WATER | 10ml | 10ml |
| J1201360-009 | CRHE-IW0015I-040.0-03192 | 8260B | WATER | 10ml | 10ml |
| J1201360-010 | CRHE-MW0034-038.5-0320: | 8260B | WATER | 10ml | 10ml |
| J1201360-011 | CRHE-IW0019I-040.0-03202 | 8260B | WATER | 10ml | 10ml |
| J1201360-012 | CRHE-MW0033-048.5-0320: | 8260B | WATER | 10ml | 10ml |
| J1201360-013 | CRHE-IW0021I-045.0-03202 | 8260B | WATER | 10ml | 10ml |
| J1201360-014 | CRHE-MW0035-045.0-0320: | 8260B | WATER | 10ml | 10ml |
| J1201360-015 | CRHE-MW0028-040.0-0320: | 8260B | WATER | 10ml | 10ml |
| J1201360-016 | CRHE-MW0037-030.0-0320: | 8260B | WATER | 10ml | 10ml |
| J1201360-017 | CRHE-IW0017I-030.0-03202 | 8260B | WATER | 10ml | 10ml |
| JWG1200321-1 | Lab Control Sample | 8260B | WATER | 10ml | 10ml |
| JWG1200321-2 | Method Blank | 8260B | WATER | 10ml | 10ml |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201360-001 | 264821 | 40951 | 1uL | | | |
| J1201360-002 | 264822 | 40951 | 1uL | | | |
| J1201360-003 | 264823 | 40951 | 1uL | | | |
| J1201360-004 | 264824 | 40951 | 1uL | | | |
| J1201360-005 | 264825 | 40951 | 1uL | | | |
| J1201360-006 | 264826 | 40951 | 1uL | | | |
| J1201360-007 | 264827 | 40951 | 1uL | | | |
| J1201360-008 | 264828 | 40951 | 1uL | | | |
| J1201360-009 | 264829 | 40951 | 1uL | | | |
| J1201360-010 | 264830 | 40951 | 1uL | | | |
| J1201360-011 | 264831 | 40951 | 1uL | | | |
| J1201360-012 | 264832 | 40951 | 1uL | | | |
| J1201360-013 | 264833 | 40951 | 1uL | | | |
| J1201360-014 | 264834 | 40951 | 1uL | | | |
| J1201360-015 | 264835 | 40951 | 1uL | | | |

**Comments**

Started By: SAllen Assisted By: Training Yes No

Completed By: SAllen Assisted By: Yes No

Reviewed By: Date: Storage:

Chain of Custody

Relinquished By: Date: Extracts Examined

Received By: Date: Yes No

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200321 | **Prep Method:** | EPA 5030B | **Prep Date:** | 03/30/12 10:42 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201360-016 | 264836 | 40951 | 1uL | | | |
| J1201360-017 | 264837 | 40951 | 1uL | | | |
| JWG1200321-1 | 264838 | 40951 | 1uL | 42546/40123 | 20uL | |
| JWG1200321-2 | 264839 | 40951 | 1uL | | | |

**Comments**

Started By: SAllen Assisted By: Training Yes No

Completed By: SAllen Assisted By: Yes No

Reviewed By: Date: Storage:

Chain of Custody

Relinquished By: Date:

Received By: Date: Extracts Examined Yes No

# *Preparation Information*

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200325 | **Prep Method:** | EPA 5030B | **Prep Date:** | 04/02/12 08:51 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Client ID | Product | Matrix | Amt. Ext. | Final Vol. |
|---|---|---|---|---|---|
| J1201360-001 | CRHE-MW0032-045.0-0319 | 8260B | WATER | 10ml | 10ml |
| J1201360-004 | CRHE-MW0031-045.0-0319 | 8260B | WATER | 10ml | 10ml |
| J1201360-005 | CRHE-IW0020I-045.0-03192 | 8260B | WATER | 10ml | 10ml |
| J1201360-006 | CRHE-MW0039-030.0-0319 | 8260B | WATER | 10ml | 10ml |
| J1201360-010 | CRHE-MW0034-038.5-0320 | 8260B | WATER | 10ml | 10ml |
| J1201360-011 | CRHE-IW0019I-040.0-03202 | 8260B | WATER | 10ml | 10ml |
| J1201360-014 | CRHE-MW0035-045.0-0320 | 8260B | WATER | 10ml | 10ml |
| J1201360-015 | CRHE-MW0028-040.0-0320 | 8260B | WATER | 10ml | 10ml |
| J1201360-017 | CRHE-IW0017I-030.0-03202 | 8260B | WATER | 10ml | 10ml |
| J1201360-018 | CRHE-IW0014I-040.0-03212 | 8260B | WATER | 10ml | 10ml |
| J1201360-019 | CRHE-MW0029-045.0-0321 | 8260B | WATER | 10ml | 10ml |
| J1201360-020 | CRHE-MW0026-035.0-0321 | 8260B | WATER | 10ml | 10ml |
| J1201360-021 | CRHE-MW0022-065.0-0321 | 8260B | WATER | 10ml | 10ml |
| J1201360-022 | CRHE-MW0027-045.0-0321 | 8260B | WATER | 10ml | 10ml |
| J1201360-023 | CRHE-MW0024-010.0-0321 | 8260B | WATER | 10ml | 10ml |
| J1201360-029 | Trip Blank | 8260B | WATER | 10ml | 10ml |
| JWG1200325-1 | Lab Control Sample | 8260B | WATER | 10ml | 10ml |
| JWG1200325-2 | Method Blank | 8260B | WATER | 10ml | 10ml |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201360-001 | 264845 | 40951 | 1uL | | | |
| J1201360-004 | 264846 | 40951 | 1uL | | | |
| J1201360-005 | 264847 | 40951 | 1uL | | | |
| J1201360-006 | 264848 | 40951 | 1uL | | | |
| J1201360-010 | 264849 | 40951 | 1uL | | | |
| J1201360-011 | 264850 | 40951 | 1uL | | | |
| J1201360-014 | 264851 | 40951 | 1uL | | | |
| J1201360-015 | 264852 | 40951 | 1uL | | | |
| J1201360-017 | 264853 | 40951 | 1uL | | | |
| J1201360-018 | 264854 | 40951 | 1uL | | | |
| J1201360-019 | 264855 | 40951 | 1uL | | | |
| J1201360-020 | 264856 | 40951 | 1uL | | | |
| J1201360-021 | 264857 | 40951 | 1uL | | | |
| J1201360-022 | 264858 | 40951 | 1uL | | | |
| J1201360-023 | 264843 | 40951 | 1uL | | | |
| J1201360-029 | 264844 | 40951 | 1uL | | | |

**Comments:**

Started By: SAllen Assisted By: Training Yes No

Completed By: SAllen Assisted By: Yes No

Reviewed By: Date: Storage:

Chain of Custody

Relinquished By: Date: Extracts Examined

Received By: Date: Yes No

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200325 | **Prep Method:** | EPA 5030B | **Prep Date:** | 04/02/12 08:51 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| JWG1200325-1 | 264859 | 40951 | 1uL | 42546/42796 | 20uL | |
| JWG1200325-2 | 264860 | 40951 | 1uL | | | |

**Comments:**

Started By: SAllen Assisted By: Training Yes No

Completed By: SAllen Assisted By: Yes No

Reviewed By: Date: Storage:

Chain of Custody

Relinquished By: Date: Extracts Examined

Received By: Date: Yes No

# *Preparation Information*

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200333 | **Prep Method:** | EPA 5030B | **Prep Date:** | 04/03/12 10:53 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Client ID | Product | Matrix | Amt. Ext. | Final Vol. |
|---|---|---|---|---|---|
| J1201360-018 | CRHE-IW0014I-040.0-03212 | 8260B | WATER | 10ml | 10ml |
| J1201360-019 | CRHE-MW0029-045.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-020 | CRHE-MW0026-035.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-021 | CRHE-MW0022-065.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-022 | CRHE-MW0027-045.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-024 | CRHE-MW0025-030.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-024 | CRHE-MW0025-030.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-030 | CHRE-MW0036-010.0-0320[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201388-017 | GAIN-FW-22B-02-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-018 | GAIN-FW-22B-01-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-019 | GAIN-FB-03-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-020 | GAIN-EB-03-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-021 | GAIN-Trip Blank-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-023 | GAIN-FW-29B-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-024 | GAIN-FW-99-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-025 | GAIN-FW-29C-032112 | 8260B | WATER | 10ml | 10ml |
| JWG1200333-1 | Matrix Spike | 8260B | WATER | 10ml | 10ml |
| JWG1200333-2 | Duplicate Matrix Spike | 8260B | WATER | 10ml | 10ml |
| JWG1200333-3 | Lab Control Sample | 8260B | WATER | 10ml | 10ml |
| JWG1200333-4 | Method Blank | 8260B | WATER | 10ml | 10ml |

| Lab Code | Parent Lab Code | Comments |
|---|---|---|
| JWG1200333-1 | J1201388-023 | |
| JWG1200333-2 | J1201388-023 | |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201360-018 | 264883 | 40951 | 1uL | | | |
| J1201360-019 | 264884 | 40951 | 1uL | | | |
| J1201360-020 | 264885 | 40951 | 1uL | | | |
| J1201360-021 | 264886 | 40951 | 1uL | | | |
| J1201360-022 | 264887 | 40951 | 1uL | | | |
| J1201360-024 | 264881 | 40951 | 1uL | | | |
| J1201360-024 | 264888 | 40951 | 1uL | | | |
| J1201360-030 | 264882 | 40951 | 1uL | | | |
| J1201388-017 | 264889 | 40951 | 1uL | | | |
| J1201388-018 | 264890 | 40951 | 1uL | | | |

**Comments:**

Started By: SAllen Assisted By: _____ Training: Yes No

Completed By: SAllen Assisted By: _____ Yes No

Reviewed By: _____ Date: _____ Storage: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined: Yes No

Received By: _____ Date: _____

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200333 | **Prep Method:** | EPA 5030B | **Prep Date:** | 04/03/12 10:53 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201388-019 | 264891 | 40951 | 1uL | | | |
| J1201388-020 | 264892 | 40951 | 1uL | | | |
| J1201388-021 | 264893 | 40951 | 1uL | | | |
| J1201388-023 | 264894 | 40951 | 1uL | | | |
| J1201388-024 | 264895 | 40951 | 1uL | | | |
| J1201388-025 | 264896 | 40951 | 1uL | | | |
| JWG1200333-1 | 264897 | 40951 | 1uL | 42873/42796 | 20uL | |
| JWG1200333-2 | 264898 | 40951 | 1uL | 42873/42796 | 20uL | |
| JWG1200333-3 | 264899 | 40951 | 1uL | 42873/42796 | 20uL | |
| JWG1200333-4 | 264900 | 40951 | 1uL | | | |

**Comments:**

Started By: SAllen Assisted By: Training Yes No

Completed By: SAllen Assisted By: Yes No

Reviewed By: Date: Storage:

Chain of Custody

Relinquished By: Date: Extracts Examined

Received By: Date: Yes No

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

***Telephone* (352) 367-0073**
***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

August 10, 2009

Jill Johnson
GeoSyntec Consultants
9511 Holsberry Lane, Suite C
Pensacola, Florida 32534

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 09-107**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from June 21 to August 6 2009. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form. This information will also be sent electronically.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

*KB Labs, Inc.*
*6821 SW Archer Road*
*Gainesville, FL 32608*
*Phone: 352-367-0073*
*Fax: 352-367-0073*
*Email: info@kbmobilelabs.com*

# PROJECT NARRATIVE

## Project Scope

From June 21 to August 6, 2009, a total of 195 water samples were analyzed for GeoSyntec Consultants at NASA CHRE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB1: FDOH NELAP Certification Number E82815

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0

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ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

---

# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. Sample ID CRHEA-DPT0019-038.0 reported 1,1,dichloroethene 1.0 changed to <1.0ug/L.

3. Changes for sample ID CRHEA-DPT0020-018.0 reported analytes <1.0 changed to <10ug/L.

4. Changes for sample ID CRHE-DPT0033-043.0 reported:
   1,1-dichloroethene 3.6 changed to 18ug/L.
   t-1,2-dichloroethene 14 changed to 72ug/L.
   trichloroethene <1.3 changed to <5.0ug/L.

5. Changes for sample ID CRHE-DPT0034-043.0 all analytes reported <1.0 changed to <2.0ug/L.

6. Changes for sample ID CRHE-DPT0036-038.0 reported:

*KB Labs, Inc.*
*6821 SW Archer Road*
*Gainesville, FL 32608*
*Phone: 352-367-0073*
*Fax: 352-367-0073*
*Email: info@kbmobilelabs.com*

1,1-dichloroethene <45 changed to <100ug/L.
trichloroethene <26 changed to <100ug/L.
tetrachloroethene <18 changed to <100ug/L.

7. Changes for sample ID CRHE-DPT0036-043.0 reported trichloroethene and tetrachloroethene <1.0 changed to <2.0ug/L.

8. Values between KB Labs Reporting Limit (RL) and Method Detection Limit (MDL) are indicated with a “I” Data Qualifier.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-107 |
| **On-site Dates**: 6/21/09-8/6/09 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| VSTD 1 | 06/21/09 | 110 | 104 | 98 | 102 | Pass | Pass | Pass | Pass |
| VSTD 5 | 06/21/09 | 107 | 108 | 93 | 99 | Pass | Pass | Pass | Pass |
| VSTD 10 | 06/21/09 | 110 | 105 | 103 | 105 | Pass | Pass | Pass | Pass |
| RSTD 20 | 06/21/09 | 104 | 97 | 102 | 98 | Pass | Pass | Pass | Pass |
| VSTD 30 | 06/21/09 | 99 | 100 | 106 | 98 | Pass | Pass | Pass | Pass |
| VSTD 50 | 06/21/09 | 56 | 69 | 107 | 82 | < LCL | Pass | Pass | Pass |
| VSTD 100 | 06/21/09 | 94 | 112 | 101 | 98 | Pass | Pass | Pass | Pass |
| BLANK | 06/21/09 | 105 | 102 | 98 | 98 | Pass | Pass | Pass | Pass |
| RSTD 50 | 06/22/09 | 82 | 79 | 103 | 97 | Pass | Pass | Pass | Pass |
| LCS 50 | 06/22/09 | 81 | 94 | 107 | 103 | Pass | Pass | Pass | Pass |
| BLANK | 06/22/09 | 78 | 95 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-010.0 | 06/22/09 | 74 | 96 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-018.0 | 06/22/09 | 73 | 93 | 94 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-028.0 | 06/22/09 | 74 | 94 | 98 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-038.0 | 06/22/09 | 73 | 108 | 94 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-043.0 1:5 | 06/22/09 | 70 | 108 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-063.0 | 06/22/09 | 71 | 115 | 95 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-048.0 | 06/22/09 | 65 | 107 | 93 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0018-010.0 | 06/22/09 | 58 | 96 | 92 | 91 | < LCL | Pass | Pass | Pass |
| CRHEA-DPT0018-018.0 | 06/22/09 | 64 | 108 | 95 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0018-028.0 | 06/22/09 | 62 | 88 | 88 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0018-038.0 1:5 | 06/22/09 | 69 | 84 | 93 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0018-043.0 1:5 | 06/22/09 | 67 | 77 | 97 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0018-048.0 | 06/22/09 | 65 | 73 | 98 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0018-063.0 | 06/22/09 | 71 | 76 | 95 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0017-038.0 1:5 | 06/22/09 | 67 | 80 | 92 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0018-048.0 1:5 | 06/22/09 | 71 | 85 | 95 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-010.0 | 06/22/09 | 73 | 84 | 93 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-018.0 | 06/22/09 | 66 | 78 | 92 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-028.0 | 06/22/09 | 71 | 81 | 92 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-038.0 | 06/22/09 | 63 | 72 | 90 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-043.0 1:5 | 06/22/09 | 71 | 81 | 96 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-048.0 1:5 | 06/22/09 | 64 | 72 | 96 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-063.0 | 06/22/09 | 66 | 79 | 95 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-010.0 MS | 06/22/09 | 69 | 97 | 97 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0019-010.0 MSD | 06/22/09 | 64 | 96 | 96 | 100 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/22/09 | 66 | 99 | 101 | 98 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/23/09 | 87 | 94 | 98 | 105 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/23/09 | 80 | 85 | 99 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 06/23/09 | 65 | 97 | 106 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-010.0 | 06/23/09 | 61 | 99 | 91 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-018.0 1:10 | 06/23/09 | 62 | 99 | 106 | 104 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-028.0 | 06/23/09 | 63 | 84 | 101 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-038.0 1:5 | 06/23/09 | 63 | 99 | 103 | 106 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (61% - 144%)
S2 = 1,2- Dichloroethane-D4 (64% - 138%)
S3 = Toluene-D8 (80% - 119%)
S4 = 4-Bromofluorobenzene (71% - 132%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-107 |
| **On-site Dates**: 6/21/09-8/6/09 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHEA-DPT0020-043.0 1:5 | 06/23/09 | 60 | 77 | 99 | 101 | < LCL | Pass | Pass | Pass |
| CRHEA-DPT0020-048.0 | 06/23/09 | 68 | 102 | 97 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-038.0 1:10 | 06/23/09 | 67 | 104 | 101 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-063.0 | 06/23/09 | 64 | 99 | 94 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-010.0 MS | 06/23/09 | 73 | 105 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-010.0 MSD | 06/23/09 | 73 | 99 | 98 | 101 | Pass | Pass | Pass | Pass |
| BLANK | 06/23/09 | 62 | 106 | 95 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0021-010.0 | 06/23/09 | 63 | 102 | 90 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-018.0 | 06/23/09 | 62 | 96 | 94 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0021-028.0 | 06/23/09 | 64 | 88 | 93 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0021-038.0 | 06/23/09 | 66 | 78 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0021-043.0 | 06/23/09 | 64 | 88 | 95 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0021-048.0 | 06/23/09 | 62 | 83 | 100 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0021-063.0 | 06/23/09 | 63 | 92 | 90 | 107 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-010.0 | 06/23/09 | 62 | 77 | 93 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-018.0 | 06/23/09 | 65 | 105 | 93 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-028.0 | 06/23/09 | 64 | 88 | 95 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-043.0 1:10 | 06/23/09 | 65 | 98 | 96 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-063.0 1:2 | 06/23/09 | 65 | 107 | 90 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-038.0 | 06/23/09 | 60 | 104 | 97 | 98 | < LCL | Pass | Pass | Pass |
| CCS 20 | 06/23/09 | 71 | 94 | 100 | 96 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/24/09 | 84 | 91 | 108 | 100 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/24/09 | 88 | 95 | 96 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 06/24/09 | 95 | 89 | 97 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-043.0 1:5 | 06/24/09 | 97 | 93 | 93 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-048.0 | 06/24/09 | 101 | 93 | 86 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-063.0 | 06/24/09 | 96 | 92 | 94 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-010.0 | 06/24/09 | 72 | 96 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-018.0 | 06/24/09 | 74 | 94 | 89 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-028.0 | 06/24/09 | 73 | 97 | 88 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-038.0 1:5 | 06/24/09 | 0 | 66 | 0 | 82 | < LCL | Pass | < LCL | Pass |
| CRHEA-DPT0023-038.0 RPT | 06/24/09 | 63 | 96 | 88 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-043.0 | 06/24/09 | 64 | 103 | 97 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-048.0 | 06/24/09 | 62 | 98 | 87 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-063.0 | 06/24/09 | 64 | 99 | 96 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0024-010.0 | 06/24/09 | 60 | 91 | 96 | 99 | < LCL | Pass | Pass | Pass |
| CRHEA-DPT0024-018.0 | 06/24/09 | 63 | 101 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0024-028.0 | 06/24/09 | 66 | 101 | 93 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0024-038.0 1:10 | 06/24/09 | 64 | 101 | 92 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0022-038.0 1:5 | 06/24/09 | 67 | 110 | 93 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0024-043.0 1:5 | 06/24/09 | 65 | 80 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0024-048.0 | 06/24/09 | 66 | 87 | 96 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0024-063.0 | 06/24/09 | 63 | 97 | 91 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0020-073.0 | 06/24/09 | 58 | 89 | 98 | 104 | < LCL | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (61% - 144%)
S2 = 1,2- Dichloroethane-D4 (64% - 138%)
S3 = Toluene-D8 (80% - 119%)
S4 = 4-Bromofluorobenzene (71% - 132%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-107 |
| **On-site Dates**: 6/21/09-8/6/09 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHEA-DPT0022-073.0 | 06/24/09 | 61 | 70 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-010.0 MS | 06/24/09 | 0 | 0 | 0 | 87 | < LCL | < LCL | < LCL | Pass |
| CRHEA-DPT0023-010.0 MSD | 06/24/09 | 71 | 102 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0023-010.0 MS | 06/24/09 | 70 | 94 | 104 | 106 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/24/09 | 70 | 98 | 92 | 99 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/25/09 | 85 | 87 | 106 | 107 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/25/09 | 94 | 93 | 104 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 06/25/09 | 96 | 88 | 92 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-010.0 | 06/25/09 | 98 | 90 | 91 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-018.0 | 06/25/09 | 94 | 90 | 91 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-028.0 | 06/25/09 | 94 | 93 | 102 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-038.0 | 06/25/09 | 97 | 93 | 93 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-043.0 | 06/25/09 | 95 | 92 | 94 | 105 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-048.0 | 06/25/09 | 102 | 97 | 90 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-063.0 | 06/25/09 | 99 | 97 | 102 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-010.0 | 06/25/09 | 80 | 98 | 99 | 10 | Pass | Pass | Pass | < LCL |
| CRHEA-DPT0025-010.0 MS | 06/25/09 | 83 | 99 | 92 | 103 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0025-010.0 MSD | 06/25/09 | 78 | 104 | 97 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 06/25/09 | 67 | 101 | 96 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-018.0 | 06/25/09 | 64 | 97 | 97 | 105 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-028.0 | 06/25/09 | 66 | 102 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-038.0 | 06/25/09 | 66 | 102 | 96 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-043.0 | 06/25/09 | 66 | 106 | 94 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-048.0 | 06/25/09 | 67 | 106 | 96 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-063.0 | 06/25/09 | 67 | 105 | 89 | 97 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-010.0 | 06/25/09 | 68 | 105 | 96 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-018.0 | 06/25/09 | 61 | 98 | 91 | 91 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-028.0 | 06/25/09 | 67 | 104 | 93 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-038.0 1:5 | 06/25/09 | 65 | 102 | 98 | 110 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-043.0 | 06/25/09 | 64 | 100 | 93 | 103 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0026-038.0 1:5 | 06/25/09 | 66 | 106 | 93 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-048.0 | 06/25/09 | 67 | 108 | 94 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-063.0 | 06/25/09 | 67 | 103 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-038.0 1:20 | 06/25/09 | 68 | 107 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-043.0 1:5 | 06/25/09 | 66 | 104 | 92 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-010.0 MS | 06/25/09 | 72 | 94 | 104 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0027-010.0 MSD | 06/25/09 | 82 | 100 | 98 | 98 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/25/09 | 75 | 94 | 95 | 96 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/26/09 | 79 | 77 | 98 | 95 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/26/09 | 88 | 88 | 104 | 105 | Pass | Pass | Pass | Pass |
| BLANK | 06/26/09 | 100 | 88 | 94 | 93 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0028-010.0 | 06/26/09 | 92 | 89 | 100 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0028-018.0 | 06/26/09 | 74 | 90 | 105 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0028-028.0 1:5 | 06/26/09 | 78 | 98 | 91 | 98 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (61% - 144%)
S2 = 1,2- Dichloroethane-D4 (64% - 138%)
S3 = Toluene-D8 (80% - 119%)
S4 = 4-Bromofluorobenzene (71% - 132%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-107 |
| **On-site Dates**: 6/21/09-8/6/09 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHEA-DPT0028-038.0 1:20 | 06/26/09 | 75 | 97 | 97 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0028-043.0 1:5 | 06/26/09 | 79 | 103 | 92 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0028-048.0 | 06/26/09 | 76 | 99 | 92 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0028-063.0 | 06/26/09 | 83 | 90 | 89 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-010.0 | 06/26/09 | 74 | 101 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-018.0 | 06/26/09 | 68 | 101 | 94 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-028.0 | 06/26/09 | 65 | 97 | 91 | 93 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-038.0 | 06/26/09 | 63 | 98 | 97 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-043.0 | 06/26/09 | 63 | 97 | 91 | 100 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-048.0 | 06/26/09 | 67 | 101 | 93 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-063.0 | 06/26/09 | 63 | 97 | 94 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-010.0 MS | 06/26/09 | 72 | 100 | 106 | 108 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0029-010.0 MSD | 06/26/09 | 74 | 102 | 105 | 102 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0030-010.0 | 06/26/09 | 64 | 102 | 93 | 99 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0030-018.0 | 06/26/09 | 62 | 100 | 93 | 101 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0030-028.0 | 06/26/09 | 67 | 105 | 91 | 95 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0030-038.0 | 06/26/09 | 66 | 104 | 101 | 94 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0030-043.0 | 06/26/09 | 66 | 105 | 95 | 92 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0030-048.0 | 06/26/09 | 66 | 103 | 91 | 98 | Pass | Pass | Pass | Pass |
| CRHEA-DPT0030-063.0 | 06/26/09 | 63 | 97 | 94 | 97 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/26/09 | 60 | 104 | 97 | 100 | < LCL | Pass | Pass | Pass |
| BLANK/BFB | 07/16/09 | 70 | 76 | 100 | 110 | Pass | Pass | Pass | Pass |
| VSTD 20 | 07/16/09 | 75 | 86 | 99 | 100 | Pass | Pass | Pass | Pass |
| RSTD 20 | 07/16/09 | 66 | 72 | 92 | 106 | Pass | Pass | Pass | Pass |
| BLANK | 07/16/09 | 69 | 84 | 96 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0032-010.0 1:5 | 07/16/09 | 67 | 75 | 94 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0032-018.0 | 07/16/09 | 61 | 68 | 93 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0032-028.0 | 07/16/09 | 61 | 71 | 94 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0032-038.0 | 07/16/09 | 62 | 74 | 93 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0032-043.0 | 07/16/09 | 64 | 81 | 86 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0032-010.0 | 07/16/09 | 56 | 72 | 95 | 94 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0032-048.0 | 07/16/09 | 57 | 64 | 91 | 92 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0032-063.0 | 07/16/09 | 62 | 102 | 92 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-010.0 | 07/16/09 | 59 | 88 | 97 | 98 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0031-018.0 | 07/16/09 | 87 | 94 | 83 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-028.0 | 07/16/09 | 100 | 97 | 89 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-038.0 | 07/16/09 | 78 | 101 | 94 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-043.0 | 07/16/09 | 76 | 94 | 88 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-048.0 | 07/16/09 | 98 | 91 | 85 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-063.0 | 07/16/09 | 97 | 95 | 88 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0033-010.0 | 07/16/09 | 100 | 99 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0033-018.0 1:10 | 07/16/09 | 95 | 93 | 89 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0033-028.0 1:10 | 07/16/09 | 97 | 92 | 96 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT033-038.0 | 07/16/09 | 97 | 93 | 100 | 97 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (61% - 144%)
S2 = 1,2- Dichloroethane-D4 (64% - 138%)
S3 = Toluene-D8 (80% - 119%)
S4 = 4-Bromofluorobenzene (71% - 132%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-107 |
| **On-site Dates**: 6/21/09-8/6/09 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT033-043.0 1:5 | 07/16/09 | 102 | 97 | 89 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT033-048.0 | 07/16/09 | 98 | 91 | 89 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT033-063.0 | 07/16/09 | 98 | 93 | 92 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-010.0 MS | 07/17/09 | 80 | 82 | 92 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-010.0 MSD | 07/17/09 | 90 | 85 | 100 | 109 | Pass | Pass | Pass | Pass |
| VSTD 20 | 07/17/09 | 93 | 83 | 89 | 104 | Pass | Pass | Pass | Pass |
| RSTD 20 | 07/17/09 | 90 | 82 | 94 | 89 | Pass | Pass | Pass | Pass |
| BLANK/BFB | 07/17/09 | 68 | 79 | 86 | 104 | Pass | Pass | Pass | Pass |
| VSTD 20 | 07/17/09 | 71 | 76 | 98 | 107 | Pass | Pass | Pass | Pass |
| RSTD 20 | 07/17/09 | 88 | 80 | 96 | 101 | Pass | Pass | Pass | Pass |
| BLANK | 07/17/09 | 96 | 87 | 105 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0031-038.0 1:2 | 07/17/09 | 88 | 79 | 94 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0033-018.0 | 07/17/09 | 94 | 87 | 88 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT033-028.0 | 07/17/09 | 98 | 94 | 95 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT034-010.0 | 07/17/09 | 96 | 86 | 110 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT034-018.0 | 07/17/09 | 80 | 89 | 98 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT034-036.0 | 07/17/09 | 96 | 90 | 87 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT034-028.0 | 07/17/09 | 92 | 88 | 91 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT034-043.0 | 07/17/09 | 74 | 81 | 83 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT034-048.0 | 07/17/09 | 82 | 91 | 87 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT034-063.0 | 07/17/09 | 91 | 89 | 87 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT035-010.0 | 07/17/09 | 5 | 88 | 98 | 96 | < LCL | Pass | Pass | Pass |
| CRHE-DPT035-018.0 | 07/17/09 | 96 | 103 | 86 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT035-028.0 | 07/17/09 | 69 | 95 | 97 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT035-010.0 | 07/17/09 | 0 | 92 | 88 | 94 | < LCL | Pass | Pass | Pass |
| CRHE-DPT035-038.0 | 07/17/09 | 54 | 87 | 92 | 95 | < LCL | Pass | Pass | Pass |
| CRHE-DPT035-043.0 | 07/17/09 | 61 | 96 | 84 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT035-048.0 | 07/17/09 | 62 | 97 | 84 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT035-063.0 | 07/17/09 | 56 | 96 | 92 | 95 | < LCL | Pass | Pass | Pass |
| CRHE-DPT036-010.0 | 07/17/09 | 51 | 88 | 49 | 204 | < LCL | Pass | < LCL | > UCL |
| CRHE-DPT036-018.0 | 07/17/09 | 57 | 94 | 90 | 93 | < LCL | Pass | Pass | Pass |
| CRHE-DPT036-028.0 | 07/17/09 | 69 | 94 | 92 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT036-038.0 1:100 | 07/17/09 | 57 | 93 | 86 | 93 | < LCL | Pass | Pass | Pass |
| CRHE-DPT036-043.0 1:2 | 07/17/09 | 95 | 95 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT036-048.0 | 07/17/09 | 82 | 96 | 86 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT036-063.0 | 07/17/09 | 101 | 98 | 86 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT036-028.0 1:2 | 07/17/09 | 91 | 87 | 87 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT036-048 MS | 07/17/09 | 95 | 85 | 98 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT036-048 MSD | 07/17/09 | 92 | 84 | 102 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT031-038 1:5 | 07/17/09 | 113 | 91 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT031-043 1:5 | 07/17/09 | 114 | 97 | 96 | 79 | Pass | Pass | Pass | Pass |
| CRHE-DPT033-038 1:5 | 07/17/09 | 120 | 99 | 95 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT033-043 1:20 | 07/17/09 | 114 | 100 | 96 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT033-48 1:2 | 07/17/09 | 121 | 97 | 97 | 79 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (61% - 144%)
S2 = 1,2- Dichloroethane-D4 (64% - 138%)
S3 = Toluene-D8 (80% - 119%)
S4 = 4-Bromofluorobenzene (71% - 132%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-107 |
| **On-site Dates**: 6/21/09-8/6/09 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| BLANK/BFB | 08/04/09 | 113 | 98 | 81 | 104 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/04/09 | 113 | 93 | 105 | 100 | Pass | Pass | Pass | Pass |
| RSTD 20 | 08/04/09 | 102 | 88 | 91 | 89 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/04/09 | 97 | 87 | 104 | 98 | Pass | Pass | Pass | Pass |
| BLANK | 08/04/09 | 93 | 87 | 99 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0037-010.0 | 08/04/09 | 99 | 97 | 91 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0037-018.0 | 08/04/09 | 115 | 111 | 95 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0037-026.0 | 08/04/09 | 102 | 99 | 89 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0037-038.0 | 08/04/09 | 81 | 100 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0037-043.0 | 08/04/09 | 90 | 80 | 97 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0037-048.0 | 08/04/09 | 92 | 85 | 87 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0037-063.0 | 08/04/09 | 79 | 79 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0038-018.0 | 08/04/09 | 65 | 86 | 97 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0038-028.0 | 08/04/09 | 77 | 96 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0038-010.0 | 08/04/09 | 62 | 94 | 95 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0038-038.0 | 08/04/09 | 71 | 98 | 82 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0038-043.0 | 08/04/09 | 63 | 102 | 90 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0038-048.0 | 08/04/09 | 62 | 102 | 89 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0038-063.0 | 08/04/09 | 58 | 102 | 88 | 93 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0039-010.0 | 08/04/09 | 49 | 79 | 81 | 81 | < LCL | Pass | Pass | Pass |
| CCS 20 | 08/05/09 | 79 | 108 | 106 | 98 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/05/09 | 79 | 98 | 93 | 96 | Pass | Pass | Pass | Pass |
| BLANK | 08/05/09 | 78 | 101 | 89 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-018.0 | 08/05/09 | 77 | 93 | 98 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-028.0 | 08/05/09 | 79 | 80 | 88 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-038.0 1:5 | 08/05/09 | 72 | 95 | 93 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-043.0 | 08/05/09 | 76 | 96 | 89 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-048.0 | 08/05/09 | 76 | 90 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-063.0 | 08/05/09 | 74 | 85 | 87 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-038.0 1:20 | 08/05/09 | 73 | 83 | 88 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-010.0 1:5 | 08/05/09 | 77 | 76 | 92 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-010.0 | 08/05/09 | 74 | 69 | 88 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-018.0 | 08/05/09 | 82 | 82 | 96 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-028.0 1:2 | 08/05/09 | 84 | 79 | 93 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-038.0 | 08/05/09 | 79 | 78 | 112 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-043.0 | 08/05/09 | 76 | 74 | 87 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-048.0 | 08/05/09 | 73 | 71 | 91 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-063.0 | 08/05/09 | 81 | 80 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0041-010.0 | 08/05/09 | 80 | 83 | 91 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0041-018.0 | 08/05/09 | 80 | 75 | 94 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0041-028.0 | 08/05/09 | 78 | 89 | 91 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0041-038.0 | 08/05/09 | 94 | 86 | 93 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-063.0 MS | 08/05/09 | 72 | 73 | 91 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0039-063.0 MSD | 08/05/09 | 99 | 81 | 102 | 102 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (61% - 144%)
S2 = 1,2- Dichloroethane-D4 (64% - 138%)
S3 = Toluene-D8 (80% - 119%)
S4 = 4-Bromofluorobenzene (71% - 132%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-107 |
| **On-site Dates**: 6/21/09-8/6/09 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0040-038.0 1:10 | 08/05/09 | 78 | 85 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0040-043.0 1:10 | 08/05/09 | 79 | 88 | 102 | 98 | Pass | Pass | Pass | Pass |
| RSTD 20 | 08/06/09 | 79 | 96 | 100 | 102 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/06/09 | 76 | 84 | 99 | 91 | Pass | Pass | Pass | Pass |
| BLANK | 08/06/09 | 84 | 93 | 93 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0041-043.0 | 08/06/09 | 83 | 82 | 80 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0041-048.0 | 08/06/09 | 68 | 73 | 88 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0041-063.0 | 08/06/09 | 78 | 94 | 95 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-010.0 | 08/06/09 | 74 | 93 | 95 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-018.0 | 08/06/09 | 72 | 88 | 78 | 93 | Pass | Pass | < LCL | Pass |
| CRHE-DPT0042-028.0 | 08/06/09 | 70 | 91 | 87 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-038.0 1:2 | 08/06/09 | 72 | 96 | 90 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-048.0 | 08/06/09 | 86 | 98 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-063.0 | 08/06/09 | 78 | 98 | 87 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-043.0 | 08/06/09 | 74 | 97 | 84 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-038.0 1:10 | 08/06/09 | 66 | 89 | 88 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-043.0 1:20 | 08/06/09 | 56 | 88 | 92 | 87 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0043-010.0 | 08/06/09 | 56 | 87 | 84 | 91 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0043-018.0 | 08/06/09 | 63 | 96 | 88 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0043-028.0 | 08/06/09 | 63 | 98 | 93 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0043-043.0 | 08/06/09 | 67 | 95 | 88 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0043-048.0 1:2 | 08/06/09 | 71 | 96 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0043-038.0 1:10 | 08/06/09 | 62 | 101 | 92 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0043-063.0 | 08/06/09 | 52 | 80 | 101 | 84 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0043-028.0 | 08/06/09 | 63 | 98 | 93 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0042-010.0 MS | 08/06/09 | 59 | 90 | 96 | 96 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0042-010.0 MSD | 08/06/09 | 64 | 107 | 88 | 98 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/06/09 | 61 | 107 | 92 | 94 | Pass | Pass | Pass | Pass |
| RSTD 20 | 08/06/09 | 64 | 99 | 92 | 95 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/06/09 | 61 | 82 | 105 | 97 | Pass | Pass | Pass | Pass |
| BLANK | 08/06/09 | 79 | 102 | 86 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0044-033 | 08/06/09 | 68 | 95 | 92 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT044-038 | 08/06/09 | 98 | 97 | 88 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT044-043 1:5 | 08/06/09 | 112 | 103 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT044-048 1:2 | 08/06/09 | 108 | 98 | 87 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0043-018.0 MS | 08/06/09 | 96 | 83 | 92 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0043-018.0 MSD | 08/06/09 | 103 | 99 | 92 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/06/09 | 101 | 88 | 107 | 100 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (61% - 144%)
S2 = 1,2- Dichloroethane-D4 (64% - 138%)
S3 = Toluene-D8 (80% - 119%)
S4 = 4-Bromofluorobenzene (71% - 132%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-107 |
| **Onsite Dates:** 6/21/09-8/6/09 | **Client Project Manager:** Rebecca DaPrato | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHEA-DPT0019-010.0 **Date of Analysis:** 6/22/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 93 | 91 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 100 | 93 | 8 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 98 | 91 | 7 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 94 | 86 | 9 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 101 | 96 | 5 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 101 | 98 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHEA-DPT0020-010.0 **Date of Analysis:** 6/23/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 88 | 100 | 13 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 95 | 110 | 14 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 95 | 109 | 13 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 94 | 104 | 10 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 97 | 111 | 14 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 96 | 111 | 15 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHEA-DPT0023-010.0 **Date of Analysis:** 6/24/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 92 | 91 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 103 | 108 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 104 | 112 | 8 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 97 | 105 | 7 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 104 | 113 | 8 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 113 | 108 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHEA-DPT0025-010.0 **Date of Analysis:** 6/25/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 92 | 87 | 6 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 105 | 99 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 102 | 98 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 99 | 97 | 2 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 108 | 101 | 7 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 106 | 101 | 6 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-107 |
| **Onsite Dates:** 6/21/09-8/6/09 | **Client Project Manager:** Rebecca DaPrato | **Matrix**: Water |

**Samples:** CRHEA-DPT0027-010.0 **Date of Analysis:** 6/25/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 86 | 92 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 101 | 107 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 101 | 109 | 7 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 99 | 106 | 7 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 108 | 113 | 4 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 109 | 106 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHEA-DPT0029-010.0 **Date of Analysis:** 6/26/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 87 | 82 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 92 | 95 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 95 | 99 | 5 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 93 | 97 | 4 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 103 | 102 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 109 | 113 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0031-010.0 **Date of Analysis:** 7/16/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 90 | 90 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 97 | 98 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 92 | 95 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 91 | 92 | 2 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 88 | 91 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 90 | 89 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0036-048.9 **Date of Analysis:** 7/17/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 86 | 83 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 87 | 83 | 4 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 85 | 79 | 7 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 80 | 76 | 5 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 89 | 84 | 6 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 93 | 92 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-107 |
| **Onsite Dates:** 6/21/09-8/6/09 | **Client Project Manager:** Rebecca DaPrato | **Matrix**: Water |

**Samples:** CRHE-DPT0039-063.0 **Date of Analysis:** 8/6/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 83 | 65 | 24 | Pass | Pass | > RPDL |
| 1,1-Dichloroethene | 61 | 137 | 20 | 75 | 81 | 7 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 72 | 82 | 13 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 76 | 87 | 13 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 83 | 90 | 9 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 82 | 101 | 21 | Pass | Pass | > RPDL |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0042-010.0 **Date of Analysis:** 8/6/2009

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 58 | 135 | 20 | 85 | 83 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 61 | 137 | 20 | 97 | 95 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 94 | 97 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 136 | 20 | 85 | 88 | 3 | Pass | Pass | Pass |
| Trichloroethene | 67 | 132 | 20 | 101 | 103 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | 133 | 20 | 112 | 104 | 8 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-107 |
| **Onsite Dates:** 6/21/09-8/6/09 | **Client Project Manager:** Rebecca DaPrato | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 — **Date of Analysis:** 6/21/2009
LCS 2 — 6/22/2009
LCS 3 — 6/22/2009

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 54 | to | 130 | 102 | 107 | 103 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 55 | to | 136 | 107 | 94 | 113 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 106 | 90 | 113 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 61 | to | 130 | 104 | 87 | 111 | Pass | Pass | Pass |
| Trichloroethene | 65 | to | 127 | 101 | 91 | 103 | Pass | Pass | Pass |
| Tetrachloroethene | 69 | to | 126 | 101 | 100 | 112 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 — **Date of Analysis:** 6/23/2009
LCS 5 — 6/24/2009
LCS 6 — 6/25/2009

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | LCS#6 | LCS#4 | LCS#5 | LCS#6 |
| Vinyl Chloride | 54 | to | 130 | 124 | 106 | 108 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 55 | to | 136 | 130 | 114 | 116 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 129 | 113 | 117 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 61 | to | 130 | 131 | 115 | 118 | > UCL | Pass | Pass |
| Trichloroethene | 65 | to | 127 | 116 | 106 | 106 | Pass | Pass | Pass |
| Tetrachloroethene | 69 | to | 126 | 115 | 105 | 117 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 7 — **Date of Analysis:** 6/26/2009
LCS 8 — 7/16/2009
LCS 9 — 7/17/2009

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#7 | LCS#8 | LCS#9 | LCS#7 | LCS#8 | LCS#9 |
| Vinyl Chloride | 54 | to | 130 | 101 | 114 | 102 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 55 | to | 136 | 110 | 95 | 89 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 110 | 87 | 86 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 61 | to | 130 | 115 | 82 | 83 | Pass | Pass | Pass |
| Trichloroethene | 65 | to | 127 | 103 | 94 | 88 | Pass | Pass | Pass |
| Tetrachloroethene | 69 | to | 126 | 115 | 85 | 84 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Herb Kelly, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-107 |
| **Onsite Dates:** 6/21/09-8/6/09 | **Client Project Manager:** Rebecca DaPrato | **Matrix**: Water |

**Samples:** LCS 10, LCS 11, LCS 12 **Date of Analysis:** 7/17/2009, 8/4/2009, 8/5/2009

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#10 | LCS#11 | LCS#12 | LCS#10 | LCS#11 | LCS#12 |
| Vinyl Chloride | 54 | to | 130 | 123 | 133 | 85 | Pass | > UCL | Pass |
| 1,1-Dichloroethene | 55 | to | 136 | 105 | 131 | 83 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 101 | 138 | 83 | Pass | > UCL | Pass |
| Cis-1,2-Dichloroethene | 61 | to | 130 | 99 | 140 | 89 | Pass | > UCL | Pass |
| Trichloroethene | 65 | to | 127 | 90 | 118 | 91 | Pass | Pass | Pass |
| Tetrachloroethene | 69 | to | 126 | 93 | 109 | 97 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 13, LCS 14 **Date of Analysis:** 8/6/2009, 8/6/2009

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#13 | LCS#14 | | LCS#13 | LCS#114 | |
| Vinyl Chloride | 54 | to | 130 | 92 | 74 | | Pass | Pass | |
| 1,1-Dichloroethene | 55 | to | 136 | 89 | 75 | | Pass | Pass | |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 90 | 76 | | Pass | Pass | |
| Cis-1,2-Dichloroethene | 61 | to | 130 | 92 | 78 | | Pass | Pass | |
| Trichloroethene | 65 | to | 127 | 88 | 88 | | Pass | Pass | |
| Tetrachloroethene | 69 | to | 126 | 99 | 93 | | Pass | Pass | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

Project Number : 09-107

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.21** | **0.45** | **0.20** | **0.28** | **0.26** | **0.18** |
| CRHE-DPT0017-010.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0017-018.0-20090622 | 6/22/09 | Water | 1 | **2.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0017-028.0-20090622 | 6/22/09 | Water | 1 | **4.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0017-038.0-20090622 | 6/22/09 | Water | 1, 5 | **210** | <1.0 | **1.1** | **1.6** | <1.0 | <1.0 |
| CRHE-DPT0017-043.0-20090622 | 6/22/09 | Water | 5 | **42** | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| CRHE-DPT0017-048.0-20090622 | 6/22/09 | Water | 1 | **11.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0017-063.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0018-010.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0018-018.0-20090622 | 6/22/09 | Water | 1 | **3.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0018-028.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0018-038.0-20090622 | 6/22/09 | Water | 5 | **78** | < 5.0 | < 5.0 | **6.1** | < 5.0 | < 5.0 |
| CRHE-DPT0018-043.0-20090622 | 6/22/09 | Water | 5 | **270** | < 5.0 | **4.2 I** | **300** | < 5.0 | < 5.0 |
| CRHE-DPT0018-048.0-20090622 | 6/22/09 | Water | 1, 5 | **270** | <1.0 | **4.0** | **120** | <1.0 | <1.0 |
| CRHE-DPT0018-063.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.0** | <1.0 | <1.0 |
| CRHE-DPT0019-010.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0019-018.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0019-028.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0019-038.0-20090622 | 6/22/09 | Water | 1 | **8.3** | <1.0 | **2.0** | **16.1** | <1.0 | <1.0 |
| CRHE-DPT0019-043.0-20090622 | 6/22/09 | Water | 5 | **7.6** | < 5.0 | < 5.0 | **22** | < 5.0 | < 5.0 |
| CRHE-DPT0019-048.0-20090622 | 6/22/09 | Water | 5 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| CRHE-DPT0019-063.0-20090622 | 6/22/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0020-010.0-20090623 | 6/23/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0020-018.0-20090623 | 6/23/09 | Water | 10 | **65** | <10 | <10 | <10 | <10 | <10 |
| CRHE-DPT0020-028.0-20090623 | 6/23/09 | Water | 1 | **57.4** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0020-038.0-20090623 | 6/23/09 | Water | 5, 10 | **540** | < 5.0 | **13** | **800** | < 5.0 | < 5.0 |
| CRHE-DPT0020-043.0-20090623 | 6/23/09 | Water | 5, 10 | **470** | < 5.0 | **21** | **380** | < 5.0 | < 5.0 |
| CRHE-DPT0020-048.0-20090623 | 6/23/09 | Water | 1 | **3.3** | < 1.0 | < 1.0 | **3.6** | < 1.0 | < 1.0 |
| CRHE-DPT0020-063.0-20090623 | 6/23/09 | Water | 1, 2 | **120** | < 1.0 | **3.4** | **140** | < 1.0 | < 1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 09-107

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.21** | **0.45** | **0.20** | **0.28** | **0.26** | **0.18** |
| CRHE-DPT0021-010.0-20090623 | 6/23/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0021-018.0-20090623 | 6/23/09 | Water | 1 | **1.2** | < 1.0 | < 1.0 | **1.2** | < 1.0 | < 1.0 |
| CRHE-DPT0021-028.0-20090623 | 6/23/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0021-038.0-20090623 | 6/23/09 | Water | 1 | **11.7** | < 1.0 | **2.9** | **33.5** | < 1.0 | < 1.0 |
| CRHE-DPT0021-043.0-20090623 | 6/23/09 | Water | 1 | **11.8** | < 1.0 | **3.6** | **47.9** | < 1.0 | < 1.0 |
| CRHE-DPT0021-048.0-20090623 | 6/23/09 | Water | 1 | **3.2** | < 1.0 | < 1.0 | **1.6** | < 1.0 | < 1.0 |
| CRHE-DPT0021-063.0-20090623 | 6/23/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | **1.2** | < 1.0 | < 1.0 |
| CRHE-DPT0022-010.0-20090623 | 6/23/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0022-018.0-20090623 | 6/23/09 | Water | 1 | **5.8** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0022-028.0-20090623 | 6/23/09 | Water | 1 | **7.8** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0022-038.0-20090623 | 6/23/09 | Water | 1, 5 | **230** | < 1.0 | **1.4** | **2.3** | < 1.0 | < 1.0 |
| CRHE-DPT0022-043.0-20090624 | 6/24/09 | Water | 5 | **16** | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| CRHE-DPT0022-048.0-20090624 | 6/24/09 | Water | 1 | **3.8** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0022-063.0-20090624 | 6/24/09 | Water | 1 | **4.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0023-010.0-20090624 | 6/24/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0023-018.0-20090624 | 6/24/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0023-028.0-20090624 | 6/24/09 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.3** | <1.0 | <1.0 |
| CRHE-DPT0023-038.0-20090624 | 6/24/09 | Water | 1 | **11.6** | <1.0 | **8.0** | **94.2** | <1.0 | <1.0 |
| CRHE-DPT0023-043.0-20090624 | 6/24/09 | Water | 1 | **15.6** | <1.0 | **4.0** | **52.4** | <1.0 | <1.0 |
| CRHE-DPT0023-048.0-20090624 | 6/24/09 | Water | 1 | **1.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0023-063.0-20090624 | 6/24/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0024-010.0-20090624 | 6/24/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0024-018.0-20090624 | 6/24/09 | Water | 1 | **2.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0024-028.0-20090624 | 6/24/09 | Water | 1 | **65.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0024-038.0-20090624 | 6/24/09 | Water | 10 | **570** | < 10 | **10** | **590** | < 10 | < 10 |
| CRHE-DPT0024-043.0-20090624 | 6/24/09 | Water | 5 | **390** | < 5.0 | **17** | **210** | < 5.0 | < 5.0 |
| CRHE-DPT0024-048.0-20090624 | 6/24/09 | Water | 1 | **1.9** | < 1.0 | < 1.0 | **2.3** | < 1.0 | < 1.0 |
| CRHE-DPT0024-063.0-20090624 | 6/24/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 09-107

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.21** | **0.45** | **0.20** | **0.28** | **0.26** | **0.18** |
| CRHE-DPT0020-073.0-20090624 | 6/24/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0022-073.0-20090624 | 6/24/09 | Water | 1 | **1.0** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0025-010.0-20090625 | 6/25/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0025-018.0-20090625 | 6/25/09 | Water | 1 | **11.3** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0025-028.0-20090625 | 6/25/09 | Water | 1 | **12.9** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0025-038.0-20090625 | 6/25/09 | Water | 1 | **67.3** | < 1.0 | **1.1** | **8.1** | < 1.0 | < 1.0 |
| CRHE-DPT0025-043.0-20090625 | 6/25/09 | Water | 1 | **4.1** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0025-048.0-20090625 | 6/25/09 | Water | 1 | **1.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0025-063.0-20090625 | 6/25/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0026-010.0-20090625 | 6/25/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0026-018.0-20090625 | 6/25/09 | Water | 1 | **24** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0026-028.0-20090625 | 6/25/09 | Water | 1 | **1.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0026-038.0-20090625 | 6/25/09 | Water | 1,5 | **390** | <1.0 | **3.2** | **42.8** | <1.0 | <1.0 |
| CRHE-DPT0026-043.0-20090625 | 6/25/09 | Water | 1 | **27.9** | <1.0 | **1.1** | **4.2** | <1.0 | <1.0 |
| CRHE-DPT0026-048.0-20090625 | 6/25/09 | Water | 1 | **2.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0026-063.0-20090625 | 6/25/09 | Water | 1 | **1.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0027-010.0-20090625 | 6/25/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0027-018.0-20090625 | 6/25/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0027-028.0-20090625 | 6/25/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0027-038.0-20090625 | 6/25/09 | Water | 5,20 | **770** | < 5.0 | **38** | **270** | < 5.0 | < 5.0 |
| CRHE-DPT0027-043.0-20090625 | 6/25/09 | Water | 1,5 | **310** | < 1.0 | **20.5** | **1.4** | < 1.0 | < 1.0 |
| CRHE-DPT0027-048.0-20090625 | 6/25/09 | Water | 1 | **3.7** | < 1.0 | < 1.0 | <1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0027-063.0-20090625 | 6/25/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0028-010.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0028-018.0-20090626 | 6/26/09 | Water | 1 | **2.7** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0028-028.0-20090626 | 6/26/09 | Water | 5 | **6.0** | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| CRHE-DPT0028-038.0-20090626 | 6/26/09 | Water | 20 | **290** | < 20 | < 20 | **1000** | < 20 | < 20 |
| CRHE-DPT0028-043.0-20090626 | 6/26/09 | Water | 5 | **430** | < 5.0 | **14** | **440** | < 5.0 | < 5.0 |

# KB LABS, INC.

Final Data Report

Project Number : 09-107

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.21** | **0.45** | **0.20** | **0.28** | **0.26** | **0.18** |
| CRHE-DPT0028-048.0-20090626 | 6/26/09 | Water | 1 | **3.2** | < 1.0 | < 1.0 | <1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0028-063.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0029-010.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0029-018.0-20090626 | 6/26/09 | Water | 1 | **1.5** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0029-028.0-20090626 | 6/26/09 | Water | 1 | **2.1** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0029-038.0-20090626 | 6/26/09 | Water | 1 | **96.6** | < 1.0 | < 1.0 | **8.5** | < 1.0 | < 1.0 |
| CRHE-DPT0029-043.0-20090626 | 6/26/09 | Water | 1 | **58.2** | < 1.0 | < 1.0 | **6.3** | < 1.0 | < 1.0 |
| CRHE-DPT0029-048.0-20090626 | 6/26/09 | Water | 1 | **2.2** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0029-063.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0030-010.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0030-018.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0030-028.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | **1.2** | < 1.0 | < 1.0 |
| CRHE-DPT0030-038.0-20090626 | 6/26/09 | Water | 1 | **4.2** | < 1.0 | **2.1** | **12.6** | < 1.0 | < 1.0 |
| CRHE-DPT0030-043.0-20090626 | 6/26/09 | Water | 1 | **5.3** | < 1.0 | **3.5** | **26.0** | < 1.0 | < 1.0 |
| CRHE-DPT0030-048.0-20090626 | 6/26/09 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0030-063.0-20090626 | 6/26/09 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0032-010.0-20090716 | 7/16/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0032-018.0-20090716 | 7/16/09 | Water | 1 | **1.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0032-028.0-20090716 | 7/16/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0032-038.0-20090716 | 7/16/09 | Water | 1 | **38.3** | <1.0 | <1.0 | **5.9** | <1.0 | <1.0 |
| CRHE-DPT0032-043.0-20090716 | 7/16/09 | Water | 1 | **23.1** | <1.0 | **1.0** | **12.3** | <1.0 | <1.0 |
| CRHE-DPT0032-048.0-20090716 | 7/16/09 | Water | 1 | **5.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0032-063.0-20090716 | 7/16/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0031-010.0-20090716 | 7/16/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0031-018.0-20090716 | 7/16/09 | Water | 1 | **32.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0031-028.0-20090716 | 7/16/09 | Water | 1 | **1.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0031-038.0-20090716 | 7/16/09 | Water | 1,2,5 | **340** | <1.0 | **2.9** | **67.9** | <1.0 | <1.0 |
| CRHE-DPT0031-043.0-20090716 | 7/16/09 | Water | 1,5 | **200** | <1.0 | **7.3** | **83.8** | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 09-107

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.21** | **0.45** | **0.20** | **0.28** | **0.26** | **0.18** |
| CRHE-DPT0031-048.0-20090716 | 7/16/09 | Water | 1 | **9.3** | <1.0 | <1.0 | **1.5** | <1.0 | <1.0 |
| CRHE-DPT0031-063.0-20090716 | 7/16/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0033-010.0-20090716 | 7/16/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0033-018.0-20090716 | 7/17/09 | Water | 1 | **2.1** | **2.4** | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0033-028.0-20090716 | 7/17/09 | Water | 1 | <1.0 | **1.9** | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0033-038.0-20090716 | 7/16/09 | Water | 1,5 | **190** | <1.0 | <1.0 | **23.4** | <1.0 | <1.0 |
| CRHE-DPT0033-043.0-20090716 | 7/16/09 | Water | 5,20 | **360** | **18** | **72** | **780** | <5.0 | <5.0 |
| CRHE-DPT0033-048.0-20090716 | 7/16/09 | Water | 1,2 | **120** | <1.0 | **2.3** | **13.7** | <1.0 | <1.0 |
| CRHE-DPT0033-063.0-20090716 | 7/16/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0034-010.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0034-018.0-20090717 | 7/17/09 | Water | 1 | **4.8** | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 |
| CRHE-DPT0034-036.0-20090717 | 7/17/09 | Water | 1 | **22.8** | <1.0 | **1.7** | **99.2** | <1.0 | <1.0 |
| CRHE-DPT0034-028.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0034-043.0-20090717 | 7/17/09 | Water | 2 | **21** | <2.0 | **2.8** | **140** | <2.0 | <2.0 |
| CRHE-DPT0034-048.0-20090717 | 7/17/09 | Water | 1 | **15.6** | <1.0 | <1.0 | **18.5** | <1.0 | <1.0 |
| CRHE-DPT0034-063.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0035-010.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0035-018.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0035-028.0-20090717 | 7/17/09 | Water | 1 | **6.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0035-038.0-20090717 | 7/17/09 | Water | 1 | **69.8** | <1.0 | <1.0 | **9.6** | <1.0 | <1.0 |
| CRHE-DPT0035-043.0-20090717 | 7/17/09 | Water | 1 | **13.8** | <1.0 | <1.0 | **5.2** | <1.0 | <1.0 |
| CRHE-DPT0035-048.0-20090717 | 7/17/09 | Water | 1 | **1.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0035-063.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0036-010.0-20090717 | 7/17/09 | Water | 1 | **1.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0036-018.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0036-028.0-20090717 | 7/17/09 | Water | 1, 2 | **130** | <1.0 | <1.0 | **19.2** | <1.0 | <1.0 |
| CRHE-DPT0036-038.0-20090717 | 7/17/09 | Water | 100 | **910** | <100 | **280** | **2100** | <100 | <100 |
| CRHE-DPT0036-043.0-20090717 | 7/17/09 | Water | 2 | **110** | <2.0 | **19** | **130** | <2.0 | <2.0 |

# KB LABS, INC.

Final Data Report

Project Number : 09-107

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.21** | **0.45** | **0.20** | **0.28** | **0.26** | **0.18** |
| CRHE-DPT0036-048.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0036-063.0-20090717 | 7/17/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0037-010.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0037-018.0-20090804 | 8/4/09 | Water | 1 | **1.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0037-026.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0037-038.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0037-043.0-20090804 | 8/4/09 | Water | 1 | **1.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0037-048.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0037-063.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0038-010.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0038-018.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0038-028.0-20090804 | 8/4/09 | Water | 1 | **11.4** | <1.0 | <1.0 | **6.0** | <1.0 | <1.0 |
| CRHE-DPT0038-038.0-20090804 | 8/4/09 | Water | 1 | **17.7** | <1.0 | **3.7** | **19.3** | <1.0 | <1.0 |
| CRHE-DPT0038-043.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0038-048.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0038-063.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0039-010.0-20090804 | 8/4/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0039-018.0-20090805 | 8/5/09 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.3** | <1.0 | <1.0 |
| CRHE-DPT0039-028.0-20090805 | 8/5/09 | Water | 1 | **88.5** | <1.0 | **1.5** | **48.2** | <1.0 | <1.0 |
| CRHE-DPT0039-038.0-20090805 | 8/5/09 | Water | 5, 20 | **1200** | **5.3** | **290** | **730** | <5.0 | <5.0 |
| CRHE-DPT0039-043.0-20090805 | 8/5/09 | Water | 1 | **7.3** | <1.0 | <1.0 | **2.0** | <1.0 | <1.0 |
| CRHE-DPT0039-048.0-20090805 | 8/5/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0039-063.0-20090805 | 8/5/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0040-010.0-20090805 | 8/5/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0040-018.0-20090805 | 8/5/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0040-028.0-20090805 | 8/5/09 | Water | 2 | **130** | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 |
| CRHE-DPT0040-038.0-20090805 | 8/5/09 | Water | 1,10 | **290** | <1.0 | **5.5** | **2.3** | <1.0 | <1.0 |
| CRHE-DPT0040-043.0-20090805 | 8/5/09 | Water | 1,10 | **460** | <1.0 | **8.2** | **2.1** | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 09-107

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.21** | **0.45** | **0.20** | **0.28** | **0.26** | **0.18** |
| CRHE-DPT0040-048.0-20090805 | 8/6/09 | Water | 1 | **1.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0040-063.0-20090805 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0041-010.0-20090805 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0041-018.0-20090805 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0041-028.0-20090805 | 8/6/09 | Water | 1 | **2.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0041-038.0-20090805 | 8/6/09 | Water | 1 | **60.8** | <1.0 | <1.0 | **7.6** | <1.0 | <1.0 |
| CRHE-DPT0041-043.0-20090806 | 8/6/09 | Water | 1 | **99.1** | <1.0 | <1.0 | **15.1** | <1.0 | <1.0 |
| CRHE-DPT0041-048.0-20090806 | 8/6/09 | Water | 1 | **2.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0041-063.0-20090806 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0042-010.0-20090806 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0042-018.0-20090806 | 8/6/09 | Water | 1 | **18.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0042-028.0-20090806 | 8/6/09 | Water | 1 | **45.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0042-038.0-20090806 | 8/6/09 | Water | 2, 10 | **570** | <2.0 | **2.7** | **120** | <2.0 | <2.0 |
| CRHE-DPT0042-043.0-20090806 | 8/6/09 | Water | 1, 20 | **430** | **1.7** | **15.4** | **290** | <1.0 | <1.0 |
| CRHE-DPT0042-048.0-20090806 | 8/6/09 | Water | 1 | **21.2** | <1.0 | <1.0 | **1.9** | <1.0 | <1.0 |
| CRHE-DPT0042-063.0-20090806 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0043-010.0-20090806 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0043-018.0-20090806 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0043-028.0-20090806 | 8/6/09 | Water | 1 | **29.3** | <1.0 | **3.7** | **2.0** | <1.0 | <1.0 |
| CRHE-DPT0043-038.0-20090806 | 8/6/09 | Water | 10 | **600** | <10 | **47** | **28** | <10 | <10 |
| CRHE-DPT0043-043.0-20090806 | 8/6/09 | Water | 1 | **4.7** | <1.0 | <1.0 | **3.0** | <1.0 | <1.0 |
| CRHE-DPT0043-048.0-20090806 | 8/6/09 | Water | 2 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 |
| CRHE-DPT0043-063.0-20090806 | 8/6/09 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0044-033.0-20090806 | 8/6/09 | Water | 1 | **2.3** | <1.0 | <1.0 | **9.6** | <1.0 | <1.0 |
| CRHE-DPT0044-038.0-20090806 | 8/6/09 | Water | 1 | **3.9** | <1.0 | <1.0 | **20.8** | <1.0 | <1.0 |
| CRHE-DPT0044-043.0-20090806 | 8/6/09 | Water | 5 | **17** | < 5.0 | < 5.0 | **79** | < 5.0 | < 5.0 |
| CRHE-DPT0044-048.0-20090806 | 8/6/09 | Water | 2 | **34** | < 2.0 | < 2.0 | **13** | < 2.0 | < 2.0 |

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☑ 6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073
FAX (352) 367-0074

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB 1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE | KSC, FL |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
| | Jan | |

**PRESERVATION**: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0017-010.0 | 6/22/09 | 0904 | | ✓ | 6/22/09 | 0915 | | GW | 2 | ✓ | | | | KB1-062209-1 |
| -018.0 | | 0916 | | | | 0923 | | | | | | | | -2 |
| -028.0 | | 0929 | | | | 0937 | | | | | | | | -3 |
| -038.0 | | 0944 | | | | 0955 | | | | | | | | -4 |
| -043.0 | | 1050 | | | | 1100 | | | | | | | | -5 |
| -048.0 | | 1110 | | | | 1118 | | | | | | | | -6 |
| -063.0 | | 1130 | | | | 1138 | | | | | | | | -7 |
| DPT0018-010.0 | | 1250 | | | | 1314 | | | | | | | | -8 |
| -018.0 | | 1304 | | | | 1314 | | | | | | | | -9 |
| -028.0 | | 1318 | | | | 1328 | | | | | | | | -10 |
| -038.0 | | 1334 | | | | 1345 | | | | | | | | -11 |
| -043.0 | | 1404 | | | | 1410 | | | | | | | | -12 |
| -048.0 | | 1420 | | | | 1428 | | | | | | | | -13 |
| -063.0 | | 1442 | | | | 1451 | | | | | | | | -14 |
| DPT0019-010.0 | | 1604 | | | | 1611 | | | | | | | | -15 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/22/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☑ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE KSC, FL | |
| SAMPLERS | CONTACT PERSON: Jan | BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0019-010.0 | 6/22/09 | 1614 | | ✓ | 6/22/09 | 1620 | | GW | 2 | ✓ | KB1-062209-16 |
| -028.0 | | 1624 | | | | 1632 | | | | | -17 |
| -038.0 | | 1638 | | | | 1648 | | | | | -18 |
| -043.0 | | 1704 | | | | 1712 | | | | | -19 |
| -48.0 | | 1720 | | | | 1726 | | | | | -20 |
| -63.0 | | 1740 | | | | 1751 | | | | | -21 |
| | | | | | | | | | | | |
| CRHEA-DPT0020-~~010.0~~ 010.1 | 6/23/09 | ~~0920~~ 0920 | | | 6/23/09 | 0933 | | GW | 2 | 1 | KB1-062309-1 |
| -018.0 | | 0938 | | | | 0949 | | | | | -2 |
| -028.0 | | 0957 | | | | 1007 | | | | | -3 |
| -038.0 | | 1018 | | | | 1034 | | | | | -4 |
| -043.0 | | 1053 | | | | 1109 | | | | | -5 |
| -048.0 | | 1119 | | | | 1137 | | | | | -6 |
| -063.0 | | 1145 | | | | 1200 | | | | | -7 |
| DPT0021-010.0 | | 1340 | | | | 1355 | | | | | -8 |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | 6/23/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB 1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRHE KSC, FL

SAMPLERS

CONTACT PERSON: Jan

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0021 -018.0 | 6/23/09 | 1404 | | ✓ | 6/23/09 | 1414 | | GW | 2 | ✓ | KB1 - 062309 - 9 |
| -028.0 | | 1421 | | | | 1433 | | | | | -10 |
| -038.0 | | 1453 | | | | 1505 | | | | | -11 |
| -043.0 | | 1517 | | | | 1530 | | | | | -12 |
| -048.0 | | 1545 | | | | 1557 | | | | | -13 |
| -063.0 | | 1614 | | | | 1635 | | | | | -14 |
| DPT022 -010.0 | | 1654 | | | | 1709 | | | | | -15 |
| -018.0 | | 1708 | | | | 1720 | | | | | -16 |
| -028.0 | | 1724 | | | | 1737 | | | | | -17 |
| -038.0 | | 1745 | | | | 1755 | | | | | -18 |

N/A TL

6/23/09

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | 6/23/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB 1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE | KSC, FL |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
| | Alex | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0022-043.0 | 6/24/09 | 0754 | | ✓ | 6/24/09 | 0810 | | GW | 2 | ✓ | KB1-062409-1 |
| -048.0 | | 0822 | | | | 0830 | | | | | -2 |
| -063.0 | | 0851 | | | | 0905 | | | | | -3 |
| DPT0023-010.0 | | 0958 | | | | 1011 | | | | | -4 |
| -018.0 | | 1011 | | | | 1025 | | | | | -5 |
| -028.0 | | 1026 | | | | 1039 | | | | | -6 |
| -038.0 | | 1045 | | | | 1057 | | | | | -7 |
| -43.0 | | 1156 | | | | 1210 | | | | | -8 |
| -048.0 | | 1221 | | | | 1233 | | | | | -9 |
| -063.0 | | 1249 | | | | 1300 | | | | | -10 |
| DPT0024-010.0 | | 1331 | | | | 1345 | | | | | -11 |
| -018.0 | | 1401 | | | | 1414 | | | | | -12 |
| -028.0 | | 1422 | | | | 1434 | | | | | -13 |
| -038.0 | | 1449 | | | | 1502 | | | | | -14 |
| -043.0 | | 1511 | | | | 1522 | | | | | -15 |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/24/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB 1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE | KSC, FL |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
| | Alex | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0024-048.0 | 6/24/09 | 1534 | | ✓ | 6/24/09 | 1545 | | GW | 2 | ✓ | KB1-062409-16 |
| CRHEA-DPT0024-63.0 | | 1602 | | | | 1615 | | | | | -17 |
| DPT0020-73 | | 1653 | | | | 1705 | | | | | -18 |
| DPT0022-73 | | 1729 | | | | 1742 | | | | | -19 |
| | | | | | | | | | | | |
| CRHEA-DPT0025-010.0 | 6/25/09 | 0817 | | ✓ | 6/25/09 | 0830 | | GW | 2 | ✓ | KB1-062509-1 |
| -018.0 | | 0831 | | | | 0845 | | | | | -2 |
| -028.0 | | 0855 | | | | 0910 | | | | | -3 |
| -038.0 | | 0916 | | | | 0935 | | | | | -4 |
| -043.0 | | 0941 | | | | 0952 | | | | | -5 |
| -048.0 | | 1003 | | | | 1014 | | | | | -6 |
| -063.0 | | 1036 | | | | 1050 | | | | | -7 |
| DPT0026-010.0 | | 1110 | | | | 1121 | | | | | -8 |
| -018.0 | | 1210 | | | | 1222 | | | | | -9 |
| -028.0 | | 1229 | | | | 1240 | | | | | -10 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/25/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRHE KSC, FL

SAMPLERS

CONTACT PERSON: Alex

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-BPT0026-038.0 | 6/25/09 | 1257 | | ✓ | 6/25/09 | 1309 | | GW | 2 | ✓ | | | | | KB1-062509-11 |
| -043.0 | | 1321 | | | | 1332 | | | | | | | | | -12 |
| -048.0 | | 1343 | | | | 1355 | | | | | | | | | -13 |
| -63.0 | | 1409 | | | | 1421 | | | | | | | | | -14 |
| BPT0027-010.0 | | 1452 | | | | 1504 | | | | | | | | | -15 |
| -018.0 | | 1508 | | | | 1521 | | | | | | | | | -16 |
| -028.0 | | 1527 | | | | 1541 | | | | | | | | | -17 |
| -038.0 | | 1547 | | | | 1600 | | | | | | | | | -18 |
| -043.0 | | 1618 | | | | 1630 | | | | | | | | | -19 |
| -048.0 | | 1642 | | | | 1654 | | | | | | | | | -20 |
| -063.0 | | 1704 | | | | 1716 | | | | | | | | | -21 |

N/A TC 6/25/09

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| Precleaned Containers / Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 6/25/09 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRTE KSC, FL

SAMPLERS

CONTACT PERSON: Alex

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRTEA-DPT0028-010.0 | 6/26/09 | 0724 | | ✓ | 6/26/09 | 0805 | | GW | 2 | ✓ | KB1-062609-1 |
| -018.0 | | 0739 | | | | | | | | | -2 |
| -028.0 | | 0757 | | | | | | | | | -3 |
| -038.0 | | 0817 | | | | 0830 | | | | | -4 |
| -043.0 | | 0844 | | | | 0856 | | | | | -5 |
| -048.0 | | 0906 | | | | 0915 | | | | | -6 |
| -063.0 | | 943 | | | | 945 | | | | | -7 |
| DPT0029-010.0 | | 1009 | | | | 1021 | | | | | -8 |
| -018.0 | | 1023 | | | | 1035 | | | | | -9 |
| -028.0 | | 1041 | | | | 1149 | | | | | -10 |
| -038.0 | | 1101 | | | | 1119 | | | | | -11 |
| -043.0 | | 1214 | | | | 1225 | | | | | -12 |
| -048.0 | | 1239 | | | | 1250 | | | | | -13 |
| -063.0 | | 1305 | | | | 1320 | | | | | -14 |
| DPT0030-010.0 | | 1440 | | | | 1452 | | | | | -15 |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 6/26/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRHE KSC, FL

SAMPLERS

CONTACT PERSON: Alex

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-SPT0030-018.0 | 6/26/09 | 1457 | | ✓ | 6/26/09 | 1510 | | GW | 2 | ✓ | KB1-062609-16 |
| -028.0 | | 1516 | | | | 1527 | | | | | -17 |
| -038.0 | | 1534 | | | | 1546 | | | | | -18 |
| -043.0 | | 1601 | | | | 1614 | | | | | -19 |
| -048.0 | | 1621 | | | | 1632 | | | | | -20 |
| -063.0 | | 1643 | | | | 1655 | | | | | -21 |

N/A TC 6/26/09

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 6/26/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB 1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE | KSC, FL |
| SAMPLERS | CONTACT PERSON: Jon | BATCH # (Lab Use Only) |

**PRESERVATION**: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0017-010.0 | 6/22/09 | 0904 | | ✓ | 6/22/09 | 0915 | | GW | 2 | ✓ | KB1-062209-1 |
| -018.0 | | 0916 | | | | 0923 | | | | | -2 |
| -028.0 | | 0929 | | | | 0937 | | | | | -3 |
| -038.0 | | 0944 | | | | 0955 | | | | | -4 |
| -043.0 | | 1050 | | | | 1100 | | | | | -5 |
| -048.0 | | 1110 | | | | 1118 | | | | | -6 |
| -063.0 | | 1130 | | | | 1138 | | | | | -7 |
| DPT0018-010.0 | | 1250 | | | | 1314 | | | | | -8 |
| -018.0 | | 1304 | | | | 1314 | | | | | -9 |
| -028.0 | | 1318 | | | | 1328 | | | | | -10 |
| -038.0 | | 1334 | | | | 1345 | | | | | -11 |
| -043.0 | | 1404 | | | | 1410 | | | | | -12 |
| -048.0 | | 1420 | | | | 1428 | | | | | -13 |
| -063.0 | | 1442 | | | | 1451 | | | | | -14 |
| DPT0019-010.0 | | 1604 | | | | 1611 | | | | | -15 |

| Precleaned Containers / Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time: 6/22/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE KSC, FL | |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
| | Jan | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0019-018.0 | 6/22/09 | 1614 | | ✓ | 6/22/09 | 1620 | | GW | 2 | ✓ | KB1-062209-16 |
| -028.0 | | 1624 | | | | 1632 | | | | | -17 |
| -038.0 | | 1638 | | | | 1648 | | | | | -18 |
| -043.0 | | 1704 | | | | 1712 | | | | | -19 |
| -48.0 | | 1720 | | | | 1726 | | | | | -20 |
| -63.0 | | 1740 | | | | 1751 | | | | | -21 |
| | | | | | | | | | | | |
| CRHEA-DPT0020-010.0 | 6/23/09 | 0920 | | | 6/23/09 | 0933 | | GW | 2 | 1 | KB1-062309-1 |
| -018.0 | | 0938 | | | | 0949 | | | | | -2 |
| -028.0 | | 0957 | | | | 1007 | | | | | -3 |
| -038.0 | | 1018 | | | | 1034 | | | | | -4 |
| -043.0 | | 1053 | | | | 1109 | | | | | -5 |
| -048.0 | | 1119 | | | | 1137 | | | | | -6 |
| -063.0 | | 1145 | | | | 1200 | | | | | -7 |
| DPT0021-010.0 | | 1340 | | | | 1355 | | | | | -8 |

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/23/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB 1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRHE KSC, FL

SAMPLERS

CONTACT PERSON: Jan

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0021 -018.0 | 6/23/09 | 1404 | | ✓ | 6/23/09 | 1414 | | GW | 2 | ✓ | KB1 - 062309 - 9 |
| -028.0 | | 1421 | | | | 1433 | | | | | -10 |
| -038.0 | | 1453 | | | | 1505 | | | | | -11 |
| -043.0 | | 1517 | | | | 1530 | | | | | -12 |
| -048.0 | | 1545 | | | | 1557 | | | | | -13 |
| -063.0 | | 1614 | | | | 1635 | | | | | -14 |
| DPT022 -010.0 | | 1654 | | | | 1709 | | | | | -15 |
| -018.0 | | 1708 | | | | 1720 | | | | | -16 |
| -028.0 | | 1724 | | | | 1737 | | | | | -17 |
| -038.0 | | 1745 | | | | 1755 | | | | | -18 |

N/A TL 6/23/09

| Precleaned Containers / Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 6/23/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB 1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE | KSC, FL |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
| | Alex | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0022-043.0 | 6/24/09 | 0759 | | ✓ | 6/24/09 | 0810 | | GW | 2 | ✓ | KB1-062409-1 |
| -048.0 | | 0822 | | | | 0830 | | | | | -2 |
| -063.0 | | 0851 | | | | 0905 | | | | | -3 |
| DPT0023-010.0 | | 0958 | | | | 1011 | | | | | -4 |
| -018.0 | | 1011 | | | | 1025 | | | | | -5 |
| -028.0 | | 1026 | | | | 1039 | | | | | -6 |
| -038.0 | | 1045 | | | | 1057 | | | | | -7 |
| -43.0 | | 1156 | | | | 1210 | | | | | -8 |
| -048.0 | | 1221 | | | | 1233 | | | | | -9 |
| -063.0 | | 1249 | | | | 1300 | | | | | -10 |
| DPT0024-010.0 | | 1331 | | | | 1345 | | | | | -11 |
| -018.0 | | 1401 | | | | 1414 | | | | | -12 |
| -028.0 | | 1422 | | | | 1434 | | | | | -13 |
| -038.0 | | 1449 | | | | 1502 | | | | | -14 |
| -043.0 | | 1511 | | | | 1522 | | | | | -15 |

| Precleaned Containers / Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| | | | | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 6/24/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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TEL (352) 367-0073
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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRHE KSC, FL

SAMPLERS

CONTACT PERSON: Alex

BATCH # (Lab Use Only)

**PRESERVATION**: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-DPT0024-048.0 | 6/24/09 | 1534 | | ✓ | 6/24/09 | 1545 | | GW | 2 | ✓ | KB1-062409-16 |
| CRHEA-DPT0024-63.0 | | 1602 | | | | 1615 | | | | | -17 |
| DPT0020-73 | | 1653 | | | | 1705 | | | | | -18 |
| DPT0022-73 | | 1729 | | | | 1742 | | | | | -19 |
| | | | | | | | | | | | |
| CRHEA-DPT0025-010.0 | 6/25/09 | 0817 | | ✓ | 6/25/09 | 0830 | | GW | 2 | ✓ | KB1-062509-1 |
| -018.0 | | 0831 | | | | 0845 | | | | | -2 |
| -028.0 | | 0855 | | | | 0910 | | | | | -3 |
| -038.0 | | 0916 | | | | 0935 | | | | | -4 |
| -043.0 | | 0941 | | | | 0952 | | | | | -5 |
| -048.0 | | 1003 | | | | 1014 | | | | | -6 |
| -063.0 | | 1036 | | | | 1050 | | | | | -7 |
| DPT0026-010.0 | | 1110 | | | | 1121 | | | | | -8 |
| -018.0 | | 1210 | | | | 1222 | | | | | -9 |
| -028.0 | | 1229 | | | | 1240 | | | | | -10 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/25/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHE | KSC, FL |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
| | Alex | |

**PRESERVATION**: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-BPT0026-038.0 | 6/25/09 | 1257 | | ✓ | 6/25/09 | 1309 | | GW | 2 | ✓ | KB1-062509-11 |
| -043.0 | | 1321 | | | | 1332 | | | | | -12 |
| -048.0 | | 1343 | | | | 1355 | | | | | -13 |
| -063.0 | | 1409 | | | | 1421 | | | | | -14 |
| BPT0027-010.0 | | 1452 | | | | 1504 | | | | | -15 |
| -018.0 | | 1508 | | | | 1521 | | | | | -16 |
| -028.0 | | 1527 | | | | 1541 | | | | | -17 |
| -038.0 | | 1547 | | | | 1600 | | | | | -18 |
| -043.0 | | 1618 | | | | 1630 | | | | | -19 |
| -048.0 | | 1642 | | | | 1654 | | | | | -20 |
| -063.0 | | 1704 | | | | 1716 | | | | | -21 |

N/A TC 6/25/09

| Precleaned Containers / Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 6/25/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA CRHF | KSC, FL |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
| | Alex | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHFA-DPT0028-010.0 | 6/26/09 | 0724 | | ✓ | 6/26/09 | 0805 | | GW | 2 | ✓ | KB1-062609-1 |
| -018.0 | | 0739 | | | | ↓ | | | | | -2 |
| -028.0 | | 0757 | | | | | | | | | -3 |
| -038.0 | | 0817 | | | | 0830 | | | | | -4 |
| -043.0 | | 0844 | | | | 0856 | | | | | -5 |
| -048.0 | | 0906 | | | | 0915 | | | | | -6 |
| -063.0 | | 934 | | | | 945 | | | | | -7 |
| DPT0029-010.0 | | 1009 | | | | 1021 | | | | | -8 |
| -018.0 | | 1023 | | | | 1035 | | | | | -9 |
| -028.0 | | 1041 | | | | 1149 | | | | | -10 |
| -038.0 | | 1101 | | | | 1119 | | | | | -11 |
| -043.0 | | 1214 | | | | 1225 | | | | | -12 |
| -048.0 | | 1239 | | | | 1250 | | | | | -13 |
| -063.0 | | 1305 | | | | 1320 | | | | | -14 |
| DPT0030-010.0 | | 1440 | | | | 1452 | | | | | -15 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/26/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRHE KSC, FL

SAMPLERS

CONTACT PERSON: Alex

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHEA-PT0030-018.0 | 6/26/09 | 1457 | | ✓ | 6/26/09 | 1510 | | GW | 2 | ✓ | KB1-062609-16 |
| -028.0 | | 1516 | | | | 1527 | | | | | -17 |
| -038.0 | | 1534 | | | | 1546 | | | | | -18 |
| -043.0 | | 1601 | | | | 1614 | | | | | -19 |
| -048.0 | | 1621 | | | | 1632 | | | | | -20 |
| -063.0 | | 1643 | | | | 1655 | | | | | -21 |

N/A TL 6/26/09

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/26/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #**

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CRAE NASA CHAE KSC, FL

SAMPLERS

CONTACT PERSON: Ian Bartus

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0032-010.0 | 7/16/09 | 1228 | | ✓ | 7/16/09 | 1430 | | GW | 2 | ✓ | |
| -018.0 | | 1246 | | | | | | | | | |
| -028.0 | | 1256 | | | | | | | | | |
| -038.0 | | 1312 | | | | | | | | | |
| -043.0 | | 1336 | | | | | | | | | |
| -48.0 | | 1356 | | | | 1645 | | | | | |
| -63.0 | | 1416 | | | | ↓ | | | | | |
| CRHE-DPT0031-010.0 | | 0850 | | | | 1745 | | | | | |
| -018.0 | | 0900 | | | | | | | | | |
| -028.0 | | 0910 | | | | | | | | | |
| -038.0 | | 0926 | | | | | | | | | |
| -043.0 | | 0958 | | | | | | | | | |
| -048.0 | | 1018 | | | | | | | | | |
| -063.0 | | 1036 | | | | | | | | | |
| CRHE-DPT0033-010.0 | ↓ | 1458 | | | | | | ↓ | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 7/16/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #**

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NAGA CRHE HSC, FL

SAMPLERS:

CONTACT PERSON: JAN BARFUS

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT033-018.0 | 7/16/09 | 1512 | | ✓ | 7/16/09 | 1745 | | GW | 2 | ✓ | |
| -028.0 | | 1618 | | | | | | | | | |
| -038.0 | | 1632 | | | | | | | | | |
| -043.0 | | 1700 | | | | | | | | | |
| -048.0 | | 1718 | | | | | | | | | |
| -063.0 | | 1734 | | | | | | | | | |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | 7/16/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #**

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRHE KSC, FL

SAMPLERS

CONTACT PERSON: JAY BARFUS

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0034-010.0 | 7/17/09 | 0759 | | ✓ | 7/17/09 | 0810 | | GW | 2 | ✓ | |
| -018.0 | | 0811 | | | | 0820 | | | | | |
| -028.0 | | 0826 | | | | 0835 | | | | | |
| -036.0 | | 0844 | | | | 0854 | | | | | |
| -043.0 | | 0914 | | | | 0924 | | | | | |
| -048.0 | | 0933 | | | | 0942 | | | | | |
| -063.0 | | 0953 | | | | 1004 | | | | | |
| CRHE-DPT0035-010.0 | | 1044 | | | | 1057 | | | | | |
| -018.0 | | 1058 | | | | 1106 | | | | | |
| -028.0 | | 1108 | | | | 1117 | | | | | |
| -038.0 | | 1216 | | | | 1226 | | | | | |
| -043.0 | | 1230 | | | | 1241 | (HK) 7/17 | | | | |
| -048.0 | | 1246 | | | | 1305 | 1305 | | | | |
| -063.0 | | 1312 | | | | 1323 | | | | | |
| CRHE-DPT0036-010.0 | | 1406 | | | | 1430 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)*<br>Hank Kelley | Date / Time<br>7/17/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (919) 678-0030

**MOBILE UNIT #**

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CRHE KSC, FL

SAMPLERS

CONTACT PERSON: JAN BARFUS

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0036-018.0 | 7/17/09 | 1416 | | | 7/17/09 | 1430 | | GW | 2 | ✓ | |
| -028.0 | | 1432 | | | | 1441 | | | | | |
| -038.0 | | 1446 | | | | 1455 | | | | | |
| -043.0 | | 1512 | | | | 1525 | | | | | |
| -048.0 | | 1528 | | | | 1540 | | | | | |
| -063.0 | | 1546 | | | | 1602 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 7/17/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB1

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS:

CONTACT PERSON: Alex Rivera

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0037-010.0-20090804 | 8/4/09 | 0900 | | ✓ | 8/4/09 | 0900 | | W | 2 | ✓ | | | | |
| -018.0 | | 0915 | | | | 0930 | | | | | | | | |
| -026.0 | | 0932 | | | | 0945 | | | | | | | | |
| -038.0 | | 0952 | | | | 1000 | | | | | | | | |
| -043.0 | | 1036 | | | | 1052 | | | | | | | | |
| -048.0 | | 1058 | | | | 1115 | | | | | | | | |
| -063.0 | | 1123 | | | | 1145 | | | | | | | | |
| DPT0038-010.0 | | 1305 | | | | 1350 | | | | | | | | |
| -019.0 | | 1318 | | | | ↓ | | | | | | | | |
| -028.0 | | 1335 | | | | | | | | | | | | |
| -038.0 | | 1354 | | | | 1409 | | | | | | | | |
| -043.0 | | 1434 | | | | 1450 | | | | | | | | |
| -048.0 | | 1456 | | | | 1513 | | | | | | | | |
| -063.0 | | 1525 | | | | 1542 | | | | | | | | |
| DPT0039-010.0 | | 1613 | | | | 1628 | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 8/4/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KBI

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | CRHE | KSGFL |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
| | ALEX RIVERA | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE-DPT0039-01B0-20090805 | 8/5/09 | 0724 | | ✓ | 8/5/09 | 1715 | | W | 2 | ✓ | |
| -028.0 | | 0742 | | | | | | | | | |
| -038.0 | | 0807 | | | | | | | | | |
| -043.0 | | 0834 | | | | | | | | | |
| -048.0 | | 0855 | | | | | | | | | |
| -063.0 | | 0920 | | | | | | | | | |
| DPT0040-010.0 | | 0955 | | | | | | | | | |
| -018.0 | | 1008 | | | | | | | | | |
| -028.0 | | 1024 | | | | | | | | | |
| -038.0 | | 1044 | | | | | | | | | |
| -043.0 | | 1342 | | | | | | | | | |
| -048.0 | | 1404 | | | | | | | | | |
| -063.0 | | 1429 | | | | | | | | | |
| DPT0041-010.0 | | 1512 | | | | | | | | | |
| -018.0 | | 1525 | | | | | | | | | |

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| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | Alex Kelly | 8/5/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON: JAN BARFUS

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE DPT0041-043.0-20090806 | 8/6/09 | 0740 | | ✓ | 8/6/09 | 0753 | | W | 2 | ✓ | |
| -048.0 | | 0758 | | | | 0816 | | | | | |
| -063.0 | | 0822 | | | | 0830 | | | | | |
| DPT0042-010.0 | | 0853 | | | (H) | 0910 | | | | | |
| -018.0 | | 0904 | | | | 0915 | | | | | |
| -028.0 | | 0918 | | | | 0930 | | | | | |
| -038.0 | | 0932 | | | | 0940 | | | | | |
| -043.0 | | 0958 | | | | 0958 | | | | | |
| -048.0 | | 1014 | | | | 1025 | | | | | |
| -063.0 | | 1034 | | | | 1050 | | | | | |
| DPT0043-010.0 | | 1156 | | | | 1225 | | | | | |
| -018.0 | | 1212 | | | | ↓ | | | | | |
| -028.0 | | 1226 | | | | 1256 | | | | | |
| -038.0 | | 1240 | | | | ↓ | | | | | |
| -043.0 | ↓ | 1310 | | ↓ | ↓ | 1355 | | ↓ | ↓ | ↓ | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 8/6/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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TEL (919) 678-0030


**MOBILE UNIT #** KBL

| CLIENT NAME | PROJECT NAME & ADDRESS | | |
|---|---|---|---|
| Geosyntec | CRHE | KSC, FL | |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RHE-DPT0043-033.0-20090806 | 8/6/09 | 1324 | | ✓ | 8/6/09 | 1355 | | W | 2 | ✓ | | | | |
| -043.0 | | 1512 | | | | 1530 | | | | | | | | |
| DPT0044-033.0 | | 1600 | | | | 1615 | | | | | | | | |
| -038.0 | | 1618 | | | | 1629 | | | | | | | | |
| -043.0 | | 1632 | | | | 1646 | | | | | | | | |
| -048.0 | | 1650 | | | | 1705 | | | | | | | | |

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* Hub Kelley | Date / Time 8/6/09 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KBI

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRITE — KSC, FL

SAMPLERS:

CONTACT PERSON: ALEX RIVERA

BATCH # (Lab Use Only):

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRITE-DPT0041-028.0-20090805 | 8/5/09 | 1542 | | ✓ | 8/5/09 | 1715 | | W | 2 | ✓ | | | | |
| -0380 | | 1601 | | | | | | | | | | | | |

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| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

8/5/09

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

***Telephone* (352) 472-5830**
***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

February 5, 2010

Jill Johnson
GeoSyntec Consultants
9511 Holsberry Lane, Suite C
Pensacola, FL 32534

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 09-275**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from January 25 to February 2, 2010. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

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# PROJECT NARRATIVE

## Project Scope

From January 25 to February 3, 2010, a total of 181 water samples were analyzed for GeoSyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB3: FDOH NELAP Certification Number E82816

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0

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ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

---

# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. Changes for sample ID CRHE-DPT0046-038.0-20100125 reported:
   vinyl chloride <1.0 changed to 10.0ug/L.
   t-1,2-dichlprothene <1.0 changed to 1.8 ug/L.
   c-1,2-dichloroethene <1.0 changed to 6.7 ug/L.

3. Changes for sample ID CRHE-DPT0053-028.0-20100127 reported:
   vinyl chloride <1.0 changed to 90.9ug/L.
   c-1,2-dichloroethene <1.0 changed to 2.3ug/L.

4. Changes for sample ID CRHE-DPT0073-038.0-20100203 reported:
   c-1,2-dichloroethene 1.6 changed to <1.0ug/L.
   trichloroethene <1.0 changed to 1.6ug/L.

5. Sample ID CRHE-DPT0050-038.0-20100126 has an "L" qualifier for vinyl chloride indicating the concentration exceeded Calibration range.

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6. Sample ID CRHE-DPT0052-028.0-20100127 has an “L” qualifier for vinyl chloride indicating the concentration exceeded Calibration range.

7. Sample ID CRHE-DPT0055-038.0-20100127 has an “L” qualifier for vinyl chloride indicating the concentration exceeded Calibration range.

8. Freon 113 was detected in a couple of samples as a TIC.

| | |
|---|---|
| CRHE-DPT0069-010.0 | 1080 ug/L |
| CRHE-DPT0069-018.0 | 20 ug/ |

9. Compound 1,1-dichlorethane was also detected as a TIC during the project. As per client, values have been reported along with J estimation DQ.

10. During first week of project work, GCMS had some instrumental difficulties maintaining calibration tune. Client was notified. Samples possibly affected for vinyl chloride were reran on 1/28 after instrument tune was fixed.

11. All references to CHRE were changed to CRHE, the correct NASA KSC Site Location ID. Samples on COC are labeled CRHE.

12. Client had site ID’s DPT04XX changed to DPT00XX. Noted on the COCs.

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CCS 20 | 01/25/10 | 101 | 105 | 98 | 102 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/25/10 | 101 | 100 | 96 | 96 | Pass | Pass | Pass | Pass |
| BLANK | 01/25/10 | 105 | 94 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-018.0 | 01/25/10 | 104 | 100 | 96 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-028.0 | 01/25/10 | 104 | 92 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-038.0 | 01/25/10 | 103 | 104 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-044.0 | 01/25/10 | 102 | 93 | 96 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-018.0 MS | 01/25/10 | 101 | 88 | 99 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-018.0 MSD | 01/25/10 | 104 | 90 | 98 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-048.0 | 01/25/10 | 108 | 96 | 92 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-058.0 | 01/25/10 | 106 | 97 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-018.0 | 01/25/10 | 103 | 88 | 96 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-028.0 | 01/25/10 | 105 | 93 | 96 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-038.0 | 01/25/10 | 106 | 93 | 96 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-043.0 | 01/25/10 | 103 | 90 | 96 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-048.0 | 01/25/10 | 99 | 98 | 109 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-058.0 | 01/25/10 | 108 | 99 | 94 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-010.0 | 01/25/10 | 106 | 92 | 92 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0045-010.0 | 01/25/10 | 148 | 128 | 96 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0047-010.0 | 01/25/10 | 108 | 97 | 95 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0047-018.0 | 01/25/10 | 135 | 107 | 93 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0047-028.0 | 01/25/10 | 184 | 107 | 94 | 85 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0047-038.0 | 01/25/10 | 116 | 109 | 94 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0047-043.0 | 01/25/10 | 99 | 105 | 174 | 83 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0047-048.0 | 01/25/10 | 98 | 109 | 173 | 83 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0047-058.0 | 01/25/10 | 199 | 173 | 94 | 85 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0046-058.0 MS | 01/25/10 | 96 | 110 | 93 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0046-058.0 MSD | 01/25/10 | 114 | 124 | 93 | 88 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/25/10 | 101 | 108 | 96 | 88 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/26/10 | 81 | 80 | 108 | 101 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/26/10 | 99 | 85 | 93 | 99 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/26/10 | 104 | 104 | 76 | 90 | Pass | Pass | Pass | Pass |
| BLANK | 01/26/10 | 102 | 103 | 92 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0048-010.0 | 01/26/10 | 73 | 106 | 96 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0048-018.0 | 01/26/10 | 102 | 104 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0048-028.0 | 01/26/10 | 114 | 112 | 93 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0048-038.0 1:10 | 01/26/10 | 106 | 104 | 91 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0048-043.0 | 01/26/10 | 106 | 98 | 92 | 83 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0048-048.0 | 01/26/10 | 114 | 99 | 92 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0048-058.0 | 01/26/10 | 102 | 100 | 100 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-028.0 | 01/26/10 | 108 | 96 | 90 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-038.0 | 01/26/10 | 106 | 95 | 93 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-043.0 | 01/26/10 | 107 | 98 | 91 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-048.0 | 01/26/10 | 104 | 97 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-058.0 | 01/26/10 | 183 | 116 | 92 | 83 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0050-010.0 | 01/26/10 | 103 | 101 | 99 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0050-018.0 | 01/26/10 | 213 | 123 | 91 | 81 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0050-028.0 | 01/26/10 | 111 | 95 | 93 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0050-038.0 | 01/26/10 | 200 | 121 | 93 | 83 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0050-043.0 | 01/26/10 | 103 | 98 | 98 | 170 | Pass | Pass | Pass | > UCL |
| CRHE-DPT0050-048.0 | 01/26/10 | 106 | 99 | 92 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0050-058.0 | 01/26/10 | 123 | 122 | 91 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0048-038.0 | 01/26/10 | 98 | 108 | 99 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0050-038.0 1:10 | 01/26/10 | 221 | 125 | 90 | 84 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0051-028.0 | 01/26/10 | 126 | 129 | 89 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0051-038.0 | 01/26/10 | 124 | 120 | 89 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0051-043.0 | 01/26/10 | 112 | 98 | 90 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-058.0 MS | 01/26/10 | 122 | 125 | 92 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-058.0 MSD | 01/26/10 | 109 | 114 | 165 | 85 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0049-058.0 MS | 01/26/10 | 124 | 124 | 92 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0049-058.0 MSD | 01/26/10 | 101 | 108 | 103 | 86 | Pass | Pass | Pass | Pass |
| RSTD | 01/26/10 | 137 | 125 | 92 | 89 | Pass | Pass | Pass | Pass |
| RSTD | 01/26/10 | 102 | 92 | 100 | 99 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/26/10 | 115 | 117 | 90 | 88 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/27/10 | 103 | 99 | 94 | 81 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/27/10 | 106 | 100 | 95 | 89 | Pass | Pass | Pass | Pass |
| BLANK | 01/27/10 | 111 | 102 | 90 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0051-048.0 | 01/27/10 | 122 | 96 | 93 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0051-058.0 | 01/27/10 | 104 | 104 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0052-028.0 | 01/27/10 | 121 | 124 | 89 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0052-038.0 | 01/27/10 | 106 | 94 | 208 | 84 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0052-043.0 | 01/27/10 | 103 | 96 | 199 | 85 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0052-048.0 | 01/27/10 | 102 | 104 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0052-058.0 | 01/27/10 | 124 | 133 | 90 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0052-063.0 | 01/27/10 | 102 | 99 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0053-028.0 | 01/27/10 | 124 | 124 | 91 | 83 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0053-038.0 | 01/27/10 | 216 | 124 | 90 | 81 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0053-043.0 | 01/27/10 | 105 | 93 | 182 | 84 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0053-048.0 | 01/27/10 | 237 | 146 | 91 | 82 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0053-058.0 | 01/27/10 | 101 | 100 | 100 | 172 | Pass | Pass | Pass | > UCL |
| CRHE-DPT0051-048.0 MS | 01/27/10 | 103 | 96 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0051-048.0 MSD | 01/27/10 | 122 | 123 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0051-048.0 MSD | 01/27/10 | 232 | 158 | 93 | 87 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0054-028.0 | 01/27/10 | 121 | 119 | 92 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0054-038.0 | 01/27/10 | 126 | 123 | 90 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0054-043.0 | 01/27/10 | 108 | 93 | 98 | 167 | Pass | Pass | Pass | > UCL |
| CRHE-DPT0054-048.0 | 01/27/10 | 124 | 122 | 91 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0054-058.0 | 01/27/10 | 105 | 93 | 192 | 81 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0054-063.0 | 01/27/10 | 129 | 118 | 91 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-028.0 | 01/27/10 | 163 | 125 | 91 | 82 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0055-038.0 | 01/27/10 | 124 | 124 | 92 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-043.0 | 01/27/10 | 109 | 99 | 89 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-048.0 | 01/27/10 | 124 | 134 | 90 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-058.0 | 01/27/10 | 107 | 98 | 97 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-063.0 | 01/27/10 | 124 | 138 | 88 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0052-028.0 1:10 | 01/27/10 | 238 | 136 | 90 | 83 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0053-038.0 | 01/27/10 | 129 | 136 | 88 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0054-058.0 MS | 01/27/10 | 102 | 91 | 98 | 173 | Pass | Pass | Pass | > UCL |
| CRHE-DPT0054-058.0 MSD | 01/27/10 | 128 | 145 | 90 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0054-058.0 MSD | 01/27/10 | 106 | 105 | 97 | 107 | Pass | Pass | Pass | Pass |
| VSTD 20 | 01/27/10 | 125 | 148 | 90 | 86 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/28/10 | 102 | 85 | 98 | 100 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/28/10 | 105 | 104 | 102 | 96 | Pass | Pass | Pass | Pass |
| BLANK | 01/28/10 | 128 | 147 | 88 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-010.0 | 01/28/10 | 108 | 96 | 989 | 82 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0056-018.0 | 01/28/10 | 262 | 182 | 89 | 82 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0056-028.0 | 01/28/10 | 104 | 94 | 98 | 116 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-038.0 | 01/28/10 | 128 | 136 | 90 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-043.0 | 01/28/10 | 109 | 95 | 90 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-048.0 | 01/28/10 | 108 | 96 | 192 | 82 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0056-058.0 | 01/28/10 | 237 | 196 | 91 | 82 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0057-028.0 | 01/28/10 | 110 | 92 | 92 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-038.0 | 01/28/10 | 108 | 91 | 194 | 84 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0057-043.0 | 01/28/10 | 116 | 97 | 90 | 82 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0057-048.0 | 01/28/10 | 133 | 140 | 89 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-058.0 | 01/28/10 | 123 | 134 | 89 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-018.0 | 01/28/10 | 129 | 134 | 90 | 65 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0057-048.0 | 01/28/10 | 106 | 103 | 141 | 82 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0058-028.0 | 01/28/10 | 129 | 134 | 90 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0058-038.0 | 01/28/10 | 127 | 135 | 90 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-018.0 | 01/28/10 | 129 | 134 | 90 | 65 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0058-043.0 | 01/28/10 | 131 | 136 | 90 | 73 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-010.0 MS | 01/28/10 | 95 | 36 | 109 | 173 | Pass | < LCL | Pass | > UCL |
| CRHE-DPT0058-048.0 | 01/28/10 | 99 | 101 | 96 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0058-058.0 | 01/28/10 | 99 | 99 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0058-063.0 | 01/28/10 | 104 | 104 | 100 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0059-028.0 | 01/28/10 | 102 | 108 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-058.0 MS | 01/28/10 | 95 | 107 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-058.0 MSD | 01/28/10 | 97 | 113 | 101 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0059-038.0 | 01/28/10 | 96 | 113 | 98 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0059-043.0 | 01/28/10 | 96 | 116 | 97 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0059-048.0 | 01/28/10 | 94 | 114 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0059-058.0 | 01/28/10 | 95 | 113 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0060-028.0 | 01/28/10 | 95 | 114 | 99 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0060-038.0 | 01/28/10 | 95 | 119 | 100 | 107 | Pass | Pass | Pass | Pass |
| VSTD 20 | 01/28/10 | 92 | 125 | 100 | 100 | Pass | Pass | Pass | Pass |
| RSTD 20 | 01/28/10 | 94 | 114 | 101 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-028.0 | 01/28/10 | 95 | 111 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-038.0 | 01/28/10 | 92 | 116 | 101 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-043.0 | 01/28/10 | 94 | 113 | 100 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0055-048.0 | 01/28/10 | 95 | 119 | 100 | 106 | Pass | Pass | Pass | Pass |
| BLANK | 01/28/10 | 99 | 123 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0052-038.0 | 01/28/10 | 96 | 121 | 101 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0052-043.0 | 01/28/10 | 98 | 124 | 102 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0058-058.0 MS | 01/28/10 | 93 | 136 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0058-058.0 MSD | 01/28/10 | 95 | 134 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-038.0 | 01/28/10 | 96 | 116 | 101 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-043.0 | 01/29/10 | 96 | 122 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-048.0 | 01/29/10 | 99 | 122 | 103 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-038.0 | 01/29/10 | 98 | 126 | 102 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0060-038.0 1:10 | 01/29/10 | 99 | 128 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0056-043.0 | 01/29/10 | 98 | 121 | 103 | 112 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CCS 20 | 01/29/10 | 92 | 126 | 101 | 100 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/29/10 | 92 | 127 | 100 | 101 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/29/10 | 89 | 126 | 101 | 99 | Pass | Pass | Pass | Pass |
| BLANK | 01/29/10 | 96 | 118 | 101 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0060-043.0 1:5 | 01/29/10 | 92 | 107 | 101 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0057-038.0 1:10 | 01/29/10 | 97 | 120 | 103 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-028.0 | 01/29/10 | 95 | 114 | 104 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-038.0 | 01/29/10 | 98 | 122 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-028.0 MS | 01/29/10 | 88 | 121 | 102 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-028.0 MSD | 01/29/10 | 90 | 117 | 102 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-043.0 | 01/29/10 | 94 | 116 | 102 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-048.0 | 01/29/10 | 95 | 119 | 103 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-058.0 | 01/29/10 | 96 | 120 | 103 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0061-063.0 | 01/29/10 | 96 | 120 | 104 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0062-010.0 | 01/29/10 | 95 | 122 | 103 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0062-018.0 | 01/29/10 | 96 | 123 | 103 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0062-028.0 | 01/29/10 | 94 | 118 | 103 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0062-038.0 | 01/29/10 | 97 | 121 | 104 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0062-043.0 | 01/29/10 | 95 | 120 | 103 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0062-048.0 | 01/29/10 | 92 | 118 | 104 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0062-058.0 | 01/29/10 | 95 | 122 | 104 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0063-028.0 | 01/29/10 | 94 | 119 | 102 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0063-038.0 | 01/29/10 | 93 | 111 | 105 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0063-043.0 | 01/29/10 | 92 | 112 | 104 | 112 | Pass | Pass | Pass | Pass |
| CRHE-DPT0063-048.0 | 01/29/10 | 93 | 115 | 104 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0063-058.0 | 01/29/10 | 97 | 117 | 104 | 107 | Pass | Pass | Pass | Pass |
| VSTD 20 | 01/29/10 | 89 | 127 | 101 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/01/10 | 93 | 103 | 101 | 98 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/01/10 | 89 | 107 | 102 | 98 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/01/10 | 94 | 121 | 102 | 99 | Pass | Pass | Pass | Pass |
| BLANK | 02/01/10 | 95 | 115 | 104 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-028.0 | 02/01/10 | 94 | 109 | 104 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-038.0 | 02/01/10 | 96 | 112 | 103 | 112 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-043.0 | 02/01/10 | 97 | 113 | 104 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-048.0 | 02/01/10 | 97 | 114 | 104 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-058.0 | 02/01/10 | 93 | 109 | 106 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-063.0 | 02/01/10 | 97 | 115 | 106 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0065-028.0 | 02/01/10 | 97 | 115 | 104 | 113 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0065-038.0 | 02/01/10 | 94 | 113 | 105 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0065-043.0 | 02/01/10 | 97 | 117 | 103 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0065-048.0 | 02/01/10 | 94 | 117 | 104 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0065-058.0 | 02/01/10 | 95 | 114 | 105 | 112 | Pass | Pass | Pass | Pass |
| CRHE-DPT0065-063.0 | 02/01/10 | 95 | 118 | 105 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-028.0 MS | 02/01/10 | 87 | 119 | 104 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0064-028.0 MSD | 02/01/10 | 92 | 114 | 103 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0066-038.0 | 02/01/10 | 95 | 110 | 106 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0066-028.0 | 02/01/10 | 96 | 112 | 105 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0066-043.0 | 02/01/10 | 92 | 114 | 105 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0066-048.0 | 02/01/10 | 94 | 119 | 103 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0066-058.0 | 02/01/10 | 94 | 115 | 104 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-010.0 | 02/01/10 | 96 | 119 | 105 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-018.0 | 02/01/10 | 97 | 122 | 104 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-028.0 | 02/01/10 | 98 | 119 | 103 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-038.0 | 02/01/10 | 97 | 121 | 102 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-038.0 1:10 | 02/01/10 | 94 | 117 | 106 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-043.0 | 02/01/10 | 98 | 126 | 101 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-048.0 | 02/01/10 | 96 | 124 | 103 | 112 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-058.0 | 02/01/10 | 98 | 126 | 103 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0066-038.0 1:10 | 02/01/10 | 98 | 121 | 104 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0066-028.0 1:5 | 02/01/10 | 97 | 125 | 103 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0065-063.0 MS | 02/01/10 | 96 | 133 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0065-063.0 MSD | 02/01/10 | 96 | 126 | 103 | 101 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/01/10 | 97 | 131 | 102 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/02/10 | 99 | 118 | 100 | 104 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/02/10 | 100 | 121 | 100 | 102 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/02/10 | 97 | 112 | 99 | 103 | Pass | Pass | Pass | Pass |
| BLANK | 02/02/10 | 100 | 117 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0067-043.0 1:5 | 02/02/10 | 100 | 118 | 102 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0068-028.0 | 02/02/10 | 100 | 118 | 101 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0068-038.0 | 02/02/10 | 99 | 116 | 101 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0068-043.0 | 02/02/10 | 100 | 117 | 102 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0068-048.0 | 02/02/10 | 100 | 117 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0068-058.0 | 02/02/10 | 102 | 119 | 101 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-010.0 1:20 | 02/02/10 | 100 | 122 | 101 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-018.0 | 02/02/10 | 100 | 120 | 101 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-028.0 | 02/02/10 | 100 | 121 | 101 | 109 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
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## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
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| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0068-028.0 MS | 02/02/10 | 95 | 121 | 103 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0068-028.0 MSD | 02/02/10 | 97 | 118 | 102 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-038.0 | 02/02/10 | 93 | 105 | 100 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-043.0 | 02/02/10 | 102 | 118 | 101 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-048.0 | 02/02/10 | 100 | 118 | 101 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-058.0 | 02/02/10 | 93 | 109 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-028.0 | 02/02/10 | 99 | 118 | 101 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-038.0 | 02/02/10 | 100 | 116 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-043.0 1:10 | 02/02/10 | 101 | 121 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-048.0 | 02/02/10 | 98 | 114 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-058.0 | 02/02/10 | 100 | 119 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-028.0 | 02/02/10 | 99 | 115 | 102 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-038.0 | 02/02/10 | 98 | 115 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-043.0 | 02/02/10 | 98 | 116 | 103 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-048.0 | 02/02/10 | 100 | 117 | 103 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-058.0 | 02/02/10 | 98 | 114 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0069-010.0 | 02/02/10 | 98 | 119 | 101 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-058.0 MS | 02/02/10 | 98 | 127 | 101 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0070-058.0 MSD | 02/02/10 | 100 | 108 | 100 | 104 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/02/10 | 100 | 118 | 101 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/03/10 | 102 | 111 | 98 | 103 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/03/10 | 100 | 105 | 98 | 104 | Pass | Pass | Pass | Pass |
| BLANK | 02/03/10 | 106 | 117 | 97 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-028.0 | 02/03/10 | 98 | 104 | 101 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-038.0 1:1000 | 02/03/10 | 101 | 111 | 99 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-043.0 1:20 | 02/03/10 | 100 | 112 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-048.0 | 02/03/10 | 101 | 113 | 99 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-058.0 1:5 | 02/03/10 | 99 | 110 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-063.0 | 02/03/10 | 102 | 112 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-028.0 | 02/03/10 | 102 | 114 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-038.0 | 02/03/10 | 101 | 113 | 100 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-043.0 | 02/03/10 | 102 | 113 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-048.0 | 02/03/10 | 101 | 112 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-058.0 | 02/03/10 | 102 | 113 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-038.0 1:5000 | 02/03/10 | 103 | 117 | 99 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0074-028.0 | 02/03/10 | 92 | 101 | 100 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0074-038.0 1:500 | 02/03/10 | 99 | 110 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0074-043.0 1:100 | 02/03/10 | 102 | 109 | 99 | 104 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 09-275 |
| **On-site Dates**: 1/25/10-2/3/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0074-048.0 | 02/03/10 | 103 | 116 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0074-058.0 | 02/03/10 | 101 | 108 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0074-063.0 | 02/03/10 | 100 | 110 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0074-010.0 | 02/03/10 | 100 | 104 | 100 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0074-018.0 | 02/03/10 | 98 | 107 | 104 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-010.0 | 02/03/10 | 101 | 108 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-018.0 | 02/03/10 | 102 | 111 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-010.0 | 02/03/10 | 100 | 114 | 102 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0072-018.0 | 02/03/10 | 100 | 108 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-048.0 MS | 02/03/10 | 100 | 112 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0073-048.0 MSD | 02/03/10 | 100 | 109 | 98 | 99 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/03/10 | 97 | 104 | 98 | 102 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-275 |
| **Onsite Dates:** 1/25/10-2/3/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0045-018.0 **Date of Analysis:** 1/25/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 114 | 102 | 12 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 85 | 100 | 16 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 80 | 118 | 39 | Pass | Pass | > RPDL |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 97 | 100 | 3 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 108 | 108 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 117 | 119 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0046-058.0 **Date of Analysis:** 1/25/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 41 | 72 | 54 | Pass | Pass | > RPDL |
| 1,1-Dichloroethene | 45 | 144 | 20 | 105 | 206 | 65 | Pass | > UCL | > RPDL |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 111 | 212 | 63 | Pass | > UCL | > RPDL |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 108 | 99 | 9 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 109 | 109 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 125 | 123 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0049-058.0 **Date of Analysis:** 1/26/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 25 | 26 | 5 | < LCL | < LCL | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 99 | 105 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 105 | 113 | 8 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 111 | 117 | 6 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 111 | 113 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 116 | 125 | 8 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0051-048.0 **Date of Analysis:** 1/27/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 28 | 76 | 93 | < LCL | Pass | > RPDL |
| 1,1-Dichloroethene | 45 | 144 | 20 | 115 | 217 | 61 | Pass | > UCL | > RPDL |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 116 | 227 | 65 | Pass | > UCL | > RPDL |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 114 | 129 | 13 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 106 | 114 | 7 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 129 | 125 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-275 |
| **Onsite Dates:** 1/25/10-2/3/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT0054-058.0 **Date of Analysis:** 1/27/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 23 | 27 | 16 | < LCL | < LCL | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 92 | 97 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 96 | 98 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 99 | 100 | 1 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 97 | 99 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 105 | 104 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0057-058.0 **Date of Analysis:** 1/28/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 99 | 105 | 6 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 95 | 105 | 10 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 103 | 110 | 6 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 103 | 108 | 4 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 102 | 106 | 4 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 99 | 100 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0058-058.0 **Date of Analysis:** 1/28/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 95 | 104 | 9 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 142 | 127 | 11 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 148 | 139 | 7 | > UCL | > UCL | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 107 | 104 | 2 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 104 | 101 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 89 | 87 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0061-028.0 **Date of Analysis:** 1/29/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 80 | 101 | 23 | Pass | Pass | > RPDL |
| 1,1-Dichloroethene | 45 | 144 | 20 | 114 | 115 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 118 | 120 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 88 | 97 | 10 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 85 | 95 | 11 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 78 | 85 | 8 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-275 |
| **Onsite Dates:** 1/25/10-2/3/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT0064-028.0 **Date of Analysis:** 2/1/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 98 | 117 | 18 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 125 | 128 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 127 | 129 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 101 | 111 | 9 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 97 | 106 | 9 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 91 | 95 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0065-063.0 **Date of Analysis:** 2/1/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 84 | 97 | 14 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 115 | 117 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 122 | 121 | 0 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 103 | 104 | 1 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 101 | 104 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 88 | 95 | 8 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0068-028.0 **Date of Analysis:** 2/2/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 86 | 88 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 115 | 109 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 115 | 112 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 107 | 109 | 1 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 104 | 105 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 96 | 98 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0070-058.0 **Date of Analysis:** 2/2/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 85 | 91 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 109 | 106 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 115 | 111 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 109 | 109 | 0 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 107 | 105 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 97 | 97 | 0 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-275 |
| **Onsite Dates:** 1/25/10-2/3/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT0073-048.0 **Date of Analysis:** 2/3/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 86 | 88 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 99 | 93 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 107 | 101 | 6 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 109 | 107 | 2 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 108 | 106 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 102 | 101 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-275 |
| **Onsite Dates:** 1/25/10-2/3/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 — **Date of Analysis:** 1/25/2010
LCS 2 — 1/26/2010
LCS 3 — 1/26/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 28 | to | 161 | 107 | 69 | 37 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 43 | to | 156 | 87 | 184 | 126 | Pass | > UCL | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 80 | 177 | 130 | Pass | > UCL | Pass |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 93 | 97 | 127 | Pass | Pass | Pass |
| Trichloroethene | 47 | to | 164 | 105 | 110 | 69 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | to | 151 | 114 | 105 | 119 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 — **Date of Analysis:** 1/26/2010
LCS 5 — 1/27/2010
LCS 6 — 1/28/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | LCS#6 | LCS#4 | LCS#5 | LCS#6 |
| Vinyl Chloride | 28 | to | 161 | 27 | 29 | 26 | < LCL | Pass | < LCL |
| 1,1-Dichloroethene | 43 | to | 156 | 94 | 104 | 75 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 99 | 111 | 102 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 105 | 110 | 104 | Pass | Pass | Pass |
| Trichloroethene | 47 | to | 164 | 109 | 108 | 106 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | to | 151 | 112 | 125 | 117 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 7 — **Date of Analysis:** 1/28/2010
LCS 8 — 1/29/2010
LCS 9 — 2/1/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#7 | LCS#8 | LCS#9 | LCS#7 | LCS#8 | LCS#9 |
| Vinyl Chloride | 28 | to | 161 | 98 | 100 | 105 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 43 | to | 156 | 124 | 128 | 127 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 124 | 131 | 129 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 104 | 106 | 106 | Pass | Pass | Pass |
| Trichloroethene | 47 | to | 164 | 102 | 102 | 101 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | to | 151 | 94 | 94 | 93 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec consultants | **Analyst:** Glenn Jackson |
| **Site: NASA CRHE** | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 09-275 |
| **Onsite Dates:** 1/25/10-2/3/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

| **Samples:** | LCS 10<br>LCS 11 | | | **Date of Analysis:** | 2/2/2010<br>2/3/2010 | | | |
|---|---|---|---|---|---|---|---|---|
| **Spike Compounds** | **Control Limits** | | | **Percent Recoveries** | | | **Control Limit Checks** | |
| | **Lower** | | **Upper** | **LCS#10** | **LCS#11** | | **LCS#10** | **LCS#11** |
| Vinyl Chloride | 28 | to | 161 | 92 | 90 | | Pass | Pass |
| 1,1-Dichloroethene | 43 | to | 156 | 109 | 97 | | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 113 | 100 | | Pass | Pass |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 108 | 108 | | Pass | Pass |
| Trichloroethene | 47 | to | 164 | 105 | 105 | | Pass | Pass |
| Tetrachloroethene | 60 | to | 151 | 97 | 102 | | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0045-018.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0045-028.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **2.0** | <1.0 | <1.0 | NA |
| CRHE-DPT0045-038.0-20100125 | 1/25/10 | Water | 1 | **5.0** | <1.0 | **1.6** | **13.6** | <1.0 | <1.0 | NA |
| CRHE-DPT0045-044.0-20100125 | 1/25/10 | Water | 1 | **5.5** | <1.0 | **1.6** | **19.0** | <1.0 | **5.1** | NA |
| CRHE-DPT0045-048.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0045-058.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0046-018.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0046-028.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0046-038.0-20100125 | 1/25/10 | Water | 1 | **10.0** | <1.0 | **1.8** | **6.7** | <1.0 | <1.0 | NA |
| CRHE-DPT0046-043.0-20100125 | 1/25/10 | Water | 1 | **4.4** | <1.0 | **3.4** | **9.5** | <1.0 | <1.0 | NA |
| CRHE-DPT0046-048.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0046-058.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0046-010.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0045-010.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0047-010.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0047-018.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0047-028.0-20100125 | 1/25/10 | Water | 1 | **12.2** | <1.0 | <1.0 | **4.0** | <1.0 | <1.0 | NA |
| CRHE-DPT0047-038.0-20100125 | 1/25/10 | Water | 1 | **28.1** | <1.0 | **5.1** | **21.2** | <1.0 | <1.0 | NA |
| CRHE-DPT0047-043.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.8** | <1.0 | <1.0 | NA |
| CRHE-DPT0047-048.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0047-058.0-20100125 | 1/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0048-010.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0048-018.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0048-028.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | **4.9** | **3.5** | <1.0 | <1.0 | NA |
| CRHE-DPT0048-038.0-20100126 | 1/26/10 | Water | 1 | **2.4** | **14.4** | <1.0 | **2.6** | <1.0 | <1.0 | **120 J** |
| CRHE-DPT0048-043.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0048-048.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0048-058.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0049-028.0-20100126 | 1/26/10 | Water | 1 | **3.8** | <1.0 | **17.9** | **1.9** | <1.0 | <1.0 | NA |
| CRHE-DPT0049-038.0-20100126 | 1/26/10 | Water | 1 | **3.4** | <1.0 | <1.0 | **3.1** | <1.0 | <1.0 | NA |
| CRHE-DPT0049-043.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.0** | <1.0 | <1.0 | NA |
| CRHE-DPT0049-048.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0049-058.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0050-010.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0050-018.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0050-028.0-20100126 | 1/26/10 | Water | 1 | **62.1** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0050-038.0-20100126 | 1/26/10 | Water | 1,10 | **1100 L** | <1.0 | **39.1** | **6.5** | <1.0 | <1.0 | NA |
| CRHE-DPT0050-043.0-20100126 | 1/26/10 | Water | 1 | **3.3** | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 | NA |
| CRHE-DPT0050-048.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0050-058.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0051-028.0-20100126 | 1/26/10 | Water | 1 | **7.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0051-038.0-20100126 | 1/26/10 | Water | 1 | **20.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0051-043.0-20100126 | 1/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0051-048.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0051-058.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0052-028.0-20100127 | 1/27/10 | Water | 1 | **130 L** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0052-038.0-20100127 | 1/28/10 | Water | 1 | **100** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0052-043.0-20100127 | 1/28/10 | Water | 1 | **40.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0052-048.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0052-058.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0052-063.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0053-028.0-20100127 | 1/27/10 | Water | 1 | **90.9** | <1.0 | <1.0 | **2.3** | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0053-038.0-20100127 | 1/27/10 | Water | 1 | **2.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0053-043.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0053-048.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0053-058.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0054-028.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0054-038.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0054-043.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0054-048.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0054-058.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0054-063.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0055-028.0-20100127 | 1/28/10 | Water | 1 | **4.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0055-038.0-20100127 | 1/28/10 | Water | 1 | **150 L** | <1.0 | <1.0 | **1.0** | <1.0 | <1.0 | NA |
| CRHE-DPT0055-043.0-20100127 | 1/28/10 | Water | 1 | **38.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0055-048.0-20100127 | 1/28/10 | Water | 1 | **12.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0055-058.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0055-063.0-20100127 | 1/27/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0056-010.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0056-018.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.0** | <1.0 | <1.0 | NA |
| CRHE-DPT0056-028.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0056-038.0-20100128 | 1/29/10 | Water | 1 | **7.3** | <1.0 | <1.0 | **7.6** | <1.0 | <1.0 | **22 J** |
| CRHE-DPT0056-043.0-20100128 | 1/29/10 | Water | 1 | **25.1** | <1.0 | **2.1** | **8.4** | <1.0 | <1.0 | **79 J** |
| CRHE-DPT0056-048.0-20100128 | 1/28/10 | Water | 1 | **1.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0056-058.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0057-028.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0057-038.0-20100128 | 1/28/10 | Water | 1, 10 | **280** | <1.0 | <1.0 | **1.5** | <1.0 | <1.0 | NA |
| CRHE-DPT0057-043.0-20100128 | 1/29/10 | Water | 1 | **71.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0057-048.0-20100128 | 1/29/10 | Water | 1 | **15.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0057-058.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0058-028.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0058-038.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0058-043.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0058-048.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0058-058.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0058-063.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0059-028.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0059-038.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0059-043.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0059-048.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0059-058.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0060-028.0-20100128 | 1/28/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0060-038.0-20100128 | 1/28/10 | Water | 1, 10 | **22.3** | <1.0 | **3.8** | **140** | <1.0 | <1.0 | NA |
| CRHE-DPT0060-043.0-20100129 | 1/29/10 | Water | 5 | **130** | <5.0 | **12** | **120** | <5.0 | <5.0 | **72 J** |
| CRHE-DPT0061-028.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0061-038.0-20100129 | 1/29/10 | Water | 1 | **7.9** | <1.0 | <1.0 | **57.3** | <1.0 | <1.0 | NA |
| CRHE-DPT0061-043.0-20100129 | 1/29/10 | Water | 1 | **4.4** | <1.0 | <1.0 | **3.4** | <1.0 | <1.0 | NA |
| CRHE-DPT0061-048.0-20100129 | 1/29/10 | Water | 1 | **7.3** | <1.0 | <1.0 | **1.3** | <1.0 | <1.0 | **18 J** |
| CRHE-DPT0061-058.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0061-063.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0062-010.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0062-018.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0062-028.0-20100129 | 1/29/10 | Water | 1 | **7.6** | <1.0 | <1.0 | **2.8** | <1.0 | <1.0 | NA |
| CRHE-DPT0062-038.0-20100129 | 1/29/10 | Water | 1 | **3.8** | <1.0 | **4.8** | **45.1** | <1.0 | <1.0 | NA |

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0062-043.0-20100129 | 1/29/10 | Water | 1 | **13.8** | <1.0 | **4.9** | **50.5** | <1.0 | <1.0 | **27 J** |
| CRHE-DPT0062-048.0-20100129 | 1/29/10 | Water | 1 | **3.3** | <1.0 | <1.0 | **3.7** | <1.0 | <1.0 | NA |
| CRHE-DPT0062-058.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0063-028.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0063-038.0-20100129 | 1/29/10 | Water | 1 | **1.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0063-043.0-20100129 | 1/29/10 | Water | 1 | **12.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0063-048.0-20100129 | 1/29/10 | Water | 1 | **5.7** | <1.0 | <1.0 | **1.9** | <1.0 | <1.0 | NA |
| CRHE-DPT0063-058.0-20100129 | 1/29/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0064-028.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0064-038.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.1** | <1.0 | <1.0 | NA |
| CRHE-DPT0064-043.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **2.9** | <1.0 | <1.0 | NA |
| CRHE-DPT0064-048.0-20100201 | 2/1/10 | Water | 1 | **1.4** | <1.0 | <1.0 | **4.6** | <1.0 | <1.0 | NA |
| CRHE-DPT0064-058.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0064-063.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0065-028.0-20100201 | 2/1/10 | Water | 1 | **1.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0065-038.0-20100201 | 2/1/10 | Water | 1 | **55.7** | <1.0 | <1.0 | **110** | <1.0 | <1.0 | NA |
| CRHE-DPT0065-043.0-20100201 | 2/1/10 | Water | 1 | **36.9** | <1.0 | <1.0 | **86.6** | <1.0 | <1.0 | NA |
| CRHE-DPT0065-048.0-20100201 | 2/1/10 | Water | 1 | **34.5** | <1.0 | **1.2** | **32.1** | <1.0 | <1.0 | **27 J** |
| CRHE-DPT0065-058.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0065-063.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0066-028.0-20100201 | 2/1/10 | Water | 1, 5 | **120** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0066-038.0-20100201 | 2/1/10 | Water | 1, 10 | **220** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0066-043.0-20100201 | 2/1/10 | Water | 1 | **110** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0066-048.0-20100201 | 2/1/10 | Water | 1 | **10.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0066-058.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0067-010.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0067-018.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0067-028.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0067-038.0-20100201 | 2/1/10 | Water | 1, 10 | **420** | <1.0 | **9.3** | **3.3** | <1.0 | <1.0 | NA |
| CRHE-DPT0067-043.0-20100201 | 2/1/10 | Water | 1, 5 | **200** | <1.0 | **9.0** | **10.5** | <1.0 | <1.0 | NA |
| CRHE-DPT0067-048.0-20100201 | 2/1/10 | Water | 1 | **5.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0067-058.0-20100201 | 2/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0068-028.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **2.6** | <1.0 | <1.0 | NA |
| CRHE-DPT0068-038.0-20100202 | 2/2/10 | Water | 1 | **6.1** | <1.0 | <1.0 | **4.4** | <1.0 | <1.0 | NA |
| CRHE-DPT0068-043.0-20100202 | 2/2/10 | Water | 1 | **13.3** | <1.0 | <1.0 | **2.3** | <1.0 | <1.0 | NA |
| CRHE-DPT0068-048.0-20100202 | 2/2/10 | Water | 1 | **5.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0068-058.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0069-010.0-20100202 | 2/2/10 | Water | 1 | <1.0 | **2.8** | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0069-018.0-20100202 | 2/2/10 | Water | 1 | **3.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0069-028.0-20100202 | 2/2/10 | Water | 1 | **3.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0069-038.0-20100202 | 2/2/10 | Water | 1 | **82.2** | <1.0 | <1.0 | **7.5** | <1.0 | <1.0 | NA |
| CRHE-DPT0069-043.0-20100202 | 2/2/10 | Water | 1 | **110 L** | <1.0 | <1.0 | **14.8** | <1.0 | <1.0 | NA |
| CRHE-DPT0069-048.0-20100202 | 2/2/10 | Water | 1 | **31.6** | <1.0 | <1.0 | **3.8** | <1.0 | <1.0 | NA |
| CRHE-DPT0069-058.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0070-028.0-20100202 | 2/2/10 | Water | 1 | <1.0 | **2.9** | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0070-038.0-20100202 | 2/2/10 | Water | 1 | **5.4** | **15.6** | <1.0 | <1.0 | <1.0 | <1.0 | **25 J** |
| CRHE-DPT0070-043.0-20100202 | 2/2/10 | Water | 10 | **37** | **26** | <10 | <10 | <10 | <10 | **210 J** |
| CRHE-DPT0070-048.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0070-058.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0071-028.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0071-038.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **3.1** | **1.4** | <1.0 | NA |
| CRHE-DPT0071-043.0-20100202 | 2/2/10 | Water | 1 | **14.6** | <1.0 | <1.0 | **2.7** | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0071-048.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0071-058.0-20100202 | 2/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0072-028.0-20100203 | 2/3/10 | Water | 1 | **1.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0072-038.0-20100203 | 2/3/10 | Water | 1000, 5000 | **4600** | <1000 | <1000 | **48000** | **160000** | <1000 | NA |
| CRHE-DPT0072-043.0-20100203 | 2/3/10 | Water | 20 | **54** | <20 | <20 | **570** | **1300** | <20 | NA |
| CRHE-DPT0072-048.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **4.7** | **24.0** | <1.0 | NA |
| CRHE-DPT0072-058.0-20100203 | 2/3/10 | Water | 5 | **4 J** | <5.0 | <5.0 | **100** | **210** | <5.0 | NA |
| CRHE-DPT0072-063.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **15.8** | **43.8** | <1.0 | NA |
| CRHE-DPT0073-028.0-20100203 | 2/3/10 | Water | 1 | **2.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0073-038.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **1.6** | <1.0 | NA |
| CRHE-DPT0073-043.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0073-048.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0073-058.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

# KB LABS, INC.

Final Data Report

Project Number : 09-275

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | 1,1-Dichloroethane |
|---|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** | |
| CRHE-DPT0074-028.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0074-038.0-20100203 | 2/3/10 | Water | 500 | **7200** | <500 | <500 | **18000** | **8100** | <500 | NA |
| CRHE-DPT0074-043.0-20100203 | 2/3/10 | Water | 100 | **1300** | <100 | <100 | **4000** | **2900** | <100 | NA |
| CRHE-DPT0074-048.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **3.6** | **4.2** | <1.0 | NA |
| CRHE-DPT0074-058.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **2.9** | **2.5** | <1.0 | NA |
| CRHE-DPT0074-063.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **2.0** | **1.7** | <1.0 | NA |
| CRHE-DPT0074-010.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0074-018.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0073-010.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0073-018.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0072-010.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |
| CRHE-DPT0072-018.0-20100203 | 2/3/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NA |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CHRE NASA KSC, FL |
| SAMPLERS | CONTACT PERSON |
| | BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER KB3+20125?? | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0045-018.0 | 1/25/10 | 0900 | | | 1/25/10 | 0928 | | GW | 2 | ✓ | |
| 028.0 | | 0910 | | | | 0928 | | | | | |
| 038.0 | | 0921 | | | | 0953 | | | | | |
| 048.0 | | 0940 | | | | 0953 | | | | | |
| 048.0 | | 0957 | | | | 1033 | | | | | |
| 058.0 | | 1010 | | | | 1030 | | | | | |
| DPT0046-018.0 | | 1150 | | | | 1209 | | | | | |
| 028.0 | | 1115 | | | | 1200 | | | | | |
| 038.0 | | 1120 | | | | 1240 | | | | | |
| 048.0 | | 1135 | | | | 1240 | | | | | |
| 048.0 | | 1250 | | | | 1320 | | | | | |
| 058.0 | | 1310 | | | | 1320 | | | | | |
| 010.0 | | 1340 | | | | 1405 | | | | | |
| DPT0045-010.0 | | 1400 | | | | 1405 | | | | | |
| DPT0047-010.0 | | 1415 | | | | 1434 | | | | | |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers Relinquished by: *(Signature)* | | Received by: *(Signature)* | 1/25/10 | client requested change of all sample IDs to '0' in the second digit of DPT, ie DPT0445 instead of DPT0045 9TH |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CTRE NASA KSC FL

SAMPLERS:

CONTACT PERSON:

BATCH # (Lab Use Only):

| SAMPLE FIELD ID \ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3+012510 | | | | | | | | | | | |
| DPT047-018.0 | 1/25/10 | 1425 | | | 1/25/10 | 1434 | | GW | 2 | ✓ | |
| 025.0 | | 1440 | | | | 1455 | | | | | |
| 038.0 | | 1450 | | | | 1455 | | | | | |
| 043.0 | | 1525 | | | | 1536 | | | | | |
| DPT0447-048.0 | | 1540 | | | | 1605 | | | | | |
| 058.0 | | 1650 | | | | 1605 | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 1/25/10 | **Remarks and Observations**<br>all DPT047s should be changed to DPT0447 by client |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** 1CB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHME xNASA KSCFL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3 #0126 10 | | | | | | | | | | | |
| DPT0448 – 010.0 | 1/26/10 | 0800 | | | 1/26/10 | 0830 | | GW | 2 | ✓ | |
| 018.0 | | 0810 | | | | 0830 | | | | | |
| 028.0 | | 0825 | | | | 0900 | | | | | |
| 038.0 | | 0845 | | | | 0900 | | | | | |
| 043.0 | | 0900 | | | | 0934 | | | | | |
| 048.0 | | 0915 | | | | 0934 | | | | | |
| 058.0 | | 0940 | | | | 1018 | | | | | |
| DPT0449-028.0 | | 1005 | | | | 1018 | | | | | |
| 038.0 | | 1015 | | | | 1040 | | | | | |
| 043.0 | | 1045 | | | | 1108 | | | | | |
| 048.0 | | 1100 | | | | 1108 | | | | | |
| 058.0 | | 1115 | | | | 1130 | | | | | |
| DPT0450 – 010.0 | | 1140 | | | | 1240 | | | | | |
| 018.0 | | 1225 | | | | 1240 | | | | | |
| 028.0 | | 1235 | | | | 1305 | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | | | |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time: 1/26/10 |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Newberry, FL 32669
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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE NASA KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3 + 01/26/10 | | | | | | | | | | | |
| DPT0450 - 038.0 | 1/26/10 | 1300 | | | 1/26/10 | 1305 | | GW | 2 | ✓ | |
| 043.0 | | 1315 | | | | 1355 | | | | | |
| 048.0 | | 1330 | | | | ↓ | | | | | |
| 058.0 | | 1345 | | | | | | | | | |
| DPT0451 - 028.0 | | 1430 | | | | 1500 | | | | | |
| 038.0 | | 1445 | | | | 1500 | | | | | |
| 043.0 | ↓ | 1455 | | | ↓ | 1515 | | ↓ | ↓ | ↓ | |

PRESERVATION
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| | | | 1/26/10 | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec | PROJECT NAME & ADDRESS: CTRE NASA KSC, FL

SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3X012710 | | | | | | | | | | | |
| DPT0451-048.0 | 1/27/10 | 0755 | | | 1/27/10 | 0830 | | GW | 2 | ✓ | |
| " -058.0 | | 0815 | | | | 0830 | | | | | |
| DPT0452-028.0 | | 0850 | | | | 0910 | | | | | |
| 038.0 | | 0900 | | | | 0910 | | | | | |
| 043.0 | | 0920 | | | | 0940 | | | | | |
| 048.0 | | 0935 | | | | 0940 | | | | | |
| 058.0 | | 0955 | | | | 1020 | | | | | |
| 063.0 | | 1010 | | | | 1020 | | | | | |
| DPT0453-028.0 | | 1045 | | | | 1108 | | | | | |
| 038.0 | | 1100 | | | | 1108 | | | | | |
| 048.0 | | 1120 | | | | 1140 | | | | | |
| 048.0 | | 1135 | | | | 1140 | | | | | |
| 058.0 | | 1225 | | | | 1235 | | | | | |
| DPT0454-028.0 | | 1305 | | | | 1325 | | | | | |
| " 038.0 | | 1320 | | | | 1325 | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 1/27/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services


☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CTRE NASA KSC FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER KB3*012710 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT054-043.0 | 1/27/10 | 1335 | | | 1/27/10 | 1400 | | GW | 2 | ✓ | |
| 048.0 | | 1355 | | | | 1400 | | | | | |
| 053.0 | | 1410 | | | | 1440 | | | | | |
| 063.0 | | 1430 | | | | 1440 | | | | | |
| DPT055-028.0 | / | 1515 | | | | 1535 | | | | | |
| 038.0 | | 1530 | | | | 1535 | | | | | |
| 043.0 | | 1545 | | | | 1615 | | | | | |
| 048.0 | | 1600 | | | | 1615 | | | | | |
| 053.0 | | 1620 | | | | 1655 | | | | | |
| 063.0 | | 1645 | | | | 1655 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 1/27/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CTRE NASA KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3*012810 | | | | | | | | | | | |
| DPT0457-010.0 | 1/28/10 | 0800 | | | 1/28/10 | 0815 | | GW | 2 | ✓ | |
| 018.0 | | 0810 | | | | 0815 | | | | | |
| 028.0 | | 0825 | | | | 0840 | | | | | |
| 038.0 | | 0835 | | | | 0840 | | | | | |
| 043.0 | | 0850 | | | | 0915 | | | | | |
| 048.0 | | 0910 | | | | 0915 | | | | | |
| 058.0 | | 0945 | | | | 0953 | | | | | |
| DPT0457-028.0 | | 1010 | | | | 1034 | | | | | |
| 038.0 | | 1025 | | | | 1034 | | | | | |
| 043.0 | | 1045 | | | | 1110 | | | | | |
| 048.0 | | 1100 | | | | 1110 | | | | | |
| 058.0 | | 1120 | | | | 1130 | | | | | |
| DPT0458-028.0 | | 1225 | | | | 1245 | | | | | |
| -038.0 | | 1240 | | | | 1245 | | | | | |
| -043.0 | | 1255 | | | | 1320 | | | | | |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 1/28/10 | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** 163

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRS MASA ICSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KG3 * 01/28/10 | | | | | | | | | | | |
| DPT 0458 – 048.0 | 1/28/10 | 1310 | | | 1/28/10 | 1320 | | GW | 6 | ✓ | |
| 053.0 | | 1330 | | | | 1400 | | | | | |
| 063.0 | | 1350 | | | | 1400 | | | | | |
| DPT 0459 – 028.0 | | 1435 | | | | 1455 | | | | | |
| 038.0 | | 1450 | | | | 1455 | | | | | |
| 043.0 | | 1505 | | | | 1550 | | | | | |
| 048.0 | | 1520 | | | | ↓ | | | | | |
| 058.0 | | 1540 | | | | ↓ | | | | | |
| DPT 0460 028.0 | | 1615 | | | | 1650 | | | | | |
| 11 038.0 | ↓ | 1640 | | | ↓ | 1650 | | ↓ | ↓ | ↓ | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 1/28/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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TEL (352) 367-0073
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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** K93

CLIENT NAME: Geosytec

PROJECT NAME & ADDRESS: CTRE NASA KSC FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| K93+0129 10 | | | | | | | | | | | |
| DPT046C-043.0 | 4/29/10 | 0730 | | | 4/29/10 | 0745 | | GW | 1 | | |
| DPT0461-028.0 | | 0815 | | | | 0830 | | | | | |
| 038.0 | | 0825 | | | | 0830 | | | | | |
| 043.0 | | 0845 | | | | 0915 | | | | | |
| 048.0 | | 0900 | | | | 0915 | | | | | |
| 058.0 | | 0930 | | | | 0940 | | | | | |
| 063.0 | | 0950 | | | | 1000 | | | | | |
| DPT046L-010.0 | | 1020 | | | | 1035 | | | | | |
| 018.0 | | 1030 | | | | 1035 | | | | | |
| 028.0 | | 1040 | | | | 1055 | | | | | |
| 038.0 | | 1050 | | | | 1055 | | | | | |
| 043.0 | | 1120 | | | | 1130 | | | | | |
| 048.0 | | 1145 | | | | 1206 | | | | | |
| 058.0 | | 1200 | | | | 1206 | | | | | |
| DPT0463-028.0 | | 1305 | | | | 1330 | | | | | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | 4/29/10 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** K83

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE NASA KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID \ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| K83* 012910 | | | | | | | | | | | |
| DPT0463-038.0 | 1/29/10 | 1320 | | | 1/29/10 | 1330 | | GW | 2 | ✓ | |
| -043.0 | ↓ | 1340 | | | ↓ | 1343 | | ↓ | ↓ | ↓ | |
| -048.0 | | 1358 | | | | 1358 | | | | | |
| 058.0 | | 1415 | | | | 1416 | | | | | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 1/29/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec | PROJECT NAME & ADDRESS: CHRE NASA KSC, FL

SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3-020/10 | | | | | | | | | | | |
| DPT0464-038.0 | 3/1/10 | 0810 | | | 4/1/10 | 0815 | | GW | 2 | | |
| 038.0 | | 0826 | | | | 0830 | | | | | |
| 043.0 | | 0844 | | | | 0849 | | | | | |
| 048.0 | | 0902 | | | | 0906 | | | | | |
| 058.0 | | 0922 | | | | 0945 | | | | | |
| 063.0 | | 0938 | | | | 0945 | | | | | |
| DPT0065-028.0 | | 1023 | | | | 1043 | | | | | |
| 038.0 | | 1038 | | | | 1043 | | | | | |
| 043.0 | | 1051 | | | | 1112 | | | | | |
| 048.0 | | 1109 | | | | 1112 | | | | | |
| 058.0 | | 1147 | | | | 1154 | | | | | |
| 063.0 | | 1143 | | | | 1154 | | | | | |
| DPT0066-028.0 | | 1315 | | | | 1325 | | | | | switch sample ID # 38.0 / 28.0 |
| 038.0 | | 1300 | | | | 1325 | | | | | |
| 043.0 | | 1332 | | | | 1354 | | | | | |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 3/1/10 | not DPT0464 changed to DPT0064 by client. RJF |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB-3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE NASA ICSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3X020110 | | | | | | | | | | | |
| DPT0066-048.0 | 2/1/10 | 1349 | | | 2/1/10 | 1354 | | GW | 2 | ✓ | |
| " 058.0 | | 1407 | | | | 1419 | | | | | |
| DPT0067-018.0 | | 1445 | | | | 1450 | | | | | |
| 028.0 | | 1513 | | | | 1515 | | | | | |
| 038.0 | | 1525 | | | | 1529 | | | | | |
| 043.0 | | 1537 | | | | 1541 | | | | | |
| 048.0 | | 1553 | | | | 1557 | | | | | |
| 058.0 | ✓ | 1610 | | | ✓ | 1615 | | ✓ | ✓ | ✓ | |
| | | 1630 | | | | 1635 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>2/1/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KBS

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CH2E MSA KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KBS * 020210 | | | | | | | | | | | |
| DPT0068 - 028.0 | 2/2/10 | 0800 | | | 2/2/10 | 0805 | | GW | 2 | ✓ | |
| 038.0 | | 0812 | | | | 0816 | | | | | |
| 043.0 | | 0828 | | | | 0830 | | | | | |
| 048.0 | | 0845 | | | | 0852 | | | | | |
| 058.0 | | 0900 | | | | 0910 | | | | | |
| DPT0069 - 010.0 | | 0927 | | | | 0930 | | | | | |
| 018.0 | | 0951 | | | | 0953 | | | | | |
| 028.0 | | 1003 | | | | 1004 | | | | | |
| 038.0 | | 1240 | | | | 1245 | | | | | |
| 043.0 | | 1257 | | | | 1300 | | | | | |
| 048.0 | | 1313 | | | | 1315 | | | | | |
| 058.0 | | 1330 | | | | 1335 | | | | | |
| DPT0070 - 028.0 | | 1412 | | | | 1420 | | | | | |
| 038.0 | | 1423 | | | | 1426 | | | | | |
| 043.0 | | 1437 | | | | 1440 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 2/2/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CH2RE NAS JAX FSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER KB3+0202/10 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0070-048.0 | 2/2/10 | 1457 | | | 2/2/10 | 1455 | | Gw | 2 | ↓ | |
| " 058.0 | ↓ | 1507 | | | ↓ | 1514 | | ↓ | ↓ | ↓ | |
| DPT0071-028.0 | | 1535 | | | | 1537 | | | | | |
| 038.0 | | 1557 | | | | 1600 | | | | | |
| 043.0 | | 1611 | | | | 1615 | | | | | |
| 048.0 | | 1624 | | | | 1628 | | | | | |
| 058.0 | | 1640 | | | | 1647 | | | | | |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | 2/2/10 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** 1483

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE NASA ISC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER KB3*0203/0 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PT0072 - 028.0 | 2/3/10 | 0747 | | | 2/3/10 | 0800 | | GW | 2 | ✓ | |
| 038.0 | | 0804 | | | | 0810 | | | | | |
| 043.0 | | 0819 | | | | 0840 | | | | | |
| 048.0 | | 0833 | | | | 0840 | | | | | |
| 058.0 | | 0850 | | | | 0914 | | | | | |
| 063.0 | | 0906 | | | | 0914 | | | | | |
| PT0073 - 028.0 | | 0943 | | | | 0944 | | | | | |
| 038.0 | | 0959 | | | | 1015 | | | | | |
| 043.0 | | 1010 | | | | 1015 | | | | | |
| 048.0 | | 1025 | | | | 1048 | | | | | |
| 058.0 | | 1041 | | | | 1045 | | | | | |
| PT0074 - 028.0 | | 1115 | | | | 1225 | | | | | |
| 038.0 | | 1125 | | | | 1225 | | | | | |
| 043.0 | | 1226 | | | | 1247 | | | | | |
| 048.0 | | 1242 | | | | 1247 | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time |
| | | | 2/3/10 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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TEL (919) 678-0030


**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CH2E xNASA KSC FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3 X020310 | | | | | | | | | | | |
| DPT074 – 058.0 | 2/3/10 | 1259 | | | 2/3/10 | 1305 | | GW | 2 | ✓ | |
| " 068.0 | ↓ | 1315 | | | ↓ | 1315 | | ↓ | ↓ | ↓ | |
| DPT074 – 078.0 | | 1341 | | | | 1347 | | | | | |
| " 088.0 | | 1350 | | | | 1354 | | | | | |
| DPT073 – 100 | | 1411 | | | | 1420 | | | | | |
| " 018.0 | | 1417 | | | | 1420 | | | | | |
| DPT072 – 010.0 | | 1433 | | | | 1500 | | | | | |
| " 018.0 | ↓ | 1445 | | | ↓ | 1509 | | ↓ | ↓ | ↓ | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | 2/3/10 |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

***Telephone* (352) 472-5830**
***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

March 3, 2010

Jill Johnson
GeoSyntec Consultants
9511 Holsberry Lane, Suite A
Pensacola, FL 32534

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 10-37**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from February 22 to March 2, 2010. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

*KB Labs, Inc.*
*25132 SW 1st Ave*
*Newberry, FL 32669*
*Phone: 352-472-5830*
*Fax: 352-472-5832*
*Email: info@kbmobilelabs.com*

# PROJECT NARRATIVE

## Project Scope

From February 22 to March 2, 2010, a total of 150 water samples were analyzed for GeoSyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB1: FDOH NELAP Certification Number E82815

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0

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ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

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# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. Sample ID CRHE-DPT0089-043.0 reported trichloroethene 5200 changed to 520ug/L.

3. As per client request, all diluted samples with values between the EL and MDL are reported and identified with FDEP Data Qualifier "I".

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-37 |
| **On-site Dates**: 2/22/10-3/2/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| VSTD 20 | 02/22/10 | 90 | 82 | 99 | 88 | Pass | Pass | Pass | Pass |
| RSTD 20 | 02/22/10 | 84 | 89 | 94 | 89 | Pass | Pass | Pass | Pass |
| BLANK | 02/22/10 | 94 | 97 | 93 | 84 | Pass | Pass | Pass | Pass |
| BLANK | 02/22/10 | 95 | 94 | 95 | 91 | Pass | Pass | Pass | Pass |
| RSTD 20 | 02/22/10 | 98 | 83 | 96 | 90 | Pass | Pass | Pass | Pass |
| BLANK | 02/22/10 | 90 | 92 | 100 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-018.0 | 02/22/10 | 104 | 94 | 93 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-028.0 | 02/22/10 | 95 | 91 | 96 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-038.0 | 02/22/10 | 95 | 90 | 97 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-043.0 | 02/22/10 | 94 | 90 | 95 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-048.0 | 02/22/10 | 96 | 91 | 96 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-058.0 | 02/22/10 | 96 | 88 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-018.0 MS | 02/22/10 | 94 | 81 | 97 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0075-018.0 MSD | 02/22/10 | 91 | 79 | 97 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0076-018.0 | 02/22/10 | 98 | 88 | 95 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0076-028.0 | 02/22/10 | 94 | 94 | 95 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0076-038.0 | 02/22/10 | 109 | 94 | 97 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0076-043.0 | 02/22/10 | 101 | 95 | 96 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0076-048.0 | 02/22/10 | 100 | 97 | 94 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0076-058.0 | 02/22/10 | 101 | 95 | 94 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-018.0 | 02/22/10 | 96 | 93 | 93 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-028.0 | 02/22/10 | 98 | 94 | 96 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-038.0 | 02/22/10 | 98 | 94 | 96 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-043.0 | 02/22/10 | 99 | 97 | 94 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-048.0 | 02/22/10 | 103 | 95 | 91 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-058.0 | 02/22/10 | 101 | 96 | 92 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-018.0 | 02/22/10 | 100 | 92 | 94 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-028.0 | 02/22/10 | 101 | 91 | 98 | 87 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/22/10 | 93 | 83 | 95 | 87 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/23/10 | 92 | 79 | 95 | 85 | Pass | Pass | Pass | Pass |
| RSTD 20 | 02/23/10 | 88 | 84 | 96 | 87 | Pass | Pass | Pass | Pass |
| BLANK | 02/23/10 | 106 | 97 | 95 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-058.0 MS | 02/23/10 | 94 | 82 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0077-058.0 MSD | 02/23/10 | 90 | 80 | 96 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-038.0 | 02/23/10 | 97 | 84 | 96 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-043.0 | 02/23/10 | 98 | 87 | 92 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-048.0 | 02/23/10 | 98 | 87 | 91 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-058.0 | 02/23/10 | 96 | 79 | 95 | 83 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-37 |
| **On-site Dates**: 2/22/10-3/2/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0079-018.0 | 02/23/10 | 99 | 83 | 93 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-058.0 MS | 02/23/10 | 89 | 79 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0078-058.0 MSD | 02/23/10 | 92 | 78 | 96 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0079-028.0 | 02/23/10 | 110 | 98 | 92 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0079-038.0 | 02/23/10 | 96 | 93 | 90 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0079-038.0 1:5 | 02/23/10 | 93 | 90 | 94 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0079-048.0 | 02/23/10 | 101 | 94 | 92 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0079-043.0 | 02/23/10 | 105 | 96 | 93 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0079-058.0 | 02/23/10 | 97 | 94 | 92 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-018.0 | 02/23/10 | 100 | 91 | 90 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-028.0 | 02/23/10 | 102 | 92 | 93 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-038.0 | 02/23/10 | 97 | 88 | 91 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-038.0 1:100 | 02/23/10 | 101 | 91 | 91 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-043.0 | 02/23/10 | 84 | 89 | 93 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-043.0 1:100 | 02/23/10 | 103 | 92 | 93 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-048.0 | 02/23/10 | 101 | 90 | 91 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0080-058.0 | 02/23/10 | 104 | 92 | 92 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0081-028.0 | 02/23/10 | 101 | 89 | 93 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0081-038.0 | 02/23/10 | 98 | 86 | 94 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0081-043.0 | 02/23/10 | 99 | 83 | 91 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0081-048.0 | 02/23/10 | 104 | 90 | 92 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0081-058.0 | 02/23/10 | 104 | 90 | 91 | 82 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/23/10 | 93 | 78 | 92 | 85 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/24/10 | 88 | 75 | 96 | 84 | Pass | Pass | Pass | Pass |
| RSTD 20 | 02/24/10 | 93 | 79 | 96 | 83 | Pass | Pass | Pass | Pass |
| BLANK | 02/24/10 | 99 | 84 | 98 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-010.0 | 02/24/10 | 98 | 86 | 92 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-018.0 | 02/24/10 | 102 | 82 | 95 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-028.0 | 02/24/10 | 98 | 84 | 92 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-033.0 | 02/24/10 | 103 | 85 | 92 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-038.0 | 02/24/10 | 102 | 85 | 92 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-043.0 | 02/24/10 | 102 | 85 | 93 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-048.0 | 02/24/10 | 104 | 87 | 91 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-010.0 MS | 02/24/10 | 94 | 75 | 94 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0082-010.0 MSD | 02/24/10 | 93 | 76 | 96 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0083-010.0 | 02/24/10 | 100 | 86 | 94 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0083-018.0 | 02/24/10 | 98 | 86 | 92 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0083-028.0 | 02/24/10 | 103 | 88 | 90 | 79 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

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| **On-site Dates**: 2/22/10-3/2/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0083-033.0 | 02/24/10 | 101 | 87 | 92 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0083-038.0 | 02/24/10 | 98 | 88 | 94 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0083-043.0 | 02/24/10 | 100 | 84 | 91 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0083-048.0 | 02/24/10 | 100 | 86 | 90 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-010.0 | 02/24/10 | 101 | 88 | 90 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-018.0 | 02/24/10 | 98 | 84 | 87 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-028.0 | 02/24/10 | 101 | 82 | 91 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-033.0 | 02/24/10 | 98 | 83 | 89 | 79 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-038.0 | 02/24/10 | 99 | 80 | 91 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-043.0 | 02/24/10 | 97 | 80 | 90 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-048.0 | 02/24/10 | 103 | 83 | 90 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-018.0 MS | 02/24/10 | 93 | 77 | 90 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0084-018.0 MSD | 02/24/10 | 91 | 72 | 91 | 84 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/24/10 | 95 | 79 | 93 | 90 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/25/10 | 90 | 81 | 92 | 79 | Pass | Pass | Pass | Pass |
| RSTD 20 | 02/25/10 | 93 | 80 | 91 | 83 | Pass | Pass | Pass | Pass |
| BLANK | 02/25/10 | 100 | 82 | 94 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-018.0 | 02/25/10 | 93 | 78 | 88 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-010.0 | 02/25/10 | 98 | 82 | 92 | 79 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-028.0 | 02/25/10 | 107 | 88 | 92 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-033.0 | 02/25/10 | 98 | 81 | 90 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-038.0 | 02/25/10 | 100 | 81 | 91 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-043.0 | 02/25/10 | 100 | 79 | 90 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-048.0 | 02/25/10 | 95 | 81 | 90 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-010.0 1:100 | 02/25/10 | 103 | 84 | 89 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-018.0 1:50 | 02/25/10 | 89 | 74 | 88 | 79 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-010.0 MS | 02/25/10 | 93 | 72 | 91 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0085-010.0 MSD | 02/25/10 | 93 | 81 | 92 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-028.0 1:5 | 02/25/10 | 98 | 82 | 94 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-033.0 1:100 | 02/25/10 | 100 | 82 | 90 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-038.0 | 02/25/10 | 104 | 88 | 88 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-043.0 | 02/25/10 | 101 | 91 | 84 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-048.0 | 02/25/10 | 108 | 92 | 55 | 75 | Pass | Pass | < LCL | Pass |
| CRHE-DPT0086-033.0 | 02/25/10 | 101 | 90 | 87 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0087-010.0 | 02/25/10 | 97 | 82 | 91 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0087-018.0 | 02/25/10 | 98 | 83 | 89 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0087-028.0 | 02/25/10 | 101 | 84 | 89 | 73 | Pass | Pass | Pass | Pass |
| CRHE-DPT0087-033.0 | 02/25/10 | 102 | 83 | 87 | 79 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-37 |
| **On-site Dates**: 2/22/10-3/2/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0087-038.0 | 02/25/10 | 98 | 78 | 91 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0087-043.0 | 02/25/10 | 97 | 77 | 92 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0087-048.0 | 02/25/10 | 101 | 80 | 90 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0088-010.0 | 02/25/10 | 100 | 79 | 88 | 77 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/25/10 | 94 | 75 | 88 | 77 | Pass | Pass | Pass | Pass |
| VSTD 20 | 02/26/10 | 94 | 82 | 90 | 77 | Pass | Pass | Pass | Pass |
| RSTD 20 | 02/26/10 | 93 | 78 | 88 | 76 | Pass | Pass | Pass | Pass |
| BLANK | 02/26/10 | 101 | 84 | 90 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0088-018.0 | 02/26/10 | 99 | 83 | 88 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0088-028.0 | 02/26/10 | 99 | 80 | 90 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0088-033.0 | 02/26/10 | 99 | 80 | 89 | 74 | Pass | Pass | Pass | Pass |
| CRHE-DPT0088-038.0 1:500 | 02/26/10 | 99 | 85 | 86 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0088-043.0 1:200 | 02/26/10 | 97 | 80 | 85 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0088-048.0 | 02/26/10 | 99 | 80 | 89 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-010.0 | 02/26/10 | 101 | 80 | 90 | 79 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-018.0 | 02/26/10 | 100 | 82 | 89 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-028.0 | 02/26/10 | 101 | 80 | 89 | 74 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-033.0 | 02/26/10 | 104 | 82 | 88 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-038.0 | 02/26/10 | 99 | 81 | 86 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-043.0 1:200 | 02/26/10 | 95 | 79 | 87 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-048.0 | 02/26/10 | 101 | 84 | 88 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0090-010.0 | 02/26/10 | 100 | 81 | 86 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0090-018.0 | 02/26/10 | 101 | 84 | 85 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0090-028.0 | 02/26/10 | 102 | 87 | 86 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0090-033.0 | 02/26/10 | 97 | 86 | 89 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0090-038.0 | 02/26/10 | 98 | 82 | 89 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0090-043.0 | 02/26/10 | 102 | 81 | 89 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0090-048.0 | 02/26/10 | 100 | 82 | 92 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0089-038.0 1:5 | 02/26/10 | 103 | 84 | 87 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-014.0 1:100 | 02/26/10 | 98 | 81 | 90 | 73 | Pass | Pass | Pass | Pass |
| CRHE-DPT0086-023.0 1:20 | 02/26/10 | 97 | 84 | 88 | 71 | Pass | Pass | Pass | < LCL |
| VSTD 20 | 02/26/10 | 94 | 75 | 88 | 76 | Pass | Pass | Pass | Pass |
| VSTD 20 | 03/01/10 | 91 | 76 | 92 | 75 | Pass | Pass | Pass | Pass |
| RSTD 20 | 03/01/10 | 89 | 77 | 92 | 74 | Pass | Pass | Pass | Pass |
| BLANK | 03/01/10 | 95 | 81 | 92 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-010.0 | 03/01/10 | 92 | 79 | 91 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-018.0 | 03/01/10 | 95 | 78 | 89 | 74 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-028.0 | 03/01/10 | 96 | 82 | 90 | 74 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
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| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-37 |
| **On-site Dates**: 2/22/10-3/2/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0091-033.0 | 03/01/10 | 95 | 81 | 92 | 73 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-018.0 MS | 03/01/10 | 92 | 79 | 91 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-018.0 MSD | 03/01/10 | 88 | 76 | 93 | 78 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-038.0 | 03/01/10 | 94 | 77 | 94 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-043.0 | 03/01/10 | 96 | 80 | 90 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0091-048.0 | 03/01/10 | 93 | 83 | 86 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0092-010.0 | 03/01/10 | 104 | 87 | 88 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0092-014.0 1:50 | 03/01/10 | 100 | 92 | 86 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0092-018.0 1:1000 | 03/01/10 | 97 | 87 | 90 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0092-028.0 1:5 | 03/01/10 | 92 | 79 | 88 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0092-033.0 1:200 | 03/01/10 | 102 | 90 | 90 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0092-038.0 1:100 | 03/01/10 | 98 | 87 | 88 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0092-043.0 | 03/01/10 | 102 | 87 | 86 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0092-048.0 | 03/01/10 | 97 | 86 | 88 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0093-010.0 | 03/01/10 | 100 | 88 | 88 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-014.0 | 03/01/10 | 98 | 84 | 88 | 73 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-018.0 | 03/01/10 | 101 | 84 | 90 | 75 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-028.0 | 03/01/10 | 101 | 88 | 85 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-033.0 | 03/01/10 | 102 | 83 | 89 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-038.0 | 03/01/10 | 99 | 83 | 89 | 74 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-043.0 | 03/01/10 | 105 | 86 | 90 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-048.0 | 03/01/10 | 101 | 86 | 88 | 76 | Pass | Pass | Pass | Pass |
| CRHE-DPT0094-010.0 | 03/01/10 | 103 | 89 | 87 | 73 | Pass | Pass | Pass | Pass |
| CRHE-DPT0094-018.0 | 03/01/10 | 102 | 92 | 86 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0094-028.0 | 03/01/10 | 102 | 92 | 86 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-028.0 MS | 03/01/10 | 99 | 85 | 85 | 73 | Pass | Pass | Pass | Pass |
| CRHE-DPT0093-028.0 MSD | 03/01/10 | 96 | 94 | 85 | 75 | Pass | Pass | Pass | Pass |
| VSTD 20 | 03/01/10 | 96 | 97 | 80 | 69 | Pass | Pass | Pass | < LCL |
| VSTD 20 | 03/02/10 | 95 | 86 | 82 | 76 | Pass | Pass | Pass | Pass |
| RSTD 20 | 03/02/10 | 97 | 81 | 89 | 70 | Pass | Pass | Pass | < LCL |
| BLANK | 03/02/10 | 88 | 89 | 89 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0094-033.0 | 03/02/10 | 98 | 85 | 86 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0094-038.0 | 03/02/10 | 97 | 78 | 83 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0094-043.0 | 03/02/10 | 99 | 83 | 87 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0094-048.0 | 03/02/10 | 99 | 79 | 86 | 69 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0095-010.0 | 03/02/10 | 98 | 78 | 87 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0095-018.0 | 03/02/10 | 101 | 78 | 88 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0095-028.0 | 03/02/10 | 96 | 78 | 86 | 71 | Pass | Pass | Pass | < LCL |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-37 |
| **On-site Dates**: 2/22/10-3/2/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0095-033.0 | 03/02/10 | 102 | 86 | 87 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0095-038.0 | 03/02/10 | 102 | 85 | 85 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0095-043.0 | 03/02/10 | 95 | 84 | 87 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0095-048.0 | 03/02/10 | 100 | 84 | 86 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0096-010.0 | 03/02/10 | 100 | 84 | 88 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0096-018.0 1:5 | 03/02/10 | 99 | 84 | 85 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0096-028.0 1:2000 | 03/02/10 | 103 | 90 | 84 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0096-033.0 1:500 | 03/02/10 | 99 | 89 | 85 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0096-038.0 | 03/02/10 | 96 | 85 | 88 | 70 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0096-038.0 1:20 | 03/02/10 | 99 | 85 | 84 | 72 | Pass | Pass | Pass | Pass |
| CRHE-DPT0096-043.0 | 03/02/10 | 101 | 86 | 86 | 71 | Pass | Pass | Pass | < LCL |
| CRHE-DPT0096-048.0 | 03/02/10 | 103 | 84 | 86 | 70 | Pass | Pass | Pass | < LCL |
| VSTD 20 | 03/02/10 | 93 | 74 | 86 | 75 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-37 |
| **Onsite Dates:** 2/22/10-3/2/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0075-018.0 **Date of Analysis:** 2/22/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 105 | 100 | 4 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 81 | 79 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 83 | 83 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 82 | 80 | 3 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 85 | 89 | 4 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 94 | 95 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0077-058.0 **Date of Analysis:** 2/22/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 110 | 106 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 82 | 82 | 0 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 85 | 84 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 84 | 85 | 1 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 94 | 92 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 101 | 104 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0078-058.0 **Date of Analysis:** 2/23/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 104 | 104 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 78 | 78 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 79 | 82 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 77 | 78 | 2 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 86 | 89 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 93 | 97 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0082-010.0 **Date of Analysis:** 2/24/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 106 | 106 | 0 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 77 | 76 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 78 | 81 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 80 | 81 | 1 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 87 | 89 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 96 | 104 | 9 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-37 |
| **Onsite Dates:** 2/22/10-3/2/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT0084-018.0 **Date of Analysis:** 2/24/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 105 | 106 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 76 | 77 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 80 | 78 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 82 | 86 | 4 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 89 | 91 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 95 | 103 | 8 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0085-010.0 **Date of Analysis:** 2/25/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 106 | 107 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 78 | 79 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 80 | 81 | 0 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 82 | 80 | 3 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 91 | 95 | 5 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 94 | 104 | 10 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0091-018.0 **Date of Analysis:** 3/1/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 105 | 99 | 6 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 78 | 73 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 83 | 76 | 9 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 83 | 77 | 8 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 90 | 88 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 104 | 111 | 6 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0093-028.0 **Date of Analysis:** 3/1/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 99 | 93 | 6 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 70 | 69 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 72 | 70 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 77 | 73 | 6 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 86 | 82 | 5 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 101 | 96 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-37 |
| **Onsite Dates:** 2/22/10-3/2/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 **Date of Analysis:** 2/22/2010
LCS 2 2/23/2010
LCS 3 2/24/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 28 | to | 161 | 61 | 111 | 111 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 43 | to | 156 | 65 | 80 | 75 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 67 | 84 | 78 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 76 | 82 | 78 | Pass | Pass | Pass |
| Trichloroethene | 47 | to | 164 | 80 | 91 | 89 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | to | 151 | 87 | 98 | 98 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 **Date of Analysis:** 2/25/2010
LCS 5 2/26/2010
LCS 6 3/1/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | LCS#6 | LCS#4 | LCS#5 | LCS#6 |
| Vinyl Chloride | 28 | to | 161 | 110 | 113 | 106 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 43 | to | 156 | 77 | 78 | 71 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 78 | 82 | 74 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 78 | 82 | 75 | Pass | Pass | Pass |
| Trichloroethene | 47 | to | 164 | 87 | 91 | 82 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | to | 151 | 99 | 103 | 102 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 7 **Date of Analysis:** 3/2/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#7 | | | LCS#7 | | |
| Vinyl Chloride | 28 | to | 161 | 99 | | | Pass | | |
| 1,1-Dichloroethene | 43 | to | 156 | 73 | | | Pass | | |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 76 | | | Pass | | |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 82 | | | Pass | | |
| Trichloroethene | 47 | to | 164 | 89 | | | Pass | | |
| Tetrachloroethene | 60 | to | 151 | 112 | | | Pass | | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0075-018.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0075-028.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0075-038.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0075-043.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0075-048.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0075-058.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0076-018.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0076-028.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0076-038.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0076-043.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0076-048.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0076-058.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0077-018.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0077-028.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0077-038.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0077-043.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0077-048.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0077-058.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0078-018.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0078-028.0-20100222 | 2/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0078-038.0-20100223 | 2/23/10 | Water | 1 | **9.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0078-043.0-20100223 | 2/23/10 | Water | 1 | **5.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0078-048.0-20100223 | 2/23/10 | Water | 1 | **4.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0078-058.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0079-018.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0079-028.0-20100223 | 2/23/10 | Water | 1 | **3.2** | <1.0 | <1.0 | **6.7** | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0079-038.0-20100223 | 2/23/10 | Water | 1, 5 | **71.9** | <1.0 | **1.2** | **140** | <1.0 | <1.0 |
| CRHE-DPT0079-043.0-20100223 | 2/23/10 | Water | 1 | **2.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0079-048.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0079-058.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0080-018.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0080-028.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0080-038.0-20100223 | 2/23/10 | Water | 1, 100 | **1400** | <1.0 | **5.4** | **9.0** | <1.0 | <1.0 |
| CRHE-DPT0080-043.0-20100223 | 2/23/10 | Water | 1,100 | **2800** | <1.0 | **15.2** | **21.6** | <1.0 | <1.0 |
| CRHE-DPT0080-048.0-20100223 | 2/23/10 | Water | 1 | **75.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0080-058.0-20100223 | 2/23/10 | Water | 1 | **2.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0081-028.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0081-038.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0081-043.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0081-048.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0081-058.0-20100223 | 2/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0082-010.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0082-018.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0082-028.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0082-033.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0082-038.0-20100224 | 2/24/10 | Water | 1 | **2.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0082-043.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0082-048.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0083-010.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0083-018.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0083-028.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0083-033.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0083-038.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0083-043.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0083-048.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0084-010.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0084-018.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0084-028.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0084-033.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0084-038.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0084-043.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0084-048.0-20100224 | 2/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0085-010.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0085-018.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0085-028.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0085-033.0-20100225 | 2/25/10 | Water | 1 | **1.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0085-038.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0085-043.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0085-048.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0086-010.0-20100225 | 2/25/10 | Water | 100 | **560** | <100 | <100 | **1000** | <100 | <100 |
| CRHE-DPT0086-018.0-20100225 | 2/25/10 | Water | 50 | **680** | <50 | **56** | **5100** | <50 | <50 |
| CRHE-DPT0086-028.0-20100225 | 2/25/10 | Water | 5 | **55** | <5 | <5 | **96** | <5 | <5 |
| CRHE-DPT0086-033.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.4** | <1.0 | <1.0 |
| CRHE-DPT0086-038.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.1** | <1.0 | <1.0 |
| CRHE-DPT0086-043.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0086-048.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0087-010.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0087-018.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0087-028.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0087-033.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0087-038.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0087-043.0-20100225 | 2/25/10 | Water | 1 | **65.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0087-048.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0088-010.0-20100225 | 2/25/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0088-018.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0088-028.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0088-033.0-20100226 | 2/26/10 | Water | 1 | **16.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0088-038.0-20100226 | 2/26/10 | Water | 500 | **13000** | <500 | <500 | **14000** | **6000** | <500 |
| CRHE-DPT0088-043.0-20100226 | 2/26/10 | Water | 200 | **1500** | <200 | <200 | **4200** | **4800** | <200 |
| CRHE-DPT0088-048.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.3** | **1.3** | <1.0 |
| CRHE-DPT0089-010.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0089-018.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0089-028.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0089-033.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.3** | <1.0 | <1.0 |
| CRHE-DPT0089-038.0-20100226 | 2/26/10 | Water | 1, 5 | **180** | <1.0 | <1.0 | **7.8** | <1.0 | <1.0 |
| CRHE-DPT0089-043.0-20100226 | 2/26/10 | Water | 200 | **4800** | <200 | <200 | **6200** | **520** | <200 |
| CRHE-DPT0089-048.0-20100226 | 2/26/10 | Water | 1 | **37.1** | <1.0 | **1.2** | **15.7** | **1.1** | <1.0 |
| CRHE-DPT0090-010.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0090-018.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0090-028.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0090-033.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0090-038.0-20100226 | 2/26/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0090-043.0-20100226 | 2/26/10 | Water | 1 | **7.5** | <1.0 | **2.2** | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0090-048.0-20100226 | 2/26/10 | Water | 1 | **3.0** | <1.0 | **1.4** | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0086-014.0-20100226 | 2/26/10 | Water | 100 | **620** | <100 | <100 | **3300** | <100 | <100 |
| CRHE-DPT0086-023.0-20100226 | 2/26/10 | Water | 20 | **480** | <20 | <20 | **770** | <20 | <20 |
| CRHE-DPT0091-010.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0091-018.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0091-028.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0091-033.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0091-038.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0091-043.0-20100301 | 3/1/10 | Water | 1 | **100** | <1.0 | **1.1** | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0091-048.0-20100301 | 3/1/10 | Water | 1 | **11.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0092-010.0-20100301 | 3/1/10 | Water | 1 | **4.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0092-014.0-20100301 | 3/1/10 | Water | 50 | **1200** | <50 | **74** | **2400** | <50 | <50 |
| CRHE-DPT0092-018.0-20100301 | 3/1/10 | Water | 1000 | **2600** | <1000 | **900 I** | **22000** | **3000** | <1000 |
| CRHE-DPT0092-028.0-20100301 | 3/1/10 | Water | 5 | **540** | <5 | **18** | **130** | <5 | <5 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0092-033.0-20100301 | 3/1/10 | Water | 200 | **1000** | <200 | <200 | **5100** | **3800** | <200 |
| CRHE-DPT0092-038.0-20100301 | 3/1/10 | Water | 100 | **970** | <100 | <100 | **3600** | **4900** | <100 |
| CRHE-DPT0092-043.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **2.8** | **2.3** | <1.0 |
| CRHE-DPT0092-048.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-010.0-20100301 | 3/1/10 | Water | 1 | **2.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-014.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-018.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-028.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-033.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-038.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-043.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0093-048.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0094-010.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0094-018.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0094-028.0-20100301 | 3/1/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0094-033.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0094-038.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0094-043.0-20100302 | 3/2/10 | Water | 1 | **33.2** | <1.0 | **2.0** | **22.8** | **4.7** | <1.0 |
| CRHE-DPT0094-048.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0095-010.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0095-018.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0095-028.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0095-033.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0095-038.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0095-043.0-20100302 | 3/2/10 | Water | 1 | **2.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0095-048.0-20100302 | 3/2/10 | Water | 1 | **13.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-37

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.27** | **0.27** | **0.33** | **0.39** | **0.56** | **0.36** |
| CRHE-DPT0096-010.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0096-018.0-20100302 | 3/2/10 | Water | 5 | **510** | <5 | **5.0** | **93.0** | <5 | <5 |
| CRHE-DPT0096-028.0-20100302 | 3/2/10 | Water | 2000 | **7700** | <2000 | <2000 | **34000** | <2000 | <2000 |
| CRHE-DPT0096-033.0-20100302 | 3/2/10 | Water | 500 | **12000** | <500 | <500 | **14000** | <500 | <500 |
| CRHE-DPT0096-038.0-20100302 | 3/2/10 | Water | 1, 20 | **490** | <1.0 | <1.0 | **12.1** | <1.0 | <1.0 |
| CRHE-DPT0096-043.0-20100302 | 3/2/10 | Water | 1 | **1.5** | <1.0 | <1.0 | **3.8** | <1.0 | <1.0 |
| CRHE-DPT0096-048.0-20100302 | 3/2/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.6** | <1.0 | <1.0 |

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** 1631

CLIENT NAME: Geosyntec | PROJECT NAME & ADDRESS: CHRE KSC, FL

SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER KB1*022210 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES |
|---|---|---|---|---|---|---|---|---|---|---|
| DPT0075-018.0 | 7/22/10 | 0843 | | | 7/23/10 | 0855 | | GW | 2 | ✓ |
| 028.0 | | 0855 | | | | 0900 | | | | |
| 038.0 | | 0913 | | | | 0920 | | | | |
| 043.0 | | 0930 | | | | 0942 | | | | |
| 048.0 | | 0950 | | | | 0957 | | | | |
| 058.0 | | 1010 | | | | 1015 | | | | |
| DPT0076-018.0 | | 1103 | | | | 1108 | | | | |
| 028.0 | | 1116 | | | | 1120 | | | | |
| 038.0 | | 1207 | | | | 1300 | | | | |
| 043.0 | | 1227 | | | | ↓ | | | | |
| 048.0 | | 1242 | | | | ↓ | | | | |
| 058.0 | | 1300 | | | | 1310 | | | | |
| DPT0077-018.0 | | 1341 | | | | 1420 | | | | |
| 028.0 | | 1355 | | | | ↓ | | | | |
| 038.0 | | 1410 | | | | ↓ | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

**COMMENT / SAMPLE PRE FIX**

| | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | 7/23/10 |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030

**MOBILE UNIT #** KJ1

CLIENT NAME: Geosyntec
PROJECT NAME & ADDRESS: CTRE KSC, FL
SAMPLERS
CONTACT PERSON
BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KJ1+0222/0 | | | | | | | | | | | |
| DT0027-043.0 | 2/24/10 | 1427 | | | 2/24/10 | 1455 | | GW | 2 | ✓ | |
| 048.0 | ↓ | 1444 | | | ↓ | 1415 | | ↓ | ↓ | ↓ | |
| 058.0 | ↓ | 1502 | | | ↓ | 1530 | | ↓ | ↓ | ↓ | |
| DT0028-018.0 | 2/24/10 | 1638 | | | 2/24/10 | 1710 | | GW | 2 | ✓ | |
| 020.0 | ↓ | 1640 | | | ↓ | 1710 | | ↓ | ↓ | ↓ | |

PRESERVATION
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 2/24/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** ICS1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CTRE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ICS1*022310 | | | | | | | | | | | |
| DPT0078 - 038.0 | 2/23/10 | 0828 | | | 2/23/10 | 0915 | | GW | 2 | ✓ | |
| 043.0 | | 0854 | | | | 0915 | | | | | |
| 048.0 | | 0917 | | | 1 | 1005 | | | | | |
| 058.0 | | 0943 | | | | 1005 | | | | | |
| DPT0079 - 018.0 | | 1040 | | | | 1055 | | | | | |
| 028.0 | | 1057 | | | | 1235 | | | | | |
| 038.0 | | 1121 | | | | ↓ | | | | | |
| 048.0 | | 1243 | | | | ↓ | | | | | |
| 043.0 | | 1323 | | | | 1340 | | | | | |
| 038.0 | | 1301 | | | | 1340 | | | | | |
| DPT0080 - 018.0 | | 1355 | | | | 1430 | | | | | |
| 028.0 | | 1416 | | | | 1430 | | | | | |
| 038.0 | | 1439 | | | | 1540 | | | | | |
| 043.0 | | 1523 | | | | 1540 | | | | | |
| DPT0081 - 028.0 | | 1535 | | | | 1545 | | | | | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | 2/23/10 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER KB1#02310 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0081-038.0 | 4/23/10 | 1550 | | | 4/23/10 | 1600 | | GW | 2 | ✓ | |
| ↓ 043.0 | | 1605 | | | | 1612 | | | | | |
| DPT0080-048.0 | | 1545 | | | | 1630 | | | | | |
| ↓ -058.0 | | 1609 | | | | 1630 | | | | | |
| DPT0081-048.0 | | 1620 | | | | 1635 | | | | | |
| ↓ 058.0 | | 1640 | | | | 1650 | | | | | |

PRESERVATION
C Chilled
H HCL
Ot Other (see Remarks)

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | 4/23/10 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030


**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CH2E KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER KB1K0224/0 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT082 - 010.0 | 7/24/10 | 0808 | | | 7/24/10 | 0815 | | GW | 2 | ✓ | |
| -018.0 | | 0819 | | | | 0840 | | | | | |
| 028.0 | | 0831 | | | | 0840 | | | | | |
| 033.0 | | 0846 | | | | 0915 | | | | | |
| 038.0 | | 0908 | | | | 0915 | | | | | |
| 043.0 | | 0924 | | | | 1005 | | | | | |
| 048.0 | | 0953 | | | | 1005 | | | | | |
| DPT083 - 010.0 | | 1151 | | | | 1140 | | | | | |
| 018.0 | | 1201 | | | | 1240 | | | | | |
| 028.0 | | 1213 | | | | 1235 | | | | | |
| 033.0 | | 1226 | | | | 1235 | | | | | |
| 038.0 | | 1242 | | | | 1255 | | | | | |
| 043.0 | | 1309 | | | | 1350 | | | | | |
| 048.0 | | 1326 | | | | 1350 | | | | | |
| DPT084 - 010.0 | | 1416 | | | | 1430 | | | | | |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | 7/24/10 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRR KSC FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB1+022410 | | | | | | | | | | | |
| DFT0084-018.0 | 2/24/10 | 1427 | | | 2/24/10 | ~~1450~~ 1505 | | GW | 2 | ✓ | |
| 022.0 | ↓ | 1440 | | | ↓ | 1505 | | ↓ | ↓ | ↓ | |
| 033.0 | | 1454 | | | | 1525 | | | | | |
| 038.0 | | 1522 | | | | 1550 | | | | | |
| 043.0 | | 1538 | | | | 1530 | | | | | |
| 048.0 | | 1557 | | | | 1615 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>2/24/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KSL

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHCE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KSL #022510 | | | | | | | | | | | |
| DPT0085-018.0 | 7/15/10 | 0832 | | | 7/15/10 | 0845 | | GW | 2 | ✓ | |
| 010.0 | | 0821 | | | | 0845 | | | | | |
| 028.0 | | 0845 | | | | 0920 | | | | | |
| 033.0 | | 0910 | | | | 0920 | | | | | |
| 038.0 | | 0926 | | | | 0955 | | | | | |
| 043.0 | | 0945 | | | | 0955 | | | | | |
| 048.0 | | 1004 | | | | 1027 | | | | | |
| DPT0086-010.0 | | 1039 | | | | 1105 | | | | | |
| 018.0 | | 1057 | | | | 1100 | | | | | |
| 028.0 | | 1136 | | | | 1222 | | | | | |
| 033.0 | | 1211 | | | | 1222 | | | | | |
| 038.0 | | 1228 | | | | 1255 | | | | | |
| 043.0 | | 1245 | | | | 1255 | | | | | |
| 048.0 | | 1303 | | | | 1315 | | | | | |
| DPT0087-010.0 | | 1406 | | | | 1410 | | | | | |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 7/15/10 | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KG1

CLIENT NAME: Geosyntec
PROJECT NAME & ADDRESS: CHPE KSC, FL
SAMPLERS
CONTACT PERSON
BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KG1-102570 | | | | | | | | | | | |
| DPT0087-018.0 | 2/25/10 | 1444 | | | 2/25/10 | 1508 | | GW | 2 | ✓ | |
| -028.0 | | 1457 | | | | 1528 | | | | | |
| -033.0 | | 1511 | | | | 1535 | | | | | |
| -038.0 | | 1527 | | | | 1535 | | | | | |
| -043.0 | | 1547 | | | | 1620 | | | | | |
| 048.0 | | 1606 | | | | 1620 | | | | | |
| DPT0088-010.0 | | 1255 | | | | 1705 | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 2/25/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | | Received by: *(Signature)* | | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER KB1#022610 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT008 - 018.0 | 2/26/10 | 0750 | | | 2/26/10 | 0900 | | GW | 2 | ✓ | |
| 028.0 | | 0806 | | | | 0820 | | | | | |
| 033.0 | | 0824 | | | | 0830 | | | | | |
| 038.0 | | 0841 | | | | 0850 | | | | | |
| 043.0 | | 0900 | | | | 0910 | | | | | |
| 048.0 | | 0935 | | | | 0945 | | | | | |
| DPT009 - 010.0 | | 1006 | | | | 1015 | | | | | |
| 018.0 | | 1018 | | | | 1025 | | | | | |
| 028.0 | | 1032 | | | | 1045 | | | | | |
| 033.0 | | 1048 | | | | 1100 | | | | | |
| 038.0 | | 1105 | | | | 1115 | | | | | |
| 043.0 | | 1212 | | | | 1225 | | | | | |
| 048.0 | | 1230 | | | | 1240 | | | | | |
| DPT0090 - 010.0 | | 1302 | | | | 1315 | | | | | |
| 018.0 | | 1315 | | | | 1325 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 2/26/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CH2E KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB1 #02610 | | | | | | | | | | | |
| DPT009 0 -028.0 | 3/26/10 | 1334 | | | 3/26/10 | 1345 | | GW | 2 | ✓ | |
| -033.0 | " | 1352 | | | | 1400 | | | | | |
| 038.0 | | 1428 | | | | 1440 | | | | | |
| 043.0 | | 1446 | | | | 1500 | | | | | |
| 048.0 | | 1504 | | | | 1524 | | | | | |
| DPT 006 014.0 | | 1536 | | | | 1588 | | | | | |
| 023.0 | ↓ | 1548 | | | ↓ | 1600 | | ↓ | ↓ | ↓ | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 3/26/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB1*030110 | | | | | | | | | | | |
| DPT0091-010.0 | 3/1/10 | 0806 | | | 3/1/10 | 0825 | | GW | 2 | ✓ | |
| 018.0 | | 0818 | | | | 0825 | | | | | |
| 028.0 | | 0828 | | | | 0850 | | | | | |
| 033.0 | | 0844 | | | | 0850 | | | | | |
| 038.0 | | 0942 | | | | 1005 | | | | | |
| 043.0 | | 0958 | | | | 1005 | | | | | |
| 048.0 | | 1025 | | | | 1034 | | | | | |
| DPT0092-010.0 | | 1050 | | | | 1110 | | | | | |
| 014.0 | | 1100 | | | | 1110 | | | | | |
| 018.0 | | 1110 | | | | 1130 | | | | | |
| 028.0 | | 1124 | | | | 1130 | | | | | |
| 033.0 | | 1207 | | | | 1240 | | | | | |
| 038.0 | | 1233 | | | | 1240 | | | | | |
| 043.0 | | 1249 | | | | 1315 | | | | | |
| 048.0 | | 1306 | | | | 1315 | | | | | |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 3/1/10 | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS:

SAMPLERS:

CONTACT PERSON:

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB1*030/10 | | | | | | | | | | | |
| DPT0093-010.0 | 3/1/10 | 1334 | | | 3/1/10 | 1350 | | GW | 2 | ✓ | |
| 014.0 | | 1344 | | | | 1350 | | | | | |
| 018.0 | | 1355 | | | | 1405 | | | | | |
| 028.0 | | 1419 | | | | 1440 | | | | | |
| 033.0 | | 1433 | | | | 1440 | | | | | |
| 038.0 | | 1449 | | | | 1511 | | | | | |
| 043.0 | | 1504 | | | | 1511 | | | | | |
| 048.0 | | 1521 | | | | 1540 | | | | | |
| DPT0094-010.0 | | 1555 | | | | 1607 | | | | | |
| 018.0 | | 1614 | | | | 1635 | | | | | |
| 028.0 | | 1628 | | | | 1635 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 3/1/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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**MOBILE UNIT #** K81

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRL ICSE, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0094-033.0 | 3/2/10 | 0745 | | | 3/2/10 | 0830 | | GW | 2 | ✓ | |
| 038.0 | | 0846 | | | | 0930 | | | | | |
| 043.0 | | 0903 | | | | 0930 | | | | | |
| 048.0 | | 0920 | | | | 0940 | | | | | |
| DPT0095-010.0 | | 1017 | | | | 1025 | | | | | |
| 018.0 | | 1028 | | | | 1050 | | | | | |
| 028.0 | | 1041 | | | | 1050 | | | | | |
| 033.0 | | 1055 | | | | 1120 | | | | | |
| 038.0 | | 1110 | | | | 1120 | | | | | |
| 043.0 | | 1125 | | | | 1135 | | | | | |
| 048.0 | | 1217 | | | | 1225 | | | | | |
| DPT0096-010.0 | | 1301 | | | | 1310 | | | | | |
| 018.0 | | 1313 | | | | 1330 | | | | | |
| 028.0 | | 1326 | | | | 1350 | | | | | |
| 033.0 | | 1341 | | | | 1350 | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 3/2/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** K31

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CH2E — 155, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0096-038.0 | 3/2/10 | 1401 | | | 3/2/10 | 1410 | | GW | 2 | ✓ | |
| 043.0 | ↓ | 1418 | | | ↓ | 1425 | | ↓ | ↓ | ↓ | |
| 048.0 | ↓ | 1435 | | | ↓ | 1446 | | ↓ | ↓ | ↓ | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | 3/2/10 |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

***Telephone* (352) 472-5830**
***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

June 28, 2010

Jill Johnson
GeoSyntec Consultants
9511 Holsberry Lane, Suite C
Pensacola, FL 32534

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 10-137**

Dear Ms.Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from June 14 to 124, 2010. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

KB Labs, Inc.
25132 SW 1st Ave
Newberry, FL 32669
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Fax: 352-472-5832
Email: info@kbmobilelabs.com

# PROJECT NARRATIVE

## Project Scope

From June 14 to 24, 2010, a total of 152 water samples were analyzed for GeoSyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB1: FDOH NELAP Certification Number E82815

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0

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ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

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# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. Changes for sample ID CRHE-DPT0097-010.0-20100614 reported:
   t-1,2-dichloroethene 28.8 changed to <1.0ug/L.
   c-1,2-dichloroethene <1.0 changed to 28.8ug/L.

3. Sample ID CRHE-DPT100-038.9-20100615 reported c-1, 2-dichloroethene 5900 changed to 59000 ug/L.

4. As per NASA client request for diluted samples between the lab RL and MDL are reported with FDEP Data Qualifier "I" some results were changed from the Field Report to the Final Report to reflect this requirement.

5. As per Geosyntec, the VC and TCE reporting limit on diluted samples with non-detects were lowered to KB Labs MDL and reported with FDEP Data Qualifier "I".

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**:GeoSystem Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu,Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:**10-137 |
| **On-site Dates**: 6/14/10-6/24/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| BFB | 06/14/10 | 108 | 110 | 97 | 94 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/14/10 | 103 | 104 | 99 | 101 | Pass | Pass | Pass | Pass |
| RSTD 20 | 06/14/10 | 85 | 102 | 98 | 97 | Pass | Pass | Pass | Pass |
| BLANK | 06/14/10 | 110 | 112 | 100 | 92 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/14/10 | 105 | 114 | 94 | 95 | Pass | Pass | Pass | Pass |
| METHOD BLANK | 06/14/10 | 114 | 123 | 92 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-010.0-20100614 | 06/14/10 | 107 | 120 | 93 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-014.0-20100614 | 06/14/10 | 110 | 123 | 92 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-018.0-20100614 | 06/14/10 | 106 | 118 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-023.0-20100614 | 06/14/10 | 111 | 123 | 94 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-028.0-20100614 | 06/14/10 | 108 | 126 | 93 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-033.0-20100614 | 06/14/10 | 103 | 122 | 95 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-038.0-20100614 | 06/14/10 | 112 | 123 | 91 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-043.0-20100614 | 06/14/10 | 112 | 119 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-048.0-20100614 | 06/14/10 | 116 | 122 | 93 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-010.0-20100614 | 06/14/10 | 112 | 119 | 95 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-014.0-20100614 | 06/14/10 | 118 | 121 | 95 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-018.0-20100614 | 06/14/10 | 112 | 116 | 94 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-023.0-20100614 | 06/14/10 | 112 | 118 | 95 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-028.0-20100614 | 06/14/10 | 109 | 114 | 94 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-033.0-20100614 | 06/14/10 | 115 | 122 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-038.0-20100614 | 06/14/10 | 113 | 119 | 94 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-043.0-20100614 | 06/14/10 | 112 | 117 | 95 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT098-048.0-20100614 | 06/14/10 | 112 | 117 | 95 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-010.0-20100614 | 06/14/10 | 109 | 114 | 94 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-014.0-20100614 | 06/14/10 | 112 | 118 | 98 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-010.0-20100614MS | 06/14/10 | 106 | 108 | 96 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-010.0-20100614MSD | 06/14/10 | 102 | 105 | 97 | 96 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/14/10 | 105 | 107 | 98 | 97 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/15/10 | 104 | 102 | 96 | 95 | Pass | Pass | Pass | Pass |
| RSTD 20 | 06/15/10 | 107 | 106 | 97 | 93 | Pass | Pass | Pass | Pass |
| BLANK | 06/15/10 | 112 | 115 | 96 | 90 | Pass | Pass | Pass | Pass |
| METHOD BLANK | 06/15/10 | 114 | 124 | 92 | 91 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/15/10 | 110 | 117 | 92 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-010.0-20100615 | 06/15/10 | 114 | 120 | 92 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT097-014.0-20100615 | 06/15/10 | 113 | 125 | 91 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-018.0-20100615 | 06/15/10 | 117 | 121 | 94 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-023.0-20100615 | 06/15/10 | 118 | 123 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-028.0-20100615 | 06/15/10 | 194 | 209 | 93 | 91 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT099-033.0-20100615 | 06/15/10 | 116 | 120 | 92 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-038.0-20100616 | 06/16/10 | 117 | 122 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-043.0-20100616 | 06/16/10 | 116 | 117 | 91 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-048.0-20100616 | 06/16/10 | 118 | 120 | 91 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-010.0-20100616 | 06/16/10 | 116 | 120 | 93 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-014.0-20100616 | 06/16/10 | 117 | 120 | 94 | 90 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**:GeoSystem Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu,Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:**10-137 |
| **On-site Dates**: 6/14/10-6/24/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT100-018.0-20100616 | 06/16/10 | 117 | 117 | 93 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-023.0-20100616 | 06/16/10 | 118 | 120 | 95 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-028.0-20100616 | 06/16/10 | 117 | 120 | 91 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-033.0-20100616 | 06/16/10 | 117 | 121 | 91 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-038.0-20100616 | 06/16/10 | 113 | 115 | 94 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-043.0-20100616 | 06/16/10 | 111 | 111 | 92 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-048.0-20100616 | 06/16/10 | 114 | 115 | 93 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-010.0-20100616 | 06/16/10 | 118 | 117 | 94 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-014.0-20100616 | 06/16/10 | 113 | 112 | 93 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-018.0-20100616 | 06/16/10 | 113 | 111 | 93 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-023.0-20100616 | 06/16/10 | 115 | 113 | 90 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-010.0-20100616MS | 06/16/10 | 110 | 106 | 94 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-010.0-20100616MSD | 06/16/10 | 106 | 98 | 95 | 98 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/16/10 | 102 | 95 | 97 | 96 | Pass | Pass | Pass | Pass |
| RSTD 20 | 06/16/10 | 105 | 96 | 97 | 97 | Pass | Pass | Pass | Pass |
| BLANK | 06/16/10 | 111 | 109 | 91 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT099-038.0-20100616 | 06/16/10 | 113 | 108 | 93 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT100-028.0-20100616 | 06/16/10 | 115 | 106 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-023.0-20100616 | 06/16/10 | 114 | 113 | 90 | 91 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/16/10 | 110 | 108 | 86 | 91 | Pass | Pass | Pass | Pass |
| BLANK | 06/16/10 | 109 | 114 | 92 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-028.0-20100616 | 06/16/10 | 111 | 119 | 89 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-033.0-20100616 | 06/16/10 | 109 | 113 | 92 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-038.0-20100616 | 06/16/10 | 110 | 114 | 95 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-043.0-20100616 | 06/16/10 | 115 | 120 | 91 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-048.0-20100616 | 06/16/10 | 4 | 116 | 91 | 87 | < LCL | Pass | Pass | Pass |
| CRHE-DPT102-010.0-20100616 | 06/16/10 | 109 | 116 | 91 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-014.0-20100616 | 06/16/10 | 111 | 116 | 93 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-018.0-20100616 | 06/16/10 | 112 | 118 | 92 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-023.0-20100616 | 06/16/10 | 111 | 120 | 91 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-028.0-20100616 | 06/16/10 | 110 | 117 | 92 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-033.0-20100616 | 06/16/10 | 109 | 115 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-038.0-20100616 | 06/16/10 | 111 | 118 | 93 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-043.0-20100617 | 06/17/10 | 113 | 117 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT102-048.0-20100617 | 06/17/10 | 109 | 113 | 92 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-010.0-20100617 | 06/17/10 | 109 | 115 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-014.0-20100617 | 06/17/10 | 114 | 117 | 92 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-018.0-20100617 | 06/17/10 | 109 | 111 | 92 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-023.0-20100617 | 06/17/10 | 110 | 110 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-028.0-20100617 | 06/17/10 | 109 | 112 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-033.0-20100617 | 06/17/10 | 114 | 115 | 95 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-038.0-20100617 | 06/17/10 | 111 | 115 | 93 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-043.0-20100617 | 06/17/10 | 108 | 110 | 95 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT103-048.0-20100617 | 06/17/10 | 111 | 116 | 94 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-010.0-20100617 | 06/17/10 | 114 | 117 | 94 | 94 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**:GeoSystem Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu,Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:**10-137 |
| **On-site Dates**: 6/14/10-6/24/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT104-014.0-20100617 | 06/17/10 | 111 | 111 | 96 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-018.0-20100617 | 06/17/10 | 112 | 115 | 90 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-023.0-20100617 | 06/17/10 | 108 | 108 | 96 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-028.0-20100617 | 06/17/10 | 110 | 113 | 93 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-033.0-20100617 | 06/17/10 | 110 | 113 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-038.0-20100617 | 06/17/10 | 112 | 115 | 93 | 95 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/17/10 | 107 | 111 | 93 | 97 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/17/10 | 107 | 111 | 93 | 97 | Pass | Pass | Pass | Pass |
| RSTD 20 | 06/17/10 | 101 | 99 | 99 | 97 | Pass | Pass | Pass | Pass |
| BLANK | 06/17/10 | 111 | 110 | 95 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT101-028.0-20100617 | 06/17/10 | 110 | 115 | 91 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-038.0-20100617 | 06/17/10 | 110 | 116 | 91 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-018.0-20100617MS | 06/17/10 | 106 | 108 | 90 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-018.0-20100617MSD | 06/17/10 | 102 | 103 | 91 | 92 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/17/10 | 106 | 105 | 91 | 93 | Pass | Pass | Pass | Pass |
| METHOD BLANK | 06/17/10 | 110 | 112 | 93 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-043.0-20100617 | 06/17/10 | 110 | 117 | 92 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT104-048.0-20100617 | 06/17/10 | 111 | 116 | 91 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-010.0-20100617 | 06/17/10 | 109 | 109 | 92 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-014.0-20100617 | 06/17/10 | 111 | 110 | 93 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-018.0-20100617 | 06/17/10 | 110 | 109 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-023.0-20100617 | 06/17/10 | 110 | 112 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-028.0-20100617 | 06/17/10 | 113 | 114 | 90 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-033.0-20100617 | 06/17/10 | 110 | 112 | 92 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-038.0-20100617 | 06/17/10 | 110 | 112 | 90 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-043.0-20100617 | 06/17/10 | 112 | 114 | 93 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT105-048.0-20100617 | 06/17/10 | 112 | 110 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT010.0-20100618 | 06/18/10 | 113 | 113 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT014.0-20100618 | 06/18/10 | 114 | 110 | 93 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT018.0-20100618 | 06/18/10 | 113 | 112 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT023.0-20100618 | 06/18/10 | 110 | 108 | 91 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT028.0-20100618 | 06/18/10 | 113 | 111 | 93 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT033.0-20100618 | 06/18/10 | 114 | 114 | 93 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT038.0-20100618 | 06/18/10 | 113 | 113 | 94 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT043.0-20100618 | 06/18/10 | 114 | 114 | 94 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT048.0-20100618 | 06/18/10 | 111 | 111 | 94 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT048.0-20100618MS | 06/18/10 | 104 | 100 | 96 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT106-DPT048.0-20100618MSD | 06/18/10 | 105 | 101 | 95 | 99 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/18/10 | 101 | 95 | 96 | 98 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/18/10 | 101 | 100 | 98 | 100 | Pass | Pass | Pass | Pass |
| RSTD 20 | 06/18/10 | 102 | 103 | 95 | 98 | Pass | Pass | Pass | Pass |
| BLANK | 06/18/10 | 107 | 110 | 91 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT107-010.0-20100618 | 06/18/10 | 112 | 118 | 94 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT107-018.0-20200618 | 06/18/10 | 111 | 115 | 93 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT107-028.0-20100618 | 06/18/10 | 113 | 114 | 91 | 92 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**:GeoSystem Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu,Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:**10-137 |
| **On-site Dates**: 6/14/10-6/24/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT107-033.0-20100618 | 06/18/10 | 109 | 109 | 91 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT107-038.9-20100618 | 06/18/10 | 111 | 111 | 93 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT107-043.0-20100618 | 06/18/10 | 116 | 114 | 90 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT107-048.0-20100618 | 06/18/10 | 114 | 113 | 91 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-010.0-20100618 | 06/18/10 | 114 | 114 | 91 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-018.0-20101618 | 06/18/10 | 112 | 112 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-028.0-10100618 | 06/18/10 | 116 | 118 | 90 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-033.0-10100618 | 06/18/10 | 111 | 112 | 90 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-038.0-10100618 | 06/18/10 | 116 | 116 | 89 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-043.0-10100618 | 06/18/10 | 113 | 115 | 91 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-048.0-10100618 | 06/18/10 | 111 | 113 | 90 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-058.0-10100618 | 06/18/10 | 113 | 117 | 89 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-058.0-10100618MS | 06/18/10 | 109 | 103 | 91 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT108-058.0-10100618MSD | 06/18/10 | 105 | 104 | 93 | 91 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/18/10 | 107 | 103 | 92 | 92 | Pass | Pass | Pass | Pass |
| CCS | 06/21/10 | 106 | 111 | 94 | 92 | Pass | Pass | Pass | Pass |
| LCS | 06/21/10 | 95 | 113 | 93 | 92 | Pass | Pass | Pass | Pass |
| METHOD BLANK | 06/21/10 | 114 | 122 | 94 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT109-010.0-20100621 | 06/21/10 | 113 | 118 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT109-018.0-20100621 | 06/21/10 | 112 | 119 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT109-028.0-20100621 | 06/21/10 | 110 | 118 | 94 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT109-033.0-20100621 | 06/21/10 | 112 | 118 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT109-038.0-20100621 | 06/21/10 | 110 | 116 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT109-043.0-20100621 | 06/21/10 | 114 | 118 | 91 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT109-048.0-20100621 | 06/21/10 | 109 | 116 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT110-033.0-20100621 | 06/21/10 | 111 | 117 | 94 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT110-038.0-20100621 | 06/21/10 | 94 | 113 | 94 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT110-043.0-20100621 | 06/21/10 | 109 | 112 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT110-048.0-20100621 | 06/21/10 | 114 | 120 | 96 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT111-010.0-20100621 | 06/21/10 | 112 | 118 | 92 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT111-018.0-20100621 | 06/21/10 | 110 | 114 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT111-028.0-20100621 | 06/21/10 | 113 | 114 | 92 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT111-033.0-20100621 | 06/21/10 | 113 | 114 | 94 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT111-038.0-20100621 | 06/21/10 | 114 | 115 | 93 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT111-043.0-20100621 | 06/21/10 | 112 | 111 | 96 | 89 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**:GeoSystem Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu,Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:**10-137 |
| **On-site Dates**: 6/14/10-6/24/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT111-048.0-20100621 | 06/21/10 | 110 | 110 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT111-058.0-20100621 | 06/21/10 | 114 | 112 | 93 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-010.0-20100621 | 06/21/10 | 113 | 110 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-018.0-20100621 | 06/21/10 | 114 | 111 | 92 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-028.0-20100621 | 06/21/10 | 114 | 112 | 92 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-033.0-20100621 | 06/21/10 | 108 | 108 | 98 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-038.0-20100621 | 06/21/10 | 108 | 105 | 96 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-043.0-20100621 | 06/21/10 | 101 | 108 | 96 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-048.0-20100621 | 06/21/10 | 111 | 106 | 99 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-048.0-20100621MS | 06/21/10 | 103 | 96 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT112-048.0-20100621MSD | 06/21/10 | 103 | 96 | 96 | 95 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/21/10 | 99 | 90 | 98 | 94 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/23/10 | 94 | 99 | 96 | 101 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/23/10 | 103 | 105 | 94 | 85 | Pass | Pass | Pass | Pass |
| METHOD BLANK | 06/23/10 | 110 | 112 | 94 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT113-010.0-20100623 | 06/23/10 | 110 | 113 | 94 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT113-018.0-20100623 | 06/23/10 | 109 | 113 | 93 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT113-028.0-20100623 | 06/23/10 | 113 | 117 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT113-033.0-20100623 | 06/23/10 | 110 | 116 | 92 | 90 | Pass | Pass | Pass | Pass |
| METHOD BLANK RERUN | 06/23/10 | 110 | 118 | 93 | 91 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/23/10 | 104 | 104 | 95 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT113-038.0-20100623 | 06/23/10 | 111 | 117 | 93 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT113-043.0-20100623 | 06/23/10 | 110 | 116 | 94 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT113-048.0-20100623 | 06/23/10 | 114 | 120 | 90 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT114-010.0-20100623 | 06/23/10 | 110 | 117 | 95 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT114-018.0-20100623 | 06/23/10 | 113 | 115 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT114-028.0-20100623 | 06/23/10 | 113 | 117 | 93 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT114-033.0-20100623 | 06/23/10 | 111 | 115 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT114-038.0-20100623 | 06/23/10 | 109 | 111 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT114-043.0-20100623 | 06/23/10 | 107 | 111 | 92 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT114-048.0-20100623 | 06/23/10 | 111 | 110 | 95 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-010.0-20100623 | 06/23/10 | 110 | 108 | 93 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-018.0-20100623 | 06/23/10 | 108 | 105 | 96 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-028.0-20100623 | 06/23/10 | 111 | 106 | 98 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-033.0-20100623 | 06/23/10 | 112 | 105 | 97 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-038.0-20100623 | 06/23/10 | 108 | 104 | 96 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-043.0-20100623 | 06/23/10 | 112 | 105 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-048.0-20100623 | 06/23/10 | 110 | 103 | 97 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-048.0-20100623MS | 06/23/10 | 102 | 94 | 98 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT115-048.0-20100623MSD | 06/23/10 | 101 | 90 | 98 | 94 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/23/10 | 100 | 90 | 98 | 94 | Pass | Pass | Pass | Pass |

**Comments:** Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data.

***Surrogate Compounds:**
S1 = Dibromofluoromethane (54% - 149%)
S2 = 1,2- Dichloroethane-D4 (61% - 156%)
S3 = Toluene-D8 (72% - 127%)
S4 = 4-Bromofluorobenzene (72% - 125%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-137 |
| **Onsite Dates:** 6/14/10-6/24/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT099-010.0 **Date of Analysis:** 6/15/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 91 | 99 | 9 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 90 | 99 | 9 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 97 | 105 | 8 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 82 | 89 | 9 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 84 | 98 | 15 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 80 | 89 | 11 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT101-010.0 **Date of Analysis:** 6/16/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 108 | 109 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 103 | 106 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 117 | 125 | 6 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 100 | 101 | 1 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 95 | 96 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 89 | 93 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT104-018.8 **Date of Analysis:** 6/17/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 75 | 66 | 12 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 84 | 74 | 12 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 92 | 83 | 10 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 90 | 83 | 8 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 94 | 84 | 12 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 88 | 84 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT106-048.0 **Date of Analysis:** 6/18/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 95 | 98 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 94 | 97 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 98 | 102 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 89 | 95 | 6 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 90 | 93 | 4 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 90 | 90 | 0 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-137 |
| **Onsite Dates:** 6/14/10-6/24/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT108-058.0 **Date of Analysis:** 6/18/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 101 | 95 | 5 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 94 | 91 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 100 | 98 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 93 | 93 | 0 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 91 | 91 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 88 | 91 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT112-048.0 **Date of Analysis:** 6/22/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 100 | 105 | 4 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 92 | 96 | 4 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 97 | 101 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 82 | 91 | 10 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 89 | 96 | 8 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 85 | 90 | 6 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT115-048.0 **Date of Analysis:** 6/24/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 40 | 143 | 20 | 109 | 104 | 4 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 45 | 144 | 20 | 97 | 95 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 68 | 130 | 20 | 102 | 102 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 59 | 156 | 20 | 91 | 90 | 2 | Pass | Pass | Pass |
| Trichloroethene | 70 | 136 | 20 | 93 | 79 | 16 | Pass | Pass | Pass |
| Tetrachloroethene | 57 | 152 | 20 | 91 | 93 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Tuan Luu, Greg Lamb, Herb Kelly |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-137 |
| **Onsite Dates:** 6/14/10-6/24/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 **Date of Analysis:** 6/14/2010
LCS 2 6/15/2010
LCS 3 6/16/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 28 | to | 161 | 95 | 100 | 110 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 43 | to | 156 | 98 | 99 | 107 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 99 | 108 | 117 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 84 | 91 | 102 | Pass | Pass | Pass |
| Trichloroethene | 47 | to | 164 | 105 | 89 | 98 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | to | 151 | 94 | 91 | 102 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 **Date of Analysis:** 6/17/2010
LCS 5 6/18/2010
LCS 6 6/21/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | LCS#6 | LCS#4 | LCS#5 | LCS#6 |
| Vinyl Chloride | 28 | to | 161 | 96 | 97 | 87 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 43 | to | 156 | 94 | 96 | 83 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 98 | 95 | 87 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 92 | 95 | 76 | Pass | Pass | Pass |
| Trichloroethene | 47 | to | 164 | 88 | 90 | 96 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | to | 151 | 89 | 93 | 76 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 7 **Date of Analysis:** 6/21/2010
LCS 8 6/23/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#7 | LCS#8 | | LCS#7 | LCS#8 | |
| Vinyl Chloride | 28 | to | 161 | 106 | 152 | | Pass | Pass | |
| 1,1-Dichloroethene | 43 | to | 156 | 95 | 154 | | Pass | Pass | |
| Trans-1,2-Dichloroethene | 61 | to | 133 | 102 | 147 | | Pass | > UCL | |
| Cis-1,2-Dichloroethene | 60 | to | 150 | 93 | 143 | | Pass | Pass | |
| Trichloroethene | 47 | to | 164 | 91 | 111 | | Pass | Pass | |
| Tetrachloroethene | 60 | to | 151 | 92 | 94 | | Pass | Pass | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

Project Number : 10-137

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.24** | **0.29** | **0.28** | **0.27** | **0.29** | **0.3** |
| CRHE-DPT0097-010.0-20100614 | 6/14/10 | Water | 1,10 | **160** | <1.0 | <1.0 | **28.8** | <1.0 | <1.0 |
| CRHE-DPT0097-014.0-20100614 | 6/14/10 | Water | 20,50 | **1500** | <20 | **72** | **3100** | <5.8 I | <20 |
| CRHE-DPT0097-018.0-20100614 | 6/14/10 | Water | 200 | **1000** | <200 | **520** | **16000** | <58 I | <200 |
| CRHE-DPT0097-023.0-20100614 | 6/14/10 | Water | 1000 | **1500** | <1000 | **2100** | **52000** | **3800** | <1000 |
| CRHE-DPT0097-028.0-20100614 | 6/14/10 | Water | 100 | **1400** | <100 | **110** | **3200** | <29 I | <100 |
| CRHE-DPT0097-033.0-20100614 | 6/15/10 | Water | 5 | **1.6 I** | <5.0 | <5.0 | **4.6 I** | <1.4 I | <5.0 |
| CRHE-DPT0097-038.0-20100614 | 6/15/10 | Water | 1 | **1.6** | <1.0 | <1.0 | **8.9** | <1.0 | <1.0 |
| CRHE-DPT0097-043.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.4** | <1.0 | <1.0 |
| CRHE-DPT0097-048.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **8.6** | <1.0 | <1.0 |
| CRHE-DPT0098-010.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0098-014.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0098-018.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0098-023.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0098-028.0-20100614 | 6/15/10 | Water | 2 | **7.6** | <2.0 | <2.0 | <2.0 | <1.0 I | <2.0 |
| CRHE-DPT0098-033.0-20100614 | 6/15/10 | Water | 100 | **320** | <100 | **120** | **1000** | **580** | <100 |
| CRHE-DPT0098-038.0-20100614 | 6/15/10 | Water | 2000 | **13000** | <2000 | **700 I** | **49000** | **36000** | <2000 |
| CRHE-DPT0098-043.0-20100614 | 6/15/10 | Water | 20 | **64** | <20 | **5.4 I** | **220** | **23** | <20 |
| CRHE-DPT0098-048.0-20100614 | 6/15/10 | Water | 10 | **6.4 I** | <10 | <10 | **19** | **16** | <10 |
| CRHE-DPT0099-010.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0099-014.0-20100614 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0099-018.0-20100615 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.0** | <1.0 | <1.0 |
| CRHE-DPT0099-023.0-20100615 | 6/15/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0099-028.0-20100615 | 6/15/10 | Water | 5 | **180** | <5.0 | **8.8** | **32** | <1.4 I | <5.0 |
| CRHE-DPT0099-033.0-20100615 | 6/15/10 | Water | 200 | **13000** | <200 | **82 I** | **6500** | <200 | <200 |
| CRHE-DPT0099-038.0-20100615 | 6/16/10 | Water | 10, 200 | **4900** | <10 | **11** | **370** | <2.9 I | <10 |
| CRHE-DPT0099-043.0-20100615 | 6/16/10 | Water | 1 | **1.9** | <1.0 | <1.0 | **1.5** | <1.0 | <1.0 |
| CRHE-DPT0099-048.0-20100615 | 6/16/10 | Water | 1 | **2.6** | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 |
| CRHE-DPT0100-010.0-20100615 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0100-014.0-20100615 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0100-018.0-20100615 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-137

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.24** | **0.29** | **0.28** | **0.27** | **0.29** | **0.3** |
| CRHE-DPT0100-023.0-20100615 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0100-028.0-20100615 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0100-033.0-20100615 | 6/16/10 | Water | 1000 | **7400** | <1000 | **620 I** | **31000** | **21000** | <1000 |
| CRHE-DPT0100-038.0-20100615 | 6/16/10 | Water | 2000 | **17000** | <2000 | **780 I** | **59000** | **32000** | <2000 |
| CRHE-DPT0100-043.0-20100615 | 6/16/10 | Water | 5 | **72** | <5.0 | **6.6** | **380** | **210** | <5.0 |
| CRHE-DPT0100-048.0-20100615 | 6/16/10 | Water | 1 | **5.4** | <1.0 | <1.0 | **28.0** | **19.5** | <1.0 |
| CRHE-DPT0101-010.0-20100615 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0101-014.0-20100615 | 6/16/10 | Water | 1 | **1.6** | <1.0 | <1.0 | **1.1** | <1.0 | <1.0 |
| CRHE-DPT0101-018.0-20100615 | 6/16/10 | Water | 1 | **8.8** | <1.0 | <1.0 | **1.0** | <1.0 | <1.0 |
| CRHE-DPT0101-023.0-20100615 | 6/16/10 | Water | 1 | **30.1** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0101-028.0-20100615 | 6/16/10 | Water | 1,10 | **260** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0101-033.0-20100615 | 6/16/10 | Water | 10 | **120** | <10 | <10 | <10 | <2.9 I | <10 |
| CRHE-DPT0101-038.0-20100615 | 6/16/10 | Water | 1 | **12.1** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0101-043.0-20100615 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0101-048.0-20100615 | 6/16/10 | Water | 1 | **3.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-010.0-20100616 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-014.0-20100616 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-018.0-20100616 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-023.0-20100616 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-028.0-20100616 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-033.0-20100616 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-038.0-20100616 | 6/16/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-043.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0102-048.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0103-010.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0103-014.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0103-018.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0103-023.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0103-028.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0103-033.0-20100616 | 6/17/10 | Water | 2 | **13** | <2.0 | <2.0 | <2.0 | <1.0 I | <2.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-137

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.24** | **0.29** | **0.28** | **0.27** | **0.29** | **0.3** |
| CRHE-DPT0103-038.0-20100616 | 6/17/10 | Water | 200 | **4000** | <200 | **160 I** | **8700** | **2900** | <200 |
| CRHE-DPT0103-043.0-20100616 | 6/17/10 | Water | 100 | **690** | <100 | **57 I** | **2200** | **1300** | <100 |
| CRHE-DPT0103-048.0-20100616 | 6/17/10 | Water | 5 | <1.2 I | <5.0 | <5.0 | **3.0 I** | **2.4 I** | <5.0 |
| CRHE-DPT0104-010.0-20100616 | 6/17/10 | Water | 5 | <1.2 I | <5.0 | <5.0 | <5.0 | <1.4 I | <5.0 |
| CRHE-DPT0104-014.0-20100616 | 6/17/10 | Water | 5 | <1.2 I | <5.0 | <5.0 | <5.0 | <1.4 I | <5.0 |
| CRHE-DPT0104-018.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0104-023.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0104-028.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0104-033.0-20100616 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0104-038.0-20100616 | 6/17/10 | Water | 1,10 | **530** | <1.0 | **1.8** | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0104-043.0-20100617 | 6/17/10 | Water | 10 | **790** | <10 | <10 | **61** | <2.8 I | <10 |
| CRHE-DPT0104-048.0-20100617 | 6/17/10 | Water | 1 | **1.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-010.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-014.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-018.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-023.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-028.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-033.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-038.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-043.0-20100617 | 6/17/10 | Water | 1 | **1.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0105-048.0-20100617 | 6/17/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-010.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-014.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-018.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-023.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-028.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-033.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-038.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-043.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0106-048.0-20100617 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-137

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.24** | **0.29** | **0.28** | **0.27** | **0.29** | **0.3** |
| CRHE-DPT0107-010.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0107-018.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0107-028.0-20100618 | 6/18/10 | Water | 1 | **21.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0107-033.0-20100618 | 6/18/10 | Water | 1 | **15.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0107-038.0-20100618 | 6/18/10 | Water | 1 | **3.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0107-043.0-20100618 | 6/18/10 | Water | 1 | **1.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0107-048.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-010.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-018.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-028.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-033.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-038.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-043.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-048.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0108-058.0-20100618 | 6/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0109-010.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0109-018.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0109-028.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0109-033.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0109-038.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0109-043.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0109-048.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0110-033.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0110-038.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0110-043.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0110-048.0-20100621 | 6/21/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0111-010.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0111-018.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0111-028.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0111-033.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-137

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.24** | **0.29** | **0.28** | **0.27** | **0.29** | **0.3** |
| CRHE-DPT0111-038.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0111-043.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0111-048.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0111-058.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0112-010.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0112-018.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0112-028.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0112-033.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0112-038.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0112-043.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0112-048.0-20100621 | 6/22/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0113-010.0-20100622 | 6/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0113-018.0-20100622 | 6/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0113-028.0-20100622 | 6/23/10 | Water | 1 | **2.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0113-033.0-20100622 | 6/23/10 | Water | 1 | **6.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0113-038.0-20100622 | 6/23/10 | Water | 1 | **3.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0113-043.0-20100622 | 6/23/10 | Water | 1 | **2.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0113-048.0-20100622 | 6/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0114-010.0-20100622 | 6/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0114-018.0-20100622 | 6/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0114-028.0-20100622 | 6/23/10 | Water | 1 | **3.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0114-033.0-20100622 | 6/23/10 | Water | 1 | **1.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0114-038.0-20100622 | 6/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0114-043.0-20100622 | 6/23/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0114-048.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0115-010.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0115-018.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0115-028.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0115-033.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0115-038.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-137

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.24** | **0.29** | **0.28** | **0.27** | **0.29** | **0.3** |
| CRHE-DPT0115-043.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0115-048.0-20100622 | 6/24/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


MOBILE UNIT #

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CKHE - KSC

SAMPLERS

CONTACT PERSON: Jan Bartus

BATCH # (Lab Use Only)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

PRESERVATION
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT097-10.0 2010 | 6.14 | 0916 | | ✓ | 6/14/10 | | | W | 2 | ✓ | |
| 14.0 | | 0925 | | | | | | | | | |
| 18.0 | | 0939 | | | | | | | | | |
| 23.0 | | 0950 | | | | | | | | | |
| 28.0 | | 1005 | | | | | | | | | |
| 33.0 | | 1023 | | | | | | | | | |
| 38.0 | | 1045 | | | | | | | | | |
| 43.0 | | 1125 | | | | | | | | | |
| 48.0 | | 1147 | | | | | | | | | |
| DPT098-10.0 | | 1350 | | | | | | | | | |
| 14.0 | | 1400 | | | | | | | | | |
| 18.0 | | 1415 | | | | | | | | | |
| 23.0 | | 1430 | | | | | | | | | |
| 28.0 | | 1446 | | | | | | | | | |
| 33.0 | | 1505 | | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/14/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #**

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| GeoSyntec | CAFE - KSC |
| SAMPLERS | CONTACT PERSON: Jan Bartus |
| | BATCH # (Lab Use Only) |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT098-38.0 2010 | 0614 | 1535 | | ✓ | 0614 | | | W | 2 | ✓ | |
| -43.0 | | 1557 | | | | | | | | | |
| -48.0 | | 1624 | | | | | | | | | |
| DPT099-10.0 | | 1825 | | | | | | | | | |
| -14.0 | | 1837 | | | | | | | | | |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time: 6/14/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #**

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CRTE KSC |
| **SAMPLERS** | **CONTACT PERSON** |
| ✓ | Jan Barfus |

**BATCH # (Lab Use Only)**

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *FHE DPT099-18.0 2010 | 0615 | 0751 | | ✓ | 6/15/10 | 1245 | | W | 2 | ✓ | |
| -23.0 | | 0805 | | | | | | | | | |
| -28.0 | | 0821 | | | | | | | | | |
| -33.0 | | 0847 | | | | | | | | | |
| -38.0 | | 0912 | | | | | | | | | |
| -43.0 | | 0931 | | | | | | | | | |
| -48.0 | | 0952 | | | | ✓ | | | | | |
| DPT100-10.0 | | 1047 | | | | 1755 | | | | | |
| 14.0 | | 1057 | | | | | | | | | |
| 18.0 | | 1110 | | | | | | | | | |
| 23.0 | | 1120 | | | | | | | | | |
| 28.0 | | 1136 | | | | | | | | | |
| 33.0 | | 1150 | | | | | | | | | |
| 38.0 | | 1313 | | | | | | | | | |
| 43.0 | | 1332 | | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/15/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #**

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Ecosystec | CRHE KSC |
| **SAMPLERS** | **CONTACT PERSON** |
| | Jan Bartus |

**BATCH # (Lab Use Only)**

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT100-48.0 2010 | 0615 | 1354 | | ✓ | 6/15/10 | 1755 | | W | 2 | ✓ | |
| DPT101-10.0 | | 1529 | | | | | | | | | |
| -14.0 | | 1538 | | | | | | | | | |
| -18.0 | | 1548 | | | | | | | | | |
| -23.0 | | 1600 | | | | | | | | | |
| -28.0 | | 1613 | | | | | | | | | |
| -33.0 | | 1628 | | | | | | | | | |
| -38.0 | | 1646 | | | | | | | | | |
| -43.0 | | 1705 | | | | | | | | | |
| -48.0 | | 1724 | | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/15/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC

SAMPLERS: ✓

CONTACT PERSON: Jan Barfus

BATCH # (Lab Use Only):

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0102-010.0-20100616 | 6/16/10 | 0813 | | ✓ | 6/16/10 | 1733 | | W | 2 | ✓ | |
| -014.0 | | 0835 | | | | | | | | | |
| -018.0 | | 0850 | | | | | | | | | |
| -023.0 | | 0900 | | | | | | | | | |
| -028 | | 0917 | | | | | | | | | |
| -033 | | 0937 | | | | | | | | | |
| -038 | | 1000 | | | | | | | | | |
| -043 | | 1018 | | | | | | | | | |
| -048 | | 1040 | | | | | | | | | |
| DPT103-010 | | 1130 | | | | | | | | | |
| -014 | | 1136 | | | | | | | | | |
| -018 | | 1149 | | | | | | | | | |
| -023 | | 1200 | | | | | | | | | |
| -028 | | 1216 | | | | | | | | | |
| -033 | | 1331 | | | | | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 6/16/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #**

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CAFE KSC

SAMPLERS: /

CONTACT PERSON: Jan Bartus

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0103-038.0 2010 | 0616 | 1346 | | ✓ | 6/16/10 | 1733 | | W | 2 | ✓ | |
| -043.0 | | 1410 | | | | | | | | | |
| -048.0 | | 1505 | | | | | | | | | |
| DPT01M-010 | | 1548 | | | | | | | | | |
| -014 | | 1600 | | | | | | | | | |
| -018 | | 1614 | | | | | | | | | |
| -023 | | 1626 | | | | | | | | | |
| -028 | | 1639 | | | | | | | | | |
| -033 | | 1653 | | | | | | | | | |
| -038 ✓ | | 1708 | | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | Received by: *(Signature)* | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/16/10 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #**

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CLHE KSC

SAMPLERS

CONTACT PERSON: Jan Backus

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CLHE DPT0104-0430 2010 | 6/17 | 0809 | | ✓ | 06/17/10 | 1750 | | W | 2 | ✓ | |
| 048.0 | | 0834 | | | | | | | | | |
| DPT0105-010.0 | | 0923 | | | | | | | | | |
| -014.0 | | 0933 | | | | | | | | | |
| -018.0 | | 0948 | | | | | | | | | |
| -023.0 | | 1000 | | | | | | | | | |
| -028.0 | | 1016 | | | | | | | | | |
| -033.0 | | 1030 | | | | | | | | | |
| -038.0 | | 1050 | | | | | | | | | |
| -043.0 | | 1116 | | | | | | | | | |
| -048.0 | | 1135 | | | | | | | | | |
| DPT0106-010.0 | | 1320 | | | | | | | | | |
| -014.0 | | 1329 | | | | | | | | | |
| -018.0 | | 1341 | | | | | | | | | |
| -023.0 | | 1407 | | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/17/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services


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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #**

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geo Synte | CRTE KSC |
| SAMPLERS | CONTACT PERSON: Jan Banks |
| | BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRTE DPTE106-028.0 2010 | 0617 | 1603 | | ✓ | 6/17/10 | 1750 | | W | 2 | ✓ | |
| -033.0 | | 1617 | | | | | | | | | |
| -038.0 | | 1648 | | | | | | | | | |
| -043.0 | | 1705 | | | | | | | | | |
| -048.0 | | 1725 | | | | | | | | | |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time: 6/17/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA CHRE

SAMPLERS

CONTACT PERSON: JAN Barfus

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE-DDT0107-010.0-2010 | 0618 | 0852 | | | 4/18/10 | 0930 | | W | 2 | ✓ | |
| -018.0 | | 0904 | | | | | | | | | |
| -028.0 | | 0919 | | | | ↓ | | | | | |
| -033.0 | | 0934 | | | | 1100 | | | | | |
| -038.0 | | 1007 | | | | | | | | | |
| -043.0 | | 1022 | | | | | | | | | |
| -048.0 | | 1041 | | | | ↓ | | | | | |
| DFT0108-010.0 | | 1133 | | | | 1213 | | | | | |
| -018.0 | | 1144 | | | | | | | | | |
| -028.0 | | 1156 | | | | | | | | | |
| -033.0 | | 1210 | | | | ↓ | | | | | |
| -038.0 | | 1227 | | | | 1306 | | | | | |
| -043.0 | | 1244 | | | | ↓ | | | | | |
| -048.0 | | 1334 | | | | 1405 | | | | | |
| -058.0 | ↓ | 1354 | | | ↓ | ↓ | | ↓ | ↓ | ↓ | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 4/19/1405 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KBI

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE ; KSC

SAMPLERS:

CONTACT PERSON: Jan Barnes

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DP10109-010.0 2010 | 6/2 | 0718 | | ✓ | 6/21/10 | 1800 | | W | ✓ | ✓ | |
| 18 | | 0733 | | | | | | | | | |
| 28 | | 0747 | | | | | | | | | |
| 33 | | 0802 | | | | | | | | | |
| 38 | | 0823 | | | | | | | | | |
| 43 | | 0844 | | | | | | | | | |
| 48 | | 0905 | | | | | | | | | |
| DPT0110-033.0 | | 1014 | | | | | | | | | |
| 38 | | 1030 | | | | | | | | | |
| 43 | | 1050 | | | | | | | | | |
| 48 | | 1107 | | | | | | | | | |
| DPT0111-010.0 | | 1150 | | | | | | | | | |
| 18 | | 1200 | | | | | | | | | |
| 28 | | 1213 | | | | | | | | | |
| 33 | | 1227 | | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 6/21/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB1

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CCAFB, KSC

SAMPLERS:

CONTACT PERSON: Jan Burks

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0111-038.0 2010 | 0610 | 1321 | | ✓ | 6/21/10 | 1800 | | W | 2 | 1 | |
| -043 | | 1351 | | | | | | | | | |
| -048 | | 1416 | | | | | | | | | |
| -058 | | 1448 | | | | | | | | | |
| DPT0112-010 | | 1547 | | | | | | | | | |
| 18 | | 1556 | | | | | | | | | |
| 28 | | 1610 | | | | | | | | | |
| 33 | | 1627 | | | | | | | 1 1/2 | | * one bottle about half mud |
| 38 | | 1656 | | | | | | | | | |
| 43 | | 1715 | | | | | | | | | |
| 48 | | 1731 | | | | | | | | | |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time 6/21/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB1

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CRHE

SAMPLERS:

CONTACT PERSON: Jan Bartus

BATCH # (Lab Use Only):

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE | | | | | | | | | | | |
| DPT013-010.0-20100622 | 6/22/10 | 0813 | | ✓ | 6/22/10 | 1800 | | W | 2 | ✓ | |
| 018.0 | | 0823 | | | | | | | | | |
| 028.0 | | 0834 | | | | | | | | | |
| 033.0 | | 0850 | | | | | | | | | |
| 038.0 | | 0924 | | | | | | | | | |
| 043.0 | | 0945 | | | | | | | | | |
| 048.0 | | 1016 | | | | | | | | | |
| DPT014-010.0 | | 1055 ~~1105~~ | | | | | | | | | |
| 018.0 | | 1105 1117 | | | | | | | | | |
| 028.0 | | 1117 1122 | | | | | | | | | |
| 033.0 | | 1122 ~~1205~~ | | | | | | | | | |
| 038.0 | | 1205 ~~1220~~ | | | | | | | | | |
| 043.0 | | 1220 ~~1337~~ | | | | | | | | | |
| 048.0 | | 1337 ~~1405~~ | | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/22/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** MB1

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CRHE CHRE

SAMPLERS:

CONTACT PERSON: Jan Barkus

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE | | | | | | | | | | | |
| DPT0115-010.0-20100622 | | 1425 | | ✓ | 6/22/10 | 1800 | | W | 2 | ✓ | |
| 018.0 | | 1438 | | | | | | | | | |
| ~~023.0~~ | | ~~1447~~ | | | | | | | | | |
| 028.0 | | ~~1506~~ 1447 | | | | | | | | | |
| 033.0 | | ~~1534~~ 1506 | | | | | | | | | |
| 038.0 | 6/23/10 | ~~1552~~ 1534 | | | | | | | | | |
| 043.0 | | 1552 | | | | | | | | | |
| 048.0 | | 1607 | | ↓ | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/24/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
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***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

August 13, 2010

Jill Johnson
GeoSyntec Consultants
9511 Holsberry Lane, Suite A
Pensacola, FL 32534

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 10-169**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from August 2 to 12, 2010. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

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# PROJECT NARRATIVE

## Project Scope

From August 2 to 12, 2010, a total of 180 water samples were analyzed for GeoSyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB3: FDOH NELAP Certification Number E82816

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0

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ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

---

# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. Sample ID CRHE-DPT0117-048.0-20100802 reported vinyl chloride <1.0 changed to 4.7ug/L.

3. Sample IDCRHE-DPT0126-018.0-20100805 reported c-1, 2-dichloroethene <1.0 changed to 2.1ug/L.

4. Sample ID CRHE-IDW178747-20100806 has an "L" qualifier for c-1, 2-dichloroethene indicating the concentration exceeded Calibration range.

5. Sample ID CRHE-DPT0135-038.0-20100810 has an "L" qualifier for vinyl chloride indicating the Concentration exceeded Calibration range.

6. Changes for sample ID CRHE-DPT0134-043.0-20100810 reported: vinyl chloride 790 changed to 200ug/L.

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t-1,2-dichloroethene 38 I changed to 43 I.
c-1,2-dichloroethene 2800 changed to 1500ug/L.
trichloroethene 50 changed to 1500ug/L.

7. Sample ID CRHE-DPT0136-043.0-20100810 reported c-1, 2-dichloroethene 1.8 changed to <1.0ug/L.

8. Sample ID CRHE-DPT0136-043.0-20100810 should be CRHE-DPT0136-048.0-20100810.

9. As per NASA Client request for diluted samples between the lab RL and MDL are reported with FDEP Data Qualifier “I” some results were changed from the field Report to the Final Report to reflect this requirement.

10. Because the presence of high level freon compounds and to prevent damage to the analytical instrument, several samples were diluted without any target compounds being identified:

    CRHE-DPT116-018.0-20100802
    CRHE-DPT116-028.0-20100802
    CRHE-DPT116-033.0-20100802
    CRHE-DPT117-038.0-20100802

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-169 |
| **On-site Dates**: 8/2/10-8/6/10, 8/9/10-8/12/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| VSTD 20 | 08/02/10 | 103 | 114 | 105 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 08/02/10 | 108 | 119 | 101 | 98 | Pass | Pass | Pass | Pass |
| RSTD 20 | 08/02/10 | 96 | 88 | 113 | 103 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0116-010.0 | 08/02/10 | 108 | 95 | 95 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0116-018.0 1:100 | 08/02/10 | 103 | 92 | 98 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0116-028.0 1:100 | 08/02/10 | 104 | 97 | 100 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0116-033.0 1:50 | 08/02/10 | 112 | 98 | 102 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0116-038.0 | 08/02/10 | 100 | 99 | 101 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0116-043.0 | 08/02/10 | 113 | 98 | 102 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0116-048.0 | 08/02/10 | 103 | 84 | 95 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0117-018.0 | 08/02/10 | 106 | 97 | 101 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0117-010.0 | 08/02/10 | 112 | 111 | 105 | 100 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/02/10 | 101 | 95 | 106 | 101 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/03/10 | 105 | 125 | 102 | 99 | Pass | Pass | Pass | Pass |
| BLANK | 08/03/10 | 113 | 124 | 102 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0117-028.0 | 08/03/10 | 108 | 120 | 102 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0117-033.0 | 08/03/10 | 87 | 103 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0117-038.0 1:20 | 08/03/10 | 111 | 129 | 103 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0117-043.0 | 08/03/10 | 112 | 128 | 103 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0117-048.0 | 08/03/10 | 112 | 132 | 103 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0118-010.0 | 08/03/10 | 114 | 133 | 103 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0118-018.0 | 08/03/10 | 114 | 133 | 103 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0118-028.0 | 08/03/10 | 116 | 140 | 102 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0118-033.0 | 08/03/10 | 68 | 81 | 97 | 99 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0118-038.0 1:5 | 08/03/10 | 113 | 141 | 102 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0118-043.0 | 08/03/10 | 119 | 146 | 101 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0118-048.0 | 08/03/10 | 120 | 144 | 101 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-010.0 | 08/03/10 | 116 | 140 | 102 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-014.0 | 08/03/10 | 116 | 134 | 104 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-018.0 | 08/03/10 | 119 | 146 | 99 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-023.0 | 08/03/10 | 118 | 149 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-028.0 | 08/03/10 | 120 | 150 | 100 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-033.0 | 08/03/10 | 69 | 94 | 93 | 103 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0119-038.0 | 08/03/10 | 120 | 148 | 101 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-043.0 | 08/03/10 | 120 | 150 | 100 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0119-048.0 | 08/03/10 | 120 | 153 | 100 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0120-010.0 | 08/03/10 | 119 | 147 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0120-014.0 | 08/03/10 | 120 | 146 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0120-018.0 1:10 | 08/03/10 | 72 | 96 | 93 | 100 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0120-023.0 1:100 | 08/03/10 | 120 | 152 | 99 | 95 | Pass | > UCL | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-169 |
| **On-site Dates**: 8/2/10-8/6/10, 8/9/10-8/12/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0120-028.0 1:2 | 08/03/10 | 120 | 157 | 99 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0120-033.0 | 08/03/10 | 122 | 151 | 98 | 96 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0120-038.0 | 08/03/10 | 119 | 148 | 99 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0120-043.0 | 08/03/10 | 122 | 158 | 99 | 95 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0120-048.0 | 08/03/10 | 121 | 154 | 101 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-010.0 | 08/03/10 | 122 | 150 | 99 | 96 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0121-014.0 | 08/03/10 | 120 | 151 | 101 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-018.0 | 08/03/10 | 118 | 153 | 101 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0120-048.0 MSD | 08/03/10 | 111 | 151 | 104 | 98 | Pass | > UCL | Pass | Pass |
| LCS | 08/03/10 | 112 | 156 | 103 | 96 | Pass | > UCL | Pass | Pass |
| CCS 20 | 08/03/10 | 107 | 151 | 104 | 95 | Pass | > UCL | Pass | Pass |
| VSTD 20 | 08/04/10 | 97 | 113 | 104 | 98 | Pass | Pass | Pass | Pass |
| LCS | 08/04/10 | 103 | 130 | 104 | 97 | Pass | Pass | Pass | Pass |
| BLANK | 08/04/10 | 110 | 120 | 104 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0121-023.0 | 08/04/10 | 116 | 132 | 101 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0119-033.0 1:5 | 08/04/10 | 117 | 140 | 101 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-028.0 | 08/04/10 | 113 | 135 | 102 | 101 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-033.0 | 08/04/10 | 112 | 136 | 103 | 100 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-038.0 1:100 | 08/04/10 | 114 | 139 | 102 | 103 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-043.0 1:50 | 08/04/10 | 115 | 145 | 100 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-048.0 | 08/04/10 | 116 | 148 | 101 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-010.0 | 08/04/10 | 117 | 144 | 101 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-014.0 | 08/04/10 | 118 | 148 | 100 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-018.0 | 08/04/10 | 119 | 153 | 100 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-023.0 | 08/04/10 | 116 | 148 | 101 | 100 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-028.0 | 08/04/10 | 121 | 152 | 98 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-033.0 | 08/04/10 | 118 | 150 | 102 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-038.0 1:100 | 08/04/10 | 119 | 156 | 100 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-043.0 1:100 | 08/04/10 | 118 | 154 | 99 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-048.0 | 08/04/10 | 117 | 149 | 101 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-010.0 MS | 08/04/10 | 110 | 150 | 103 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0122-010.0 MSD | 08/04/10 | 107 | 145 | 104 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-023.0 MS | 08/04/10 | 108 | 148 | 103 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0121-023.0 MSD | 08/04/10 | 109 | 149 | 104 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-010.0 | 08/04/10 | 116 | 146 | 103 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-014.0 | 08/04/10 | 114 | 149 | 101 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-018.0 | 08/04/10 | 116 | 145 | 102 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-023.0 | 08/04/10 | 108 | 138 | 101 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-028.0 | 08/04/10 | 116 | 149 | 100 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-033.0 | 08/04/10 | 119 | 151 | 100 | 97 | Pass | > UCL | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-169 |
| **On-site Dates**: 8/2/10-8/6/10, 8/9/10-8/12/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0123-038.0 | 08/04/10 | 118 | 149 | 100 | 96 | Pass | > UCL | Pass | Pass |
| CCS 20 | 08/04/10 | 113 | 160 | 102 | 97 | Pass | > UCL | Pass | Pass |
| VSTD 20 | 08/05/10 | 105 | 131 | 105 | 97 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/05/10 | 108 | 138 | 103 | 96 | Pass | > UCL | Pass | Pass |
| BLANK | 08/05/10 | 114 | 130 | 104 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0123-038.0 MS | 08/05/10 | 104 | 134 | 104 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-038.0 MSD | 08/05/10 | 106 | 137 | 103 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-043.0 | 08/05/10 | 81 | 103 | 98 | 102 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0123-048.0 | 08/05/10 | 112 | 134 | 103 | 99 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0123-043.0 | 08/05/10 | 109 | 129 | 105 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0124-010.0 | 08/05/10 | 116 | 141 | 102 | 100 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-014.0 | 08/05/10 | 115 | 143 | 102 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-018.0 1:5 | 08/05/10 | 112 | 140 | 102 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-023.0 1:50 | 08/05/10 | 114 | 142 | 101 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-028.0 | 08/05/10 | 110 | 134 | 105 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-033.0 | 08/05/10 | 114 | 148 | 102 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-038.0 1:5 | 08/05/10 | 117 | 148 | 102 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-043.0 | 08/05/10 | 119 | 147 | 103 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-048.0 | 08/05/10 | 115 | 149 | 101 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0124-018.0 1:100 | 08/05/10 | 117 | 149 | 100 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0125-010.0 | 08/05/10 | 109 | 133 | 102 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0125-018.0 | 08/05/10 | 119 | 151 | 100 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0125-028.0 | 08/05/10 | 118 | 145 | 99 | 101 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0125-033.0 | 08/05/10 | 116 | 150 | 102 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0125-038.0 | 08/05/10 | 118 | 146 | 99 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0125-043.0 1:20 | 08/05/10 | 117 | 144 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0125-048.0 | 08/05/10 | 117 | 149 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-010.0 | 08/05/10 | 78 | 98 | 97 | 99 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0126-018.0 | 08/05/10 | 117 | 150 | 101 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-028.0 | 08/05/10 | 119 | 145 | 101 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-033.0 | 08/05/10 | 121 | 150 | 100 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-038.0 | 08/05/10 | 116 | 148 | 100 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-043.0 | 08/05/10 | 118 | 150 | 100 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-010.0 MS | 08/05/10 | 114 | 156 | 101 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-010.0 MSD | 08/05/10 | 114 | 156 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CCS 20 | 08/05/10 | 114 | 158 | 100 | 93 | Pass | > UCL | Pass | Pass |
| VSTD 20 | 08/06/10 | 104 | 131 | 102 | 99 | Pass | Pass | Pass | Pass |
| LCS | 08/06/10 | 108 | 136 | 100 | 98 | Pass | > UCL | Pass | Pass |
| BLANK | 08/06/10 | 114 | 130 | 102 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0126-048.0 | 08/06/10 | 113 | 129 | 100 | 98 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-169 |
| **On-site Dates**: 8/2/10-8/6/10, 8/9/10-8/12/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0126-048.0 MS | 08/06/10 | 108 | 137 | 103 | 100 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0126-048.0 MSD | 08/06/10 | 109 | 143 | 101 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0127-033.0 | 08/06/10 | 113 | 138 | 102 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0127-038.0 | 08/06/10 | 116 | 138 | 100 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0127-043.0 1:100 | 08/06/10 | 96 | 113 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0127-048.0 1:5 | 08/06/10 | 111 | 142 | 101 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0128-033.0 | 08/06/10 | 116 | 142 | 100 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0128-038.0 | 08/06/10 | 117 | 142 | 101 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0128-043.0 | 08/06/10 | 118 | 144 | 101 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0128-048.0 | 08/06/10 | 115 | 146 | 100 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0129-010.0 | 08/06/10 | 119 | 146 | 100 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0129-018.0 | 08/06/10 | 114 | 138 | 101 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0129-028.0 | 08/06/10 | 118 | 147 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0129-033.0 | 08/06/10 | 118 | 144 | 101 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0129-038.0 | 08/06/10 | 102 | 122 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0129-043.0 1:100 | 08/06/10 | 117 | 142 | 100 | 100 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0129-048.0 1:10 | 08/06/10 | 114 | 140 | 100 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0130-033.0 | 08/06/10 | 117 | 143 | 99 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0130-038.0 | 08/06/10 | 64 | 81 | 93 | 95 | < LCL | Pass | Pass | Pass |
| CCS 20 | 08/06/10 | 112 | 154 | 100 | 95 | Pass | > UCL | Pass | Pass |
| VSTD 20 | 08/09/10 | 108 | 124 | 103 | 98 | Pass | Pass | Pass | Pass |
| BLANK | 08/09/10 | 112 | 128 | 103 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0130-043.0 | 08/09/10 | 111 | 128 | 103 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0130-048.0 | 08/09/10 | 111 | 127 | 103 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0130-038.0 1:20 | 08/09/10 | 114 | 138 | 101 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0130-043.0 1:10 | 08/09/10 | 113 | 134 | 103 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0131-033.0 1:20 | 08/09/10 | 112 | 137 | 102 | 98 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0131-038.0 1:50 | 08/09/10 | 115 | 134 | 102 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0131-043.0 1:50 | 08/09/10 | 114 | 138 | 102 | 95 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0131-048.0 1:100 | 08/09/10 | 72 | 84 | 97 | 98 | < LCL | Pass | Pass | Pass |
| CRHE-IDW178747-20100806 | 08/09/10 | 116 | 146 | 101 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0132-010.0 | 08/09/10 | 85 | 103 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0132-018.0 | 08/09/10 | 120 | 150 | 101 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0132-024.0 | 08/09/10 | 121 | 148 | 101 | 96 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0132-033.0 | 08/09/10 | 116 | 150 | 102 | 93 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0132-038.0 | 08/09/10 | 118 | 147 | 100 | 97 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0132-043.0 | 08/09/10 | 118 | 146 | 101 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0132-048.0 | 08/09/10 | 120 | 152 | 99 | 94 | Pass | > UCL | Pass | Pass |
| LCS | 08/09/10 | 112 | 147 | 101 | 95 | Pass | > UCL | Pass | Pass |
| VSTD 1 | 08/09/10 | 116 | 119 | 102 | 98 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-169 |
| **On-site Dates**: 8/2/10-8/6/10, 8/9/10-8/12/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| VSTD 5 | 08/09/10 | 109 | 120 | 99 | 95 | Pass | Pass | Pass | Pass |
| VSTD 10 | 08/09/10 | 80 | 110 | 98 | 98 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0133-010.0 | 08/09/10 | 109 | 114 | 101 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-014.0 | 08/09/10 | 106 | 110 | 100 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-018.0 1:20 | 08/09/10 | 116 | 131 | 98 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-023.0 1:500 | 08/09/10 | 114 | 131 | 98 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-028.0 1:200 | 08/09/10 | 114 | 132 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-033.0 1:20 | 08/09/10 | 114 | 131 | 97 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-038.0 1:50 | 08/09/10 | 110 | 129 | 98 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-043.0 | 08/09/10 | 110 | 126 | 98 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0133-048.0 | 08/09/10 | 108 | 124 | 99 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-010.0 | 08/09/10 | 108 | 118 | 100 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-014.0 | 08/09/10 | 112 | 120 | 100 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-018.0 | 08/09/10 | 109 | 117 | 100 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-023.0 | 08/09/10 | 104 | 116 | 101 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0132-048.0 MS | 08/09/10 | 100 | 119 | 101 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0132-048.0 MSD | 08/09/10 | 109 | 127 | 104 | 99 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/09/10 | 100 | 120 | 101 | 99 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/10/10 | 91 | 100 | 101 | 103 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/10/10 | 99 | 110 | 104 | 101 | Pass | Pass | Pass | Pass |
| BLANK | 08/10/10 | 104 | 108 | 104 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-028.0 | 08/10/10 | 106 | 112 | 102 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-033.0 1:20 | 08/10/10 | 107 | 115 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-038.0 1:5000 | 08/10/10 | 105 | 114 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-043.0 1:50 | 08/10/10 | 110 | 119 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0134-048.0 | 08/10/10 | 107 | 115 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-010.0 | 08/10/10 | 108 | 116 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-018.0 | 08/10/10 | 110 | 115 | 101 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-028.0 | 08/10/10 | 103 | 113 | 102 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-033.0 | 08/10/10 | 106 | 112 | 100 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-038.0 | 08/10/10 | 107 | 114 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-043.0 | 08/10/10 | 105 | 116 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-048.0 | 08/10/10 | 109 | 116 | 101 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0135-038.0 1:20 | 08/10/10 | 109 | 120 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0136-033.0 | 08/10/10 | 108 | 116 | 102 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0136-038.0 | 08/10/10 | 110 | 119 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0136-043.0 | 08/10/10 | 101 | 111 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0136-048.0 1:20 | 08/10/10 | 109 | 120 | 101 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0136-063.0 | 08/10/10 | 107 | 125 | 100 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0137-033.0 | 08/10/10 | 100 | 110 | 98 | 98 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-169 |
| **On-site Dates**: 8/2/10-8/6/10, 8/9/10-8/12/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0137-038.0 | 08/10/10 | 108 | 120 | 100 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0137-043.0 | 08/10/10 | 112 | 124 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0137-048.0 | 08/10/10 | 110 | 122 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0131-063.0 | 08/10/10 | 112 | 124 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-IDW178748-20100810 1:5 | 08/10/10 | 111 | 124 | 98 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0137-033.0 MS | 08/10/10 | 103 | 126 | 100 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0137-033.0 MSD | 08/10/10 | 103 | 128 | 99 | 95 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/10/10 | 105 | 129 | 100 | 96 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/11/10 | 92 | 102 | 101 | 104 | Pass | Pass | Pass | Pass |
| LCS | 08/11/10 | 96 | 106 | 103 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0137-043.0 MS | 08/11/10 | 103 | 117 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0137-043.0 MSD | 08/11/10 | 103 | 120 | 99 | 99 | Pass | Pass | Pass | Pass |
| BLANK | 08/11/10 | 108 | 117 | 100 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0138-010.0 | 08/11/10 | 109 | 116 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0138-018.0 | 08/11/10 | 109 | 120 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0138-028.0 | 08/11/10 | 109 | 117 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0138-033.0 | 08/11/10 | 108 | 116 | 100 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0138-038.0 | 08/11/10 | 113 | 127 | 97 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0138-043.0 | 08/11/10 | 111 | 122 | 98 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0138-048.0 | 08/11/10 | 110 | 120 | 99 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-010.0 | 08/11/10 | 98 | 108 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-018.0 | 08/11/10 | 112 | 121 | 98 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-033.0 | 08/11/10 | 86 | 94 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-038.0 1:10 | 08/11/10 | 113 | 125 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-043.0 1:100 | 08/11/10 | 115 | 128 | 97 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-048.0 1:200 | 08/11/10 | 116 | 128 | 97 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-028.0 | 08/11/10 | 114 | 124 | 96 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-010.0 | 08/11/10 | 97 | 108 | 94 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-014.0 | 08/11/10 | 113 | 125 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-018.0 | 08/11/10 | 113 | 123 | 96 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-023.0 | 08/11/10 | 112 | 123 | 95 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-028.0 | 08/11/10 | 115 | 126 | 95 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-033.0 | 08/11/10 | 118 | 123 | 95 | 95 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/11/10 | 100 | 110 | 97 | 91 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/12/10 | 109 | 120 | 98 | 95 | Pass | Pass | Pass | Pass |
| BLANK | 08/12/10 | 109 | 102 | 101 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-038.0 | 08/12/10 | 116 | 118 | 99 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-043.0 | 08/12/10 | 113 | 117 | 99 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-048.0 | 08/12/10 | 113 | 120 | 99 | 95 | Pass | Pass | Pass | Pass |
| CRHE-IDW183401-20100811 1:5 | 08/12/10 | 104 | 99 | 103 | 92 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
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| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0140-038.0 MS | 08/12/10 | 99 | 113 | 99 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0140-038.0 MSD | 08/12/10 | 98 | 111 | 99 | 95 | Pass | Pass | Pass | Pass |
| LCS | 08/12/10 | 107 | 119 | 100 | 94 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/12/10 | 103 | 107 | 101 | 95 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. 1,2-DCAD4 surrogate recovery drifted high during the day but would return to acceptable criteria for initial and daily CCS. Results were not affected as LCS and MS/MSD recoveries were in control even when 12DCAD4 recoveries were high. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-169 |
| **Onsite Dates:** 8/2/10-8/12/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0121-023.0 **Date of Analysis:** 8/4/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 97 | 98 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 107 | 106 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 111 | 111 | 0 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 127 | 129 | 1 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 105 | 106 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 106 | 107 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0122-010.0 **Date of Analysis:** 8/4/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 96 | 97 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 102 | 105 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 113 | 111 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 122 | 123 | 1 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 104 | 104 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 102 | 108 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0123-038.0 **Date of Analysis:** 8/4/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 98 | 95 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 107 | 105 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 111 | 109 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 125 | 121 | 3 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 101 | 99 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 103 | 99 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0126-010.0 **Date of Analysis:** 8/5/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 85 | 90 | 6 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 91 | 92 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 93 | 95 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 118 | 126 | 6 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 96 | 102 | 6 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 95 | 100 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-169 |
| **Onsite Dates:** 8/2/10-8/12/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT0126-048.0 **Date of Analysis:** 8/6/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 98 | 91 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 109 | 102 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 111 | 103 | 8 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 124 | 121 | 3 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 104 | 99 | 5 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 103 | 98 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0132-048.0 **Date of Analysis:** 8/9/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 95 | 85 | 10 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 103 | 87 | 17 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 110 | 110 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 106 | 104 | 2 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 103 | 81 | 23 | Pass | Pass | > RPDL |
| Tetrachloroethene | 50 | 132 | 20 | 105 | 79 | 28 | Pass | Pass | > RPDL |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0137-033.0 **Date of Analysis:** 8/10/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 100 | 92 | 8 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 103 | 102 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 109 | 104 | 5 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 114 | 111 | 2 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 106 | 106 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 104 | 107 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0137-043.0 **Date of Analysis:** 8/10/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 102 | 102 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 110 | 110 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 115 | 118 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 115 | 115 | 1 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 106 | 106 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 107 | 108 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-169 |
| **Onsite Dates:** 8/2/10-8/12/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT0140-038.0 **Date of Analysis:** 8/12/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 89 | 86 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 98 | 95 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 98 | 93 | 6 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 108 | 98 | 9 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 103 | 101 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 105 | 103 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-169 |
| **Onsite Dates:** 8/2/10-8/12/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 — **Date of Analysis:** 8/2/2010
LCS 2 — 8/3/2010
LCS 3 — 8/4/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 52 | to | 150 | 87 | 103 | 114 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 58 | to | 132 | 89 | 115 | 124 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 54 | to | 140 | 94 | 123 | 125 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | to | 126 | 107 | 132 | 132 | Pass | > UCL | > UCL |
| Trichloroethene | 68 | to | 119 | 98 | 110 | 110 | Pass | Pass | Pass |
| Tetrachloroethene | 58 | to | 127 | 109 | 105 | 114 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 — **Date of Analysis:** 8/5/2010
LCS 5 — 8/6/2010
LCS 6 — 8/9/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | LCS#6 | LCS#4 | LCS#5 | LCS#6 |
| Vinyl Chloride | 52 | to | 150 | 103 | 104 | 89 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 58 | to | 132 | 113 | 117 | 96 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 54 | to | 140 | 114 | 117 | 99 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | to | 126 | 126 | 129 | 121 | Pass | > UCL | Pass |
| Trichloroethene | 68 | to | 119 | 103 | 107 | 102 | Pass | Pass | Pass |
| Tetrachloroethene | 58 | to | 127 | 103 | 104 | 103 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 7 — **Date of Analysis:** 8/10/2010
LCS 8 — 8/11/2010
LCS 9 — 8/12/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#7 | LCS#8 | LCS#9 | LCS#7 | LCS#8 | LCS#9 |
| Vinyl Chloride | 52 | to | 150 | 103 | 103 | 93 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 58 | to | 132 | 109 | 113 | 102 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 54 | to | 140 | 113 | 113 | 107 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | to | 126 | 109 | 110 | 111 | Pass | Pass | Pass |
| Trichloroethene | 68 | to | 119 | 102 | 103 | 101 | Pass | Pass | Pass |
| Tetrachloroethene | 58 | to | 127 | 110 | 111 | 109 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

Project Number : 10-169

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| SampleI ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0116-010.0-20100802 | 8/2/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0116-018.0-20100802 | 8/2/10 | Water | 100 | <21 I | <100 | <100 | <28 I | <26 I | <18 I |
| CRHE-DPT0116-028.0-20100802 | 8/2/10 | Water | 100 | <21 I | <100 | <100 | <28 I | <26 I | <18 I |
| CRHE-DPT0116-033.0-20100802 | 8/2/10 | Water | 50 | <11 I | <50 | <50 | <14 I | <13 I | <9 I |
| CRHE-DPT0116-038.0-20100802 | 8/2/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0116-043.0-20100802 | 8/2/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0116-048.0-20100802 | 8/2/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0117-010.0-20100802 | 8/2/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0117-018.0-20100802 | 8/2/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0117-028.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0117-033.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0117-038.0-20100802 | 8/3/10 | Water | 20 | <6.4 I | <20 | <20 | <8.0 I | <6.6 I | <11 I |
| CRHE-DPT0117-043.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0117-048.0-20100802 | 8/3/10 | Water | 1 | **4.7** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0118-010.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0118-018.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | **1.0** | < 1.0 | < 1.0 |
| CRHE-DPT0118-028.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0118-033.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0118-038.0-20100802 | 8/3/10 | Water | 5 | <1.6 I | < 5.0 | < 5.0 | <2.0 I | <1.7 I | <2.6 I |
| CRHE-DPT0118-043.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0118-048.0-20100802 | 8/3/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0119-010.0-20100803 | 8/3/10 | Water | 1 | **1.5** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0119-014.0-20100803 | 8/3/10 | Water | 1 | **3.4** | < 1.0 | < 1.0 | **1.4** | < 1.0 | < 1.0 |
| CRHE-DPT0119-018.0-20100803 | 8/3/10 | Water | 1 | **4.9** | < 1.0 | < 1.0 | **1.2** | < 1.0 | < 1.0 |
| CRHE-DPT0119-023.0-20100803 | 8/3/10 | Water | 1 | **12.6** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0119-028.0-20100803 | 8/3/10 | Water | 1 | **37.1** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0119-033.0-20100803 | 8/3/10 | Water | 1,5 | **180** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0119-038.0-20100803 | 8/3/10 | Water | 1 | **8.7** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0119-043.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-169

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0119-048.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0120-010.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0120-014.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0120-018.0-20100803 | 8/3/10 | Water | 10 | **400** | <10 | <10 | **170** | <3.3 I | <5.2 I |
| CRHE-DPT0120-023.0-20100803 | 8/3/10 | Water | 100 | **4100** | <100 | **230** | **9300** | <33 I | <52 I |
| CRHE-DPT0120-028.0-20100803 | 8/3/10 | Water | 2 | **190** | <2.0 | <2.0 | **20** | < 1.0 I | <1.1 I |
| CRHE-DPT0120-033.0-20100803 | 8/3/10 | Water | 1 | **1.5** | < 1.0 | < 1.0 | **3.9** | < 1.0 | < 1.0 |
| CRHE-DPT0120-038.0-20100803 | 8/3/10 | Water | 1 | **1.8** | < 1.0 | < 1.0 | **12.1** | < 1.0 | < 1.0 |
| CRHE-DPT0120-043.0-20100803 | 8/3/10 | Water | 1 | **3.0** | < 1.0 | < 1.0 | **14.0** | < 1.0 | < 1.0 |
| CRHE-DPT0120-048.0-20100803 | 8/3/10 | Water | 1 | **5.6** | < 1.0 | < 1.0 | **29.0** | < 1.0 | < 1.0 |
| CRHE-DPT0121-010.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0121-014.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0121-018.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0121-023.0-20100803 | 8/3/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0121-028.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0121-033.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0121-038.0-20100804 | 8/4/10 | Water | 100 | **4900** | <100 | <100 | **6400** | <33 I | <52 I |
| CRHE-DPT0121-043.0-20100804 | 8/4/10 | Water | 50 | **1200** | <50 | **66** | **4900** | **1700** | <26 I |
| CRHE-DPT0121-048.0-20100804 | 8/4/10 | Water | 1 | **28.0** | < 1.0 | < 1.0 | **72.6** | **8.3** | < 1.0 |
| CRHE-DPT0122-010.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | **1.2** | < 1.0 | < 1.0 |
| CRHE-DPT0122-014.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0122-018.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0122-023.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0122-028.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0122-033.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0122-038.0-20100804 | 8/4/10 | Water | 100 | **2900** | <100 | <100 | **6400** | **120** | <52 I |
| CRHE-DPT0122-043.0-20100804 | 8/4/10 | Water | 100 | **1600** | <100 | **110** | **6800** | **2700** | <52 I |
| CRHE-DPT0122-048.0-20100804 | 8/4/10 | Water | 1 | **2.6** | < 1.0 | < 1.0 | **14.5** | **3.1** | < 1.0 |
| CRHE-DPT0123-010.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-169

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0123-014.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0123-018.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0123-023.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0123-028.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0123-033.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0123-038.0-20100804 | 8/4/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0123-043.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0123-048.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0124-010.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0124-014.0-20100805 | 8/5/10 | Water | 1 | **37.8** | < 1.0 | **1.9** | **87.2** | < 1.0 | < 1.0 |
| CRHE-DPT0124-018.0-20100805 | 8/5/10 | Water | 1,100 | **560** | < 1.0 | **6.6** | **3600** | < 1.0 | < 1.0 |
| CRHE-DPT0124-023.0-20100805 | 8/5/10 | Water | 50 | **3000** | <50 | <50 | **4500** | <17 I | <26 I |
| CRHE-DPT0124-028.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | **2.9** | < 1.0 | < 1.0 |
| CRHE-DPT0124-033.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | **1.1** | < 1.0 | < 1.0 |
| CRHE-DPT0124-038.0-20100805 | 8/5/10 | Water | 5 | **290** | <5.0 | **8.5** | **360** | <1.7 I | <2.6 I |
| CRHE-DPT0124-043.0-20100805 | 8/5/10 | Water | 1 | **1.2** | < 1.0 | < 1.0 | **2.2** | < 1.0 | < 1.0 |
| CRHE-DPT0124-048.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0125-010.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0125-018.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0125-028.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0125-033.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0125-038.0-20100805 | 8/5/10 | Water | 1 | **2.1** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0125-043.0-20100805 | 8/5/10 | Water | 20 | **1700** | <20 | **24** | **1300** | <6.6 I | <11 I |
| CRHE-DPT0125-048.0-20100805 | 8/5/10 | Water | 1 | **35.8** | < 1.0 | **1.7** | **7.0** | < 1.0 | < 1.0 |
| CRHE-DPT0126-010.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0126-018.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | **2.1** | < 1.0 | < 1.0 |
| CRHE-DPT0126-028.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0126-033.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0126-038.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0126-043.0-20100805 | 8/5/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0126-048.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0127-033.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0127-038.0-20100806 | 8/6/10 | Water | 1 | **1.7** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0127-043.0-20100806 | 8/6/10 | Water | 100 | **320** | <100 | **120** | **2700** | **2400** | <52 I |
| CRHE-DPT0127-048.0-20100806 | 8/6/10 | Water | 5 | **15** | <5.0 | **6.2** | **210** | **66** | <2.6 I |
| CRHE-DPT0128-033.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0128-038.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0128-043.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0128-048.0-20100806 | 8/6/10 | Water | 1 | **3.1** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0129-010.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0129-018.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0129-028.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0129-033.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0129-038.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0129-043.0-20100806 | 8/6/10 | Water | 100 | **3000** | <100 | **110** | **5900** | <33 I | <52 I |
| CRHE-DPT0129-048.0-20100806 | 8/6/10 | Water | 10 | **250** | <10 | **22** | **790** | **110** | <5.2 I |
| CRHE-DPT0130-033.0-20100806 | 8/6/10 | Water | 1 | <1.0 | < 1.0 | **1.4** | **1.4** | < 1.0 | < 1.0 |
| CRHE-DPT0130-038.0-20100806 | 8/6/10 | Water | 1,20 | **770** | < 1.0 | **10.5** | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0130-043.0-20100806 | 8/9/10 | Water | 1,10 | **170** | < 1.0 | **3.6** | **1.6** | < 1.0 | < 1.0 |
| CRHE-DPT0130-048.0-20100806 | 8/9/10 | Water | 1 | **3.6** | < 1.0 | < 1.0 | **1.2** | < 1.0 | < 1.0 |
| CRHE-DPT0131-033.0-20100809 | 8/9/10 | Water | 20 | **1600** | <20 | **65** | **940** | <6.6 I | <11 I |
| CRHE-DPT0131-038.0-20100809 | 8/9/10 | Water | 50 | **760** | <50 | **71** | **2200** | <17 I | <26 I |
| CRHE-DPT0131-043.0-20100809 | 8/9/10 | Water | 50 | **320** | <50 | **84** | **3000** | **220** | <26 I |
| CRHE-DPT0131-048.0-20100809 | 8/9/10 | Water | 100 | **370** | <100 | <100 | **2200** | **630** | <52 I |
| CRHE-DPT0132-010.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | **1.4** | < 1.0 | < 1.0 |
| CRHE-DPT0132-018.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0132-024.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0132-033.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

# KB LABS, INC.

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Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0132-038.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0132-043.0-20100809 | 8/9/10 | Water | 1 | **2.0** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0132-048.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0133-010.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | **1.6** |
| CRHE-DPT0133-014.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0133-018.0-20100809 | 8/9/10 | Water | 20 | **400** | <20 | **13 I** | **710** | <6.6 I | <11 I |
| CRHE-DPT0133-023.0-20100809 | 8/9/10 | Water | 500 | **1700** | <500 | **610** | **27000** | <170 I | <260 I |
| CRHE-DPT0133-028.0-20100809 | 8/9/10 | Water | 200 | **910** | <200 | **210** | **15000** | <66 I | <110 I |
| CRHE-DPT0133-033.0-20100809 | 8/9/10 | Water | 20 | **580** | <20 | **15 I** | **1100** | <6.6 I | <11 I |
| CRHE-DPT0133-038.0-20100809 | 8/9/10 | Water | 50 | **790** | <50 | **38 I** | **2800** | **50** | <26 I |
| CRHE-DPT0133-043.0-20100809 | 8/9/10 | Water | 1 | **4.0** | < 1.0 | < 1.0 | **12.9** | < 1.0 | < 1.0 |
| CRHE-DPT0133-048.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | **3.7** | < 1.0 | < 1.0 |
| CRHE-DPT0134-010.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0134-014.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0134-018.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0134-023.0-20100809 | 8/9/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0134-028.0-20100810 | 8/10/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0134-033.0-20100810 | 8/10/10 | Water | 20 | **200** | <20 | **73** | **500** | **94** | <11 I |
| CRHE-DPT0134-038.0-20100810 | 8/10/10 | Water | 5000 | **4200 I** | <5000 | <5000 | **39000** | **100000** | <2600 I |
| CRHE-DPT0134-043.0-20100810 | 8/10/10 | Water | 50 | **200** | <50 | **43 I** | **1500** | **1500** | <26 I |
| CRHE-DPT0134-048.0-20100810 | 8/10/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | **12.5** | **46.4** | < 1.0 |
| CRHE-DPT0135-010.0-20100810 | 8/10/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0135-018.0-20100810 | 8/10/10 | Water | 1 | **7.8** | < 1.0 | < 1.0 | **3.0** | < 1.0 | < 1.0 |
| CRHE-DPT0135-028.0-20100810 | 8/10/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0135-033.0-20100810 | 8/10/10 | Water | 1 | <1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0135-038.0-20100810 | 8/10/10 | Water | 1,20 | **2500 L** | < 1.0 | **73.6** | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0135-043.0-20100810 | 8/10/10 | Water | 1 | **72.4** | < 1.0 | **3.5** | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0135-048.0-20100810 | 8/10/10 | Water | 1 | **3.7** | < 1.0 | < 1.0 | **1.3** | < 1.0 | < 1.0 |
| CRHE-DPT0136-033.0-20100810 | 8/10/10 | Water | 1 | **1.7** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

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| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0136-038.0-20100810 | 8/10/10 | Water | 1 | **5.8** | < 1.0 | < 1.0 | **1.8** | < 1.0 | < 1.0 |
| CRHE-DPT0136-043.0-20100810 | 8/10/10 | Water | 1 | **2.1** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0136-048.0-20100810 | 8/10/10 | Water | 20 | **78** | <20 | **31** | **930** | **110** | <11 I |
| CRHE-DPT0136-063.0-20100810 | 8/10/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0137-033.0-20100810 | 8/10/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0137-038.0-20100810 | 8/10/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0137-043.0-20100810 | 8/10/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0137-048.0-20100810 | 8/10/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0131-063.0-20100810 | 8/10/10 | Water | 1 | **2.5** | < 1.0 | < 1.0 | **14.6** | **1.9** | < 1.0 |
| CRHE-DPT0138-010.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0138-018.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0138-028.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0138-033.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0138-038.0-20100811 | 8/11/10 | Water | 1 | **4.9** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0138-043.0-20100811 | 8/11/10 | Water | 1 | **41.8** | < 1.0 | < 1.0 | **2.4** | < 1.0 | < 1.0 |
| CRHE-DPT0138-048.0-20100811 | 8/11/10 | Water | 1 | **9.2** | < 1.0 | < 1.0 | **1.7** | < 1.0 | < 1.0 |
| CRHE-DPT0139-010.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0139-018.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0139-028.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0139-033.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0139-038.0-20100811 | 8/11/10 | Water | 10 | **850** | <10 | **34** | **600** | <3.3 I | <5.2 I |
| CRHE-DPT0139-043.0-20100811 | 8/11/10 | Water | 100 | **1700** | <100 | **190** | **7200** | **500** | <52 I |
| CRHE-DPT0139-048.0-20100811 | 8/11/10 | Water | 200 | **910** | <200 | **180 I** | **6100** | **3400** | <110 I |
| CRHE-DPT0140-010.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0140-014.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0140-018.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0140-023.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0140-028.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0140-033.0-20100811 | 8/11/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

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KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0140-038.0-20100811 | 8/12/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0140-043.0-20100811 | 8/12/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| CRHE-DPT0140-048.0-20100811 | 8/12/10 | Water | 1 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

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| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-IDW178747-20100806 | 8/9/10 | Water | 1 | **44** | < 1.0 | **1.2** | **140 L** | **6.3** | < 1.0 |
| CRHE-IDW178748-20100810 | 8/10/10 | Water | 5 | **23** | <5.0 | **3.3 I** | **200** | **10** | <2.6 I |
| CRHE-IDW183401-20100811 | 8/12/10 | Water | 5 | **7.5** | <5.0 | **1.9 I** | **100** | **66** | <2.6 I |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** 1603

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CHRE NASA KSC

SAMPLERS: GeoSyntec

CONTACT PERSON: Jan Burton / Joy McKinnon

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE | | | | | | | | | | | |
| DPT0116-010.0-20100702 | | 0915 | | ✓ | 8/2/10 | 0915 | | W | 2 | ✓ | |
| 016.0 | | 0930 | | | | 1040 | | | | | |
| 028.0 | | 0950 | | | | ↓ | | | | | |
| 033.0 | | 1010 | | | | | | | | | |
| 038.0 | | 1030 | | | | | | | | | |
| 043.0 | | 1655 | | | | 1125 | | | | | |
| 048.0 | 1115 | ~~1055~~ | | | | ↓ | | | | | |
| DPT0117-010.0 | | 1145 | | | | 1205 | | | | | |
| 018.0 | | 1158 | | | | ↓ | | | | | |
| 028.0 | | 1300 | | | | 1440 | | | | | |
| 033.0 | | 1320 | | | | ↓ | | | | | |
| 038.0 | | 1345 | | | | | | | | | |
| 043.0 | | 1408 | | | | | | | | | |
| 048.0 | | 1430 | | | | ↓ | | | | | |
| DPT0118-010.0 | | 1505 | | | | 1600 | | | | | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | 8/2/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** K 103

CLIENT NAME: GeosynTec

PROJECT NAME & ADDRESS: CHRE

SAMPLERS:

CONTACT PERSON: Jen Barfus

BATCH # (Lab Use Only):

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHR3 | | | | | | | | | | | |
| CHR3-018.0-20100802 | | 1520 | | | 8/2/10 | 1600 | | | | | |
| -028.0 | | 1537 | | | | ↓ | | | | | |
| 033.0 | | 1553 | | | | 1710 | | | | | |
| 038.0 | | 1617 | | | | | | | | | |
| 043.0 | | 1637 | | | | | | | | | |
| 048.0 | | 1700 | | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | [signature] | 8/2/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (919) 678-0030

**MOBILE UNIT #** K03

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE KSC

SAMPLERS

CONTACT PERSON: ~~Jan Barfus~~

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE | | | | | | | | | | | |
| OPT0119-010.0-20100803 | | 0830 | | ✓ | 8/3/10 | 0910 | | W | 2 | ✓ | |
| 014.0 | | 0843 | | | | ↓ | | | | | |
| 018.0 | | 0857 | | | | | | | | | |
| 023.0 | | 0915 | | | | 1005 | | | | | |
| 028.0 | | 0935 | | | | ↓ | | | | | |
| 033.0 | | 0953 | | | | | | | | | |
| 038.0 | | 1013 | | | | 1110 | | | | | |
| 043.0 | | 1035 | | | | ↓ | | | | | |
| 048.0 | | 1100 | | | | | | | | | |
| OPT0120-010.0 | | 1253 | | | | 1325 | | | | | |
| 014.0 | | 1305 | | | | ↓ | | | | | |
| 018.0 | | 1320 | | | | | | | | | |
| 023.0 | | 1335 | | | | 1420 | | | | | |
| 028.0 | | 1357 | | | | | | | | | |
| 033.0 | | 1415 | | | | ↓ | | | | | |

| Precleaned Containers Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | 8/3/10 | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | 8/3/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** K 83

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE KSC

SAMPLERS:

CONTACT PERSON: Joey

BATCH # (Lab Use Only):

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE | | | | | | | | | | | |
| MOTO120-035.0-20100803 | | 1437 | | ✓ | 8/3/10 | 1030 | | | | | |
| -043.0 | | 1500 | | | | ↓ | | | | | |
| -048.0 | | 1523 | | | | ↓ | | | | | |
| MOTO121-010.0 | | 1608 | | | | 1715 | | | | | |
| 014.0 | | 1625 | | | | ↓ | | | | | |
| 018.0 | | 1640 | | | | ↓ | | | | | |
| 023.0 | | 1658 | | | | ↓ | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 8/3/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (919) 678-0030

**MOBILE UNIT #** K63

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CHRE |
| SAMPLERS | CONTACT PERSON: Joey |
| | BATCH # (Lab Use Only) |

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE | | | | | | | | | | | |
| DPT0121-028.0-20100804 | | 0757 | | ✓ | 8/4/10 | 0830 | | W | 2 | ✓ | |
| 033.0 | | 0817 | | | | ↓ | | | | | |
| 038.0 | | 0837 | | | | 0930 | | | | | |
| 043.0 | | 0857 | | | | ↓ | | | | | |
| 048.0 | | 0920 | | | | | | | | | |
| DPT0122-010.0 | | 1005 | | | | 1035 | | | | | |
| 014.0 | | 1020 | | | | ↓ | | | | | |
| 018.0 | | 1030 | | | | | | | | | |
| 023.0 | | 1047 | | | | 1130 | | | | | |
| 028.0 | | 1105 | | | | ↓ | | | | | |
| 033.0 | | 1123 | | | | | | | | | |
| 038.0 | | 1140 | | | | 1235 | | | | | |
| 043.0 | | 1205 | | | | ↓ | | | | | |
| 048.0 | | 1228 | | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | [signature] | 8/4/10 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (919) 678-0030

**MOBILE UNIT #** 1483

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CHRE

SAMPLERS:

CONTACT PERSON: Joey

BATCH # (Lab Use Only):

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE | | | | | | | | | | | |
| OPT0123-010.0-20100804 | | 1510 | | ✓ | 8/4/10 | 1555 | | | | | |
| 014.0 | | 1523 | | | | " | | | | | |
| 018.0 | | 1545 | | | | " | | | | | |
| 023.0 | | 1605 | | | | 1715 | | | | | |
| 028.0 | | 1623 | | | | " | | | | | |
| 033.0 | | 1640 | | | | " | | | | | |
| 038.0 | | 1700 | | | | " | | | | | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| | | | | |
|---|---|---|---|---|
| Precleaned Containers Relinquished by: *(Signature)* | Date / Time 8/4/10 | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 8/4/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (919) 678-0030

**MOBILE UNIT #** 1453

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CHRE

SAMPLERS

CONTACT PERSON: JBey

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE | | | | | | | | | | | |
| OPT0123-043.0-20100805 | | 0745 | | | 8/5/10 | 0845 | | W | 2 | ✓ | |
| 048.0 | | 0807 | | | | ↓ | | | | | |
| OPT0124-010.0 | | 0910 | | | | 1000 | | | | | |
| -014.0 | | 0935 | | | | ↓ | | | | | |
| 018.0 | | 0947 | | | | | | | | | |
| 023.0 | | 1000 | | | | 1040 | | | | | |
| 028.0 | | 1017 | | | | ↓ | | | | | |
| 033.0 | | 1033 | | | | | | | | | |
| 038.0 | | 1050 | | | | ~~102~~ 1125 | | | | | |
| 043.0 | | 1105 | | | | ↓ | | | | | |
| 048.0 | | 1111 | | | | | | | | | |
| OPT025-010.0 | | 1205 | | | | 1205 | | | | | |
| 018.0 | | 1255 | | | | 1340 | | | | | |
| 023.0 | | 1335 | | | | ↓ | | | | | |
| 028.0 | | 1347 | | | | | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 8/5/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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TEL (919) 678-0030


**MOBILE UNIT #** 433

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CMRE |
| **SAMPLERS** | **CONTACT PERSON** |
| | JDay |

**BATCH # (Lab Use Only)**

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CMRE | | | | | | | | | | | |
| OPT012S-0350-20180105 | | 1400 | | ✓ | 8/1/18 | 1455 | | W | 2 | ✓ | |
| 043.0 | | 1422 | | | | J | | | | | |
| 048.0 | | 1445 | | | | J | | | | | |
| OPT0126-010.0 | | 1540 | | | | 1620 | | | | | |
| -018.0 | | 1555 | | | | J | | | | | |
| -028.0 | | 1610 | | | | J | | | | | |
| -038.0 | | 1630 | | | | 1700 | | | | | |
| 038.0 | | 1645 | | | | J | | | | | |
| 043.0 | | 1715 | | | | 1720 | | | | | |

| Precleaned Containers / Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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FAX (352) 472-5832

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TEL (919) 678-0030

**MOBILE UNIT #** 1CB3

| CLIENT NAME | PROJECT NAME & ADDRESS | BATCH # (Lab Use Only) |
|---|---|---|
| GeoSyntec | CHRE | |

SAMPLERS

CONTACT PERSON: Tony

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE MW-26 | | | | | | | | | | | |
| OPT0126-048.0-20100506 | | 0738 | | ✓ | 5/6/10 | 0755 | | W | 2 | ✓ | |
| OPT0127-033.0 | 0825 | ~~0845~~ | | | | 0900 | | | | | |
| 038.0 | | ~~0845~~ 0845 | | | | ↓ | | | | | |
| 043.0 | | 0905 | | | | 0930 | | | | | |
| 048.0 | | 0925 | | | | ↓ | | | | | |
| OPT0128-033.0 | | 1007 | | | | 1040 | | | | | |
| 038.0 | | 1030 | | | | ↓ | | | | | |
| 043.0 | | 1050 | | | | 1152 | | | | | |
| 048.0 | | 1110 | | | | ↓ | | | | | |
| OPT0129-010.0 | | 1155 | | | | 1215 | | | | | |
| 018.0 | | 1210 | | | | ↓ | | | | | |
| 028.0 | | 1225 | | | | 1255 | | | | | |
| 033.0 | | 1246 | | | | ↓ | | | | | |
| 038.0 | | 1300 | | | | 1415 | | | | | |
| 043.0 | | ~~1345~~ 1320 | | | | ↓ | | | | | |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time |
| | | | 4/6/10 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| GeoSyntec | CHRE |
| **SAMPLERS** | **CONTACT PERSON** / **BATCH # (Lab Use Only)** |
| | Joey |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~CHRE CRHE~~ | | | | | | | | | | | |
| DPT0129-048.0-20100806 | | ~~1310~~ 1570 | | ✓ | 8/6/10 | 1535 | | W | 2 | ✓ | |
| DPT0130 ~~033.0~~ 033.0 | | 1542 | | | | 1600 | | | | | |
| FDW178747 | | 1530 | | | | ↓ | | | | | |
| DPT0130-038.0 | | 1605 | | | | ~~1630~~ 1640 | | | | | |
| 043.0 | | 1630 | | | | ↓ | | | | | |
| 048.0 | | 1650 | | | | 1655 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>8/6/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (919) 678-0030

**MOBILE UNIT #** 1643

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CH2E IGSC

SAMPLERS: CH2E MW

CONTACT PERSON: Jan Barnes

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~CH2E~~ | | | | | | | | | | | |
| OPTO131-033.0-20100809 | 8/9 | 0835 | | ✓ | 8/9/10 | 0840 | | W | 2 | ✓ | |
| 038.0 | | 0857 | | | | 0905 | | | | | |
| 043.0 | | 0916 | | | | 0950 | | | | | |
| 048.0 | | 0944 | | | | ↓ | | | | | |
| OPTO132-010.0 | | 1021 | | | | 1050 | | | | | |
| 018.0 | | 1030 | | | | ↓ | | | | | |
| 024.0 | | 1042 | | | | ↓ | | | | | |
| 033.0 | | ~~1115~~ 1058 | | | | 1120 | | | | | |
| 038.0 | | 1115 | | | | ↓ | | | | | |
| 043.0 | | 1135 | | | | 1205 | | | | | |
| 048.0 | | 1150 | | | | ↓ | | | | | |
| OPTO133-010.0 | | 1352 | | | | 1420 | | | | | |
| 014.0 | | 1401 | | | | ↓ | | | | | |
| 018.0 | | 1418 | | | | | | | | | |
| 023.0 | | 1422 | | | | 1500 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | [signature] | 8/9/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** K03

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHAE LSC

SAMPLERS:

CONTACT PERSON: Jan Bartas

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID / NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~CHAE~~ ~~MW~~ | | | | | | | | | | | |
| OBTO13-028.0-20100809 | | | | ✓ | 8/9/10 | 1500 | | GW | 2 | ✓ | |
| 033.2 | | 1449 | | | | " | | | | | |
| 038.0 | | 1507 | | | | 1505 | | | | | |
| 043.0 | | 1526 | | | | ↓ | | | | | |
| 048.0 | | 1543 | | | | | | | | | |
| OBTO14-010.0 | | 1653 | | | | 1715 | | | | | |
| 015.0 | | 1701 | | | | ↓ | | | | | |
| 018.0 | | 1710 | | | | | | | | | |
| 023.0 | | 1722 | | | | 1730 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 8/9/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030

**MOBILE UNIT #** 1463

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE

SAMPLERS:

CONTACT PERSON: Jan Barfus

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID \ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHRE MW | | | | | | | | | | | |
| DPT0134-028.0-20100810 | | 0743 | | ✓ | 8/10/10 | 0805 | | W | 2 | ✓ | |
| 033.0 | | 0757 | | | | ↓ | | | | | |
| 038.0 | | 0813 | | | | 0840 | | | | | |
| 043.0 | | 0831 | | | | ↓ | | | | | |
| 048.0 | | 0850 | | | | 0945 | | | | | |
| DPT0135-010.0 | | 0928 | | | | ↓ | | | | | |
| 015.0 | | 0957 | | | | 1010 | | | | | |
| 028.0 | | 1000 | | | | ↓ | | | | | |
| 033.0 | | 1013 | | | | 1045 | | | | | |
| 038.0 | | 1039 | | | | ↓ | | | | | |
| 043.0 | | 1052 | | | | 1135 | | | | | |
| 048.0 | | 1112 | | | | ↓ | | | | | |
| DPT0136-033.0 | | 1146 | | | | 1205 | | | | | |
| -038.0 | | 1200 | | | | ↓ | | | | | |
| -043.0 | | 1310 | | | | 1405 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 8/10/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** 1483

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE

SAMPLERS

CONTACT PERSON: Jan Burgess

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRTE | | | | | | | | | | | |
| DPT0136-041.0-20100810 | | 1330 | | ✓ | 1405 | | | W | 2 | ✓ | |
| 063.0 | | 1336 | | | ↓ | | | | | | |
| DPT0137-033.0 | | 1456 | | | 1520 | | | | | | |
| -038.0 | | 1516 | | | ↓ | | | | | | |
| 043.0 | | 1559 | | | 1620 | | | | | | |
| 048.0 | | 1605 | | | ↓ | | | | | | |
| DPT0131-063.0 | | 1630 | | | 1640 | | | | | | |
| EDW178748 | | 1620 | | | 1650 | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

# CHAIN-OF-CUSTODY RECORD

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TEL (919) 678-0030

**MOBILE UNIT #**

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CRITE |
| **SAMPLERS** | **CONTACT PERSON** |
| | Jan Barfus |

**BATCH # (Lab Use Only)**

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRITE | | | | | | | | | | | |
| DPT0138-010.0-20100811 | ~~0801~~ | 0801 | | ✓ | 8/11/10 | 0820 | | W | 2 | ✓ | |
| 018.0 | ~~0812~~ | 0812 | | | | ↓ | | | | | |
| 028.0 | | 0830 | | | | 0850 | | | | | |
| 033.0 | | 0846 | | | | ↓ | | | | | |
| 038.0 | | 0905 | | | | 0955 | | | | | |
| 043.0 | | 0925 | | | | ↓ | | | | | |
| 048.0 | | 0946 | | | | ↓ | | | | | |
| DPT0139-010.0 | | 1024 | | | | 1055 | | | | | |
| 018.0 | | 1034 | | | | ↓ | | | | | |
| 028.0 | | 1046 | | | | ↓ | | | | | |
| 033.0 | | 1100 | | | | 1125 | | | | | |
| 038.0 | | 1118 | | | | ↓ | | | | | |
| 043.0 | | 1138 | | | | 1210 | | | | | |
| 048.0 | | 1202 | | | | ↓ | | | | | |
| DPT0140-010.0 | | 1416 | | | | 1430 | | | | | |

| Precleaned Containers Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | 8/11/10 | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | 8/11/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** 163

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CRHE

SAMPLERS:

CONTACT PERSON: Jan Barfus

BATCH # (Lab Use Only):

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE | | | | | | | | | | | |
| DPT0140-014.0-20100811 | | ~~1427~~ 1427 | ✓ | | 8/11/10 | 1430 | | W | 2 | ✓ | |
| 018.0 | | 1435 | | | | 1437 | | | | | |
| 023.0 | | 1443 | | | | ✓ | | | | | |
| 028.0 | | 1456 | | | | 1515 | | | | | |
| 033.0 | | 1508 | | | | ✓ | | | | | |
| 038.0 | | 1522 | | | | 1600 | | | | | |
| 043.0 | | 1534 | | | | ✓ | | | | | |
| 048.0 | | 1550 | | | | ✓ | | | | | |
| IDW 183401 | | 1630 | | | | 1640 | | | | | |

PRESERVATION
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | | |
| Relinquished by: (Signature) | | Received by: (Signature) | Date / Time 8/11/10 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

***Telephone* (352) 472-5830**
***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

October 21, 2010

Jill Johnson
GeoSyntec Consultants
9511 Holsberry Lane, Suite C
Pensacola, FL 32534

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 10-184**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from October 11 to 14, and 18, 2010. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

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# PROJECT NARRATIVE

## Project Scope

From October 11 to 14, and 18, 2010, a total of 107 water samples were analyzed for GeoSyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB3: FDOH NELAP Certification Number E82816

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0

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ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

---

# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. Changes for sample ID CRHE-DPT0145-043.0-20101012 reported:
   t-1,2-dichloroethene <1.0 changed to 1.6ug/L.
   c-1,2-dichloroethene 1.6 changed to <1.0ug/L.

3. As per NASA client request for diluted samples between the lab RL and MDL are reported with FDEP Data qualifier "I". Some results were changed from the Field Report to the Final Report to reflect this requirement.

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-184 |
| **On-site Dates**: 10/11/10-10/14/10, 10/18/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| VSTD 20 | 10/11/10 | 107 | 111 | 100 | 95 | Pass | Pass | Pass | Pass |
| LCS | 10/11/10 | 105 | 110 | 101 | 96 | Pass | Pass | Pass | Pass |
| BLANK | 10/11/10 | 112 | 112 | 100 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-010.0 | 10/11/10 | 111 | 108 | 100 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-018.0 | 10/11/10 | 113 | 110 | 100 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-028.0 | 10/11/10 | 114 | 111 | 101 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-033.0 | 10/11/10 | 114 | 108 | 99 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-038.0 | 10/11/10 | 112 | 116 | 100 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-043.0 | 10/11/10 | 117 | 114 | 98 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-048.0 | 10/11/10 | 116 | 116 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0142-010.0 | 10/11/10 | 117 | 117 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0142-018.0 | 10/11/10 | 117 | 120 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0142-028.0 | 10/11/10 | 118 | 118 | 98 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0142-033.0 | 10/11/10 | 115 | 120 | 98 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0142-038.0 | 10/11/10 | 118 | 122 | 97 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0142-043.0 | 10/11/10 | 119 | 123 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0142-048.0 | 10/11/10 | 121 | 120 | 97 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0143-028.0 | 10/11/10 | 111 | 114 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0143-033.0 | 10/11/10 | 113 | 112 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0143-038.0 | 10/11/10 | 114 | 116 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0143-043.0 | 10/11/10 | 117 | 118 | 99 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0143-048.0 | 10/11/10 | 117 | 120 | 98 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-010.0 | 10/11/10 | 116 | 114 | 99 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-010.0 MS | 10/11/10 | 110 | 124 | 100 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0141-010.0 MSD | 10/11/10 | 111 | 108 | 99 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0143-028.0 MS | 10/11/10 | 111 | 118 | 101 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0143-028.0 MSD | 10/11/10 | 109 | 115 | 101 | 93 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/11/10 | 110 | 119 | 99 | 94 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/12/10 | 105 | 112 | 100 | 94 | Pass | Pass | Pass | Pass |
| LCS | 10/12/10 | 110 | 111 | 100 | 95 | Pass | Pass | Pass | Pass |
| BLANK | 10/12/10 | 114 | 110 | 98 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-018.0 | 10/12/10 | 113 | 107 | 101 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-028.0 | 10/12/10 | 113 | 105 | 101 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-033.0 | 10/12/10 | 108 | 104 | 102 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-038.0 | 10/12/10 | 111 | 107 | 100 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-043.0 | 10/12/10 | 111 | 106 | 100 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-048.0 | 10/12/10 | 110 | 104 | 102 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-018.0 MS | 10/12/10 | 107 | 112 | 101 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-018.0 MSD | 10/12/10 | 106 | 109 | 102 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-053.0 | 10/12/10 | 117 | 110 | 101 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-063.0 | 10/12/10 | 116 | 112 | 100 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-010.0 | 10/12/10 | 116 | 112 | 101 | 89 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-184 |
| **On-site Dates**: 10/11/10-10/14/10, 10/18/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0145-018.0 | 10/12/10 | 114 | 108 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-028.0 | 10/12/10 | 117 | 110 | 98 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-063.0 MS | 10/12/10 | 112 | 123 | 99 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0144-063.0 MSD | 10/12/10 | 114 | 122 | 99 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-033.0 | 10/12/10 | 118 | 120 | 96 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-038.0 | 10/12/10 | 118 | 116 | 97 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-043.0 | 10/12/10 | 117 | 120 | 97 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-048.0 | 10/12/10 | 120 | 121 | 96 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-053.0 | 10/12/10 | 121 | 121 | 96 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-063.0 | 10/12/10 | 120 | 123 | 96 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0145-048.0 1:5 | 10/12/10 | 119 | 121 | 97 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-053.0 1:50 | 10/12/10 | 118 | 120 | 97 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-063.0 | 10/12/10 | 120 | 116 | 97 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0146-028.0 | 10/12/10 | 117 | 118 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0146-033.0 | 10/12/10 | 119 | 119 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0146-038.0 | 10/12/10 | 116 | 117 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0146-043.0 1:50 | 10/12/10 | 118 | 117 | 97 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0146-048.0 | 10/12/10 | 120 | 114 | 98 | 87 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/12/10 | 111 | 116 | 98 | 93 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/13/10 | 109 | 107 | 99 | 98 | Pass | Pass | Pass | Pass |
| LCS | 10/13/10 | 107 | 112 | 100 | 96 | Pass | Pass | Pass | Pass |
| BLANK | 10/13/10 | 113 | 109 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-063.0 MS | 10/13/10 | 109 | 106 | 99 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0139-063.0 MSD | 10/13/10 | 107 | 113 | 101 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0147-028.0 | 10/13/10 | 112 | 111 | 100 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0147-033.0 | 10/13/10 | 115 | 111 | 99 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0147-038.0 | 10/13/10 | 116 | 111 | 100 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0147-043.0 | 10/13/10 | 116 | 111 | 100 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0147-048.0 | 10/13/10 | 114 | 110 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0147-028.0 MS | 10/13/10 | 108 | 110 | 102 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0147-028.0 MSD | 10/13/10 | 109 | 115 | 100 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-010.0 | 10/13/10 | 114 | 111 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-018.0 | 10/13/10 | 117 | 111 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-028.0 | 10/13/10 | 118 | 114 | 100 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-033.0 | 10/13/10 | 119 | 114 | 97 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-038.0 | 10/13/10 | 119 | 116 | 97 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-043.0 | 10/13/10 | 118 | 114 | 98 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-048.0 1:20 | 10/13/10 | 118 | 121 | 96 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0148-043.0 1:10 | 10/13/10 | 117 | 118 | 96 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0149-010.0 | 10/13/10 | 122 | 121 | 97 | 89 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0149-018.0 | 10/13/10 | 120 | 120 | 95 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0149-028.0 | 10/13/10 | 120 | 121 | 95 | 86 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-184 |
| **On-site Dates**: 10/11/10-10/14/10, 10/18/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0149-033.0 | 10/13/10 | 119 | 122 | 96 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0149-038.0 | 10/13/10 | 120 | 122 | 96 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0149-043.0 | 10/13/10 | 122 | 124 | 95 | 86 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0149-033.0 1:100 | 10/13/10 | 124 | 124 | 94 | 88 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0149-043.0 1:10 | 10/13/10 | 126 | 125 | 97 | 87 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0149-048.0 | 10/13/10 | 117 | 121 | 97 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-028.0 | 10/13/10 | 118 | 120 | 96 | 88 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/13/10 | 114 | 124 | 98 | 93 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/14/10 | 105 | 109 | 100 | 96 | Pass | Pass | Pass | Pass |
| LCS | 10/14/10 | 107 | 112 | 102 | 98 | Pass | Pass | Pass | Pass |
| BLANK | 10/14/10 | 110 | 111 | 100 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0149-038 1:100 | 10/14/10 | 115 | 110 | 100 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0149-048.0 1:5 | 10/14/10 | 113 | 115 | 100 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-033.0 | 10/14/10 | 111 | 109 | 100 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-038.0 | 10/14/10 | 114 | 110 | 101 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-043.0 | 10/14/10 | 114 | 109 | 101 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-048.0 | 10/14/10 | 111 | 109 | 100 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-053.0 | 10/14/10 | 112 | 107 | 102 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-063.0 | 10/14/10 | 115 | 112 | 101 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-048.0 MS | 10/14/10 | 107 | 113 | 100 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0150-048.0 MSD | 10/14/10 | 109 | 118 | 101 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0151-028.0 | 10/14/10 | 114 | 112 | 102 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0151-033.0 | 10/14/10 | 116 | 116 | 98 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0151-038.0 1:5 | 10/14/10 | 114 | 110 | 99 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0151-043.0 | 10/14/10 | 114 | 117 | 99 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0151-048.0 | 10/14/10 | 111 | 104 | 101 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0151-053.0 | 10/14/10 | 118 | 118 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0151-063.0 | 10/14/10 | 117 | 112 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0152-010.0 | 10/14/10 | 113 | 113 | 99 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0152-018.0 | 10/14/10 | 117 | 116 | 99 | 86 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 10-184 |
| **On-site Dates**: 10/11/10-10/14/10, 10/18/10 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0152-028.0 | 10/14/10 | 114 | 112 | 98 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0152-033.0 | 10/14/10 | 120 | 116 | 98 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0152-038.0 | 10/14/10 | 116 | 115 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0152-043.0 1:20 | 10/14/10 | 118 | 116 | 96 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0152-048.0 | 10/14/10 | 119 | 118 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0152-043.0 1:5 | 10/14/10 | 118 | 120 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0153-028.0 | 10/14/10 | 118 | 123 | 97 | 89 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/14/10 | 113 | 124 | 97 | 90 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/18/10 | 105 | 110 | 98 | 94 | Pass | Pass | Pass | Pass |
| BLANK | 10/18/10 | 116 | 111 | 98 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0153-033.0 | 10/18/10 | 113 | 107 | 100 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0153-038.0 1:10 | 10/18/10 | 114 | 110 | 98 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0153-043.0 | 10/18/10 | 115 | 108 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0153-048.0 1:20 | 10/18/10 | 112 | 112 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0153-053.0 | 10/18/10 | 116 | 110 | 100 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0153-063.0 | 10/18/10 | 114 | 112 | 98 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-010.0 | 10/18/10 | 113 | 110 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-018.0 | 10/18/10 | 114 | 112 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-028.0 | 10/18/10 | 117 | 114 | 97 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-033.0 | 10/18/10 | 116 | 113 | 98 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-038.0 | 10/18/10 | 116 | 112 | 99 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-043.0 | 10/18/10 | 119 | 112 | 96 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-048.0 | 10/18/10 | 121 | 115 | 97 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-010.0 | 10/18/10 | 114 | 108 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-018.0 | 10/18/10 | 117 | 111 | 97 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-028.0 | 10/18/10 | 119 | 115 | 96 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-033.0 | 10/18/10 | 114 | 112 | 97 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-038.0 | 10/18/10 | 118 | 114 | 97 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-043.0 | 10/18/10 | 119 | 114 | 97 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-048.0 | 10/18/10 | 115 | 116 | 98 | 86 | Pass | Pass | Pass | Pass |
| CRHE-IDW144955-20101015 | 10/18/10 | 115 | 117 | 96 | 85 | Pass | Pass | Pass | Pass |
| CRHE-IDW144956-20101015 1:5 | 10/18/10 | 116 | 115 | 98 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0155-038.0 1:5 | 10/18/10 | 117 | 112 | 98 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-048.0 MS | 10/18/10 | 110 | 116 | 97 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0154-048.0 MSD | 10/18/10 | 113 | 118 | 97 | 88 | Pass | Pass | Pass | Pass |
| LCS | 10/18/10 | 111 | 117 | 97 | 96 | Pass | Pass | Pass | Pass |
| CCS | 10/18/10 | 113 | 119 | 97 | 92 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-184 |
| **Onsite Dates:** 10/11/10-10/14/10,10/18/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0141-010.0 **Date of Analysis:** 10/11/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 101 | 96 | 5 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 118 | 115 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 118 | 106 | 11 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 103 | 102 | 1 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 95 | 96 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 104 | 104 | 0 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0143-028.0 **Date of Analysis:** 10/11/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 103 | 104 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 121 | 123 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 112 | 112 | 0 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 104 | 104 | 0 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 96 | 99 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 109 | 111 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0144-018.0 **Date of Analysis:** 10/12/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 110 | 103 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 125 | 121 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 119 | 103 | 14 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 106 | 104 | 2 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 100 | 99 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 114 | 114 | 0 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0144-063.0 **Date of Analysis:** 10/12/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 105 | 102 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 121 | 122 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 102 | 100 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 83 | 89 | 7 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 102 | 102 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 112 | 113 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-184 |
| **Onsite Dates:** 10/11/10-10/14/10,10/18/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT0139-063.0 **Date of Analysis:** 10/12/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 112 | 104 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 134 | 124 | 8 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 106 | 101 | 5 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 112 | 104 | 8 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 103 | 97 | 6 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 115 | 110 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0147-028.0 **Date of Analysis:** 10/13/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 103 | 105 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 125 | 129 | 4 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 101 | 102 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 103 | 108 | 4 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 97 | 101 | 4 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 111 | 113 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0150-048.0 **Date of Analysis:** 10/14/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 107 | 104 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 134 | 126 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 130 | 101 | 25 | Pass | Pass | > RPDL |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 107 | 106 | 1 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 101 | 100 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 119 | 111 | 7 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0154-048.0 **Date of Analysis:** 10/18/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 98 | 99 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 108 | 122 | 13 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 104 | 105 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 99 | 102 | 3 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 94 | 95 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 106 | 108 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson, Brad Weichert |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 10-184 |
| **Onsite Dates:** 10/11/10-10/14/10,10/18/10 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1, LCS 2, LCS 3 **Date of Analysis:** 10/11/2010, 10/12/2010, 10/13/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 52 | to | 150 | 101 | 91 | 97 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 58 | to | 132 | 133 | 121 | 127 | > UCL | Pass | Pass |
| Trans-1,2-Dichloroethene | 54 | to | 140 | 118 | 105 | 106 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | to | 126 | 113 | 105 | 109 | Pass | Pass | Pass |
| Trichloroethene | 68 | to | 119 | 102 | 95 | 100 | Pass | Pass | Pass |
| Tetrachloroethene | 58 | to | 127 | 117 | 107 | 113 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4, LCS 5 **Date of Analysis:** 10/14/2010, 10/18/2010

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | | LCS#4 | LCS#5 | |
| Vinyl Chloride | 52 | to | 150 | 100 | 97 | | Pass | Pass | |
| 1,1-Dichloroethene | 58 | to | 132 | 116 | 122 | | Pass | Pass | |
| Trans-1,2-Dichloroethene | 54 | to | 140 | 105 | 106 | | Pass | Pass | |
| Cis-1,2-Dichloroethene | 67 | to | 126 | 108 | 99 | | Pass | Pass | |
| Trichloroethene | 68 | to | 119 | 101 | 94 | | Pass | Pass | |
| Tetrachloroethene | 58 | to | 127 | 115 | 107 | | Pass | Pass | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-DPT0141-010.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0141-018.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0141-028.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0141-033.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0141-038.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0141-043.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0141-048.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0142-010.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0142-018.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0142-028.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0142-033.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0142-038.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0142-043.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0142-048.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0143-028.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-DPT0143-033.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0143-038.0-20101011 | 10/11/10 | Water | 1 | **1.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0143-043.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0143-048.0-20101011 | 10/11/10 | Water | 1 | **1.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-010.0-20101011 | 10/11/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-018.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-028.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-033.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-038.0-20101012 | 10/12/10 | Water | 1 | **1.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-043.0-20101012 | 10/12/10 | Water | 1 | **30.4** | <1.0 | **1.4** | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-048.0-20101012 | 10/12/10 | Water | 1 | **7.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0144-053.0-20101012 | 10/12/10 | Water | 1 | **2.0** | <1.0 | <1.0 | **3.4** | <1.0 | <1.0 |
| CRHE-DPT0144-063.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0145-010.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0145-018.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Sample ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-DPT0145-028.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0145-033.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0145-038.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0145-043.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | **1.6** | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0145-048.0-20101012 | 10/12/10 | Water | 1, 5 | **150** | <1.0 | **3.9** | **1.6** | <1.0 | <1.0 |
| CRHE-DPT0145-053.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0145-063.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0139-053.0-20101012 | 10/12/10 | Water | 50 | **350** | <15 I | **88** | **1600** | **1200** | <26 I |
| CRHE-DPT0139-063.0-20101012 | 10/12/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0146-028.0-20101012 | 10/12/10 | Water | 1 | **1.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0146-033.0-20101012 | 10/12/10 | Water | 1 | **1.1** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0146-038.0-20101012 | 10/12/10 | Water | 1 | **18.4** | <1.0 | **4.3** | **7.1** | <1.0 | <1.0 |
| CRHE-DPT0146-043.0-20101012 | 10/12/10 | Water | 50 | **330** | <15 I | **100** | **1900** | **2500** | <26 I |
| CRHE-DPT0146-048.0-20101012 | 10/12/10 | Water | 1 | **40.4** | <1.0 | **3.0** | **55.4** | **1.8** | <1.0 |
| CRHE-DPT0147-028.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Sample ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-DPT0147-033.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0147-038.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0147-043.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0147-048.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0148-010.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0148-018.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0148-028.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0148-033.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0148-038.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | **2.9** | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0148-043.0-20101013 | 10/13/10 | Water | 1, 10 | **470** | <1.0 | **7.6** | **8.6** | <1.0 | <1.0 |
| CRHE-DPT0148-048.0-20101013 | 10/13/10 | Water | 20 | **720** | <6.0 I | **11 I** | **260** | <6.6 I | <10 I |
| CRHE-DPT0149-010.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0149-018.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0149-028.0-20101013 | 10/13/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0149-033.0-20101013 | 10/13/10 | Water | 1 | **100** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Sample ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-DPT0149-038.0-20101013 | 10/13/10 | Water | 1, 100 | **2300** | <1.0 | **10.9** | **3.8** | <1.0 | <1.0 |
| CRHE-DPT0149-043.0-20101013 | 10/13/10 | Water | 1, 10 | **310** | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 |
| CRHE-DPT0149-048.0-20101013 | 10/13/10 | Water | 1, 5 | **130** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0150-028.0-20101013 | 10/13/10 | Water | 1 | **2.9** | <1.0 | <1.0 | **7.9** | <1.0 | <1.0 |
| CRHE-DPT0150-033.0-20101014 | 10/14/10 | Water | 1 | **11.3** | <1.0 | <1.0 | **20.1** | <1.0 | <1.0 |
| CRHE-DPT0150-038.0-20101014 | 10/14/10 | Water | 1 | **15.2** | <1.0 | <1.0 | **14.4** | <1.0 | <1.0 |
| CRHE-DPT0150-043.0-20101014 | 10/14/10 | Water | 1 | **22.6** | <1.0 | <1.0 | **21.5** | <1.0 | <1.0 |
| CRHE-DPT0150-048.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0150-053.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0150-063.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0151-028.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0151-033.0-20101014 | 10/14/10 | Water | 1 | **1.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0151-038.0-20101014 | 10/14/10 | Water | 5 | **280** | <1.5 I | **11** | **220** | **5.2** | <2.6 I |
| CRHE-DPT0151-043.0-20101014 | 10/14/10 | Water | 1 | **30.4** | <1.0 | <1.0 | **6.7** | <1.0 | <1.0 |
| CRHE-DPT0151-048.0-20101014 | 10/14/10 | Water | 1 | **37.3** | <1.0 | **1.6** | **7.2** | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Sample ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-DPT0151-053.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0151-063.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0152-010.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0152-018.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0152-028.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0152-033.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0152-038.0-20101014 | 10/14/10 | Water | 1 | **2.9** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0152-043.0-20101014 | 10/14/10 | Water | 5 | **360** | <1.5 I | **17** | **300** | **4.0 I** | <2.6 I |
| CRHE-DPT0152-048.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0153-028.0-20101014 | 10/14/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0153-033.0-20101015 | 10/18/10 | Water | 1 | **42.4** | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 |
| CRHE-DPT0153-038.0-20101015 | 10/18/10 | Water | 10 | **460** | <3.0 I | **8.6 I** | **86** | <3.3 I | <5.2 I |
| CRHE-DPT0153-043.0-20101015 | 10/18/10 | Water | 1 | **28.5** | <1.0 | **1.4** | **48.4** | **1.2** | <1.0 |
| CRHE-DPT0153-048.0-20101015 | 10/18/10 | Water | 20 | **170** | <6.0 I | **16 I** | **550** | <6.6 I | <10 I |
| CRHE-DPT0153-053.0-20101015 | 10/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-DPT0153-063.0-20101015 | 10/18/10 | Water | 1 | **3.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0154-010.0-20101015 | 10/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0154-018.0-20101015 | 10/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0154-028.0-20101015 | 10/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0154-033.0-20101015 | 10/18/10 | Water | 1 | **1.2** | <1.0 | <1.0 | **6.5** | <1.0 | <1.0 |
| CRHE-DPT0154-038.0-20101015 | 10/18/10 | Water | 1 | **3.3** | <1.0 | <1.0 | **6.4** | <1.0 | <1.0 |
| CRHE-DPT0154-043.0-20101015 | 10/18/10 | Water | 1 | **21.6** | <1.0 | <1.0 | **2.7** | <1.0 | <1.0 |
| CRHE-DPT0154-048.0-20101015 | 10/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0155-010.0-20101015 | 10/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0155-018.0-20101015 | 10/18/10 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0155-028.0-20101015 | 10/18/10 | Water | 1 | **9.8** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0155-033.0-20101015 | 10/18/10 | Water | 1 | **42.3** | <1.0 | <1.0 | **2.5** | <1.0 | <1.0 |
| CRHE-DPT0155-038.0-20101015 | 10/18/10 | Water | 1,5 | **110** | <1.0 | <1.0 | **12.0** | <1.0 | <1.0 |
| CRHE-DPT0155-043.0-20101015 | 10/18/10 | Water | 1 | **79.4** | <1.0 | <1.0 | **1.4** | <1.0 | <1.0 |
| CRHE-DPT0155-048.0-20101015 | 10/18/10 | Water | 1 | **12.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

Project Number : 10-184

NASA CRHE IDW

KSC, FL

Prepared for: GeoSyntec Consultants

| Samplel ID | Analysis Date | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|
| **Water MDL (ug/L)** | | | | **0.32** | **0.30** | **0.37** | **0.40** | **0.33** | **0.52** |
| CRHE-IDW144955-20101015 | 10/18/10 | Water | 1 | **7.7** | <1.0 | <1.0 | **23.2** | **6.2** | <1.0 |
| CRHE-IDW144956-20101015 | 10/18/10 | Water | 5 | **2.4 I** | <1.5 I | <1.9 I | **2.6 I** | <1.6 I | <2.5 I |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** CB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: ~~CHRE~~ CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KS3*/01110 | | | | | | | | | | | |
| DW-144957 | 10/08/10 | 1700 | | | 10/11/10 | 0820 | | GW | 2 | | |
| DPT0141-010.0 | 10/11/10 | 0903 | | | | 1100 | | | | | |
| 018.0 | | 0917 | | | | | | | | | |
| 028.0 | | 0932 | | | | | | | | | |
| 033.0 | | 0953 | | | | | | | | | |
| 038.0 | | 1014 | | | | | | | | | |
| 043.0 | | 1032 | | | | | | | | | |
| 048.0 | | 1055 | | | | | | | | | |
| DPT0142 010.0 | | 1134 | | | | 1152 | | | | | |
| 018.0 | | 1148 | | | | 1152 | | | | | |
| 028.0 | | 1303 | | | | 1350 | | | | | |
| 033.0 | | 1323 | | | | | | | | | |
| 038.0 | | 1341 | | | | | | | | | |
| 043.0 | | 1401 | | | | 1430 | | | | | |
| 048.0 | | 1423 | | | | 1430 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>10/11/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

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Newberry, FL 32669
TEL (352) 367-0073
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3★101110 | | | | | | | | | | | |
| DPT 0143-028.0 | 10/11/10 | 1535 | | | 10/11/10 | 1535 | | GW | 2 | ✓ | |
| 033.0 | ↓ | 1552 | | | ↓ | 1555 | | ↓ | ↓ | ↓ | |
| 038.0 | | 1609 | | | | 1635 | | | | | |
| 043.0 | | 1629 | | | | 1635 | | | | | |
| 048.0 | | 1657 | | | | 1659 | | | | | |
| DPT 0144-010.0 | ↓ | 1714 | | | ↓ | 1720 | | ↓ | ↓ | ↓ | |

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 10/11/10 | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRA KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER KB3+101L10 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DT0144 - 018.0 | 10/12/10 | 0740 | | | 10/12/10 | 0748 | | GW | 2 | ✓ | |
| 028.0 | | 0757 | | | | 0820 | | | | | |
| 033.0 | | 0826 | | | | 0840 | | | | | |
| 038.0 | | 0847 | | | | 0850 | | | | | |
| 043.0 | | 0910 | | | | 0920 | | | | | |
| 048.0 | | 0934 | | | | 0945 | | | | | |
| 053.0 | | 1003 | | | | 1035 | | | | | |
| 063.0 | | 1032 | | | | 1035 | | | | | |
| DT0145 - 090.0 | | 1119 | | | | 1120 | | | | | |
| 018.0 | | 1152 | | | | 1145 | | | | | |
| 028.0 | | 1143 | | | | 1145 | | | | | |
| 033.0 | | 1201 | | | | 1205 | | | | | |
| 038.0 | | 1305 | | | | 1323 | | | | | |
| 043.0 | | 1323 | | | | 1323 | | | | | |
| 048.0 | | 1342 | | | | 1406 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>10/12/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER KB3 * 101210 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0145-053.0 | 10/14/10 | 1406 | | | 10/14/10 | 1406 | | GW | 2 | ✓ | |
| " 063.0 | | 1437 | | | | 1445 | | | | | |
| DPT0139-053.0 | | 1518 | | | | 1520 | | | | | |
| " 063.0 | | 1538 | | | | 1545 | | | | | |
| DPT0146-043.0 | | 1617 | | | | 1618 | | | | | |
| 033.0 | | 1631 | | | | 1636 | | | | | |
| 038.0 | | 1647 | | | | 1655 | | | | | |
| 043.0 | | 1703 | | | | 1710 | | | | | |
| 048.0 | | 1732 | | | | 1730 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>10/14/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** K83

| CLIENT NAME | PROJECT NAME & ADDRESS | | |
|---|---|---|---|
| Geosyntec | CRTE KSGFL | | |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) | |

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| K83 K101310 | | | | | | | | | | | |
| DPT 0147-028.0 | 10/13/10 | 0853 | | | 10/13/10 | 0852 | | GW | 2 | ✓ | |
| 033.0 | | 0909 | | | | 0912 | | | | | |
| 038.0 | | 0926 | | | | 0928 | | | | | |
| 043.0 | | 0945 | | | | 0945 | | | | | |
| 048.0 | | 1004 | | | | 1008 | | | | | |
| DPT 0148-010.0 | | 1046 | | | | 1100 | | | | | |
| 018.0 | | 1100 | | | | 1100 | | | | | |
| 028.0 | | 1114 | | | | 1135 | | | | | |
| 033.0 | | 1130 | | | | 1131 | | | | | |
| 038.0 | | 1153 | | | | 1200 | | | | | |
| 043.0 | | 1214 | | | | 1236 | | | | | |
| 048.0 | | 1232 | | | | 1236 | | | | | |
| DPT 0149-010.0 | | 1428 | | | | 1440 | | | | | |
| 018.0 | | 1438 | | | | 1470 | | | | | |
| 028.0 | | 1450 | | | | 1510 | | | | | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| | | | 10/13/10 | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTF KSCFL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3 #10B10 | | | | | | | | | | | |
| DPT 0149-033.0 | 10/13/10 | 1505 | | | 10/13/10 | 1520 | | GW | 2 | ✓ | |
| 038.0 | | 1521 | | | | 1540 | | | | | |
| 043.0 | | 1538 | | | | 1540 | | | | | |
| 048.0 | | 1555 | | | | 1650 | | | | | |
| DPT 0650-028.0 | | 1640 | | | | 1650 | | | | | |

PRESERVATION
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/13/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3 H014/0 | | | | | | | | | | | |
| DPT 050-038.0 | 10/14/10 | 0740 | | | 10/14/10 | 0800 | | GW | 2 | ✓ | |
| 038.0 | | 0758 | | | | 0800 | | | | | |
| 043.0 | | 0819 | | | | 0845 | | | | | |
| 048.0 | | 0841 | | | | 0845 | | | | | |
| 053.0 | | 0913 | | | | 0945 | | | | | |
| 063.0 | | 0936 | | | | 0945 | | | | | |
| DPT 051-028.0 | | 1032 | | | | 1100 | | | | | |
| 033.0 | | 1055 | | | | 1100 | | | | | |
| 038.0 | | 1117 | | | | 1145 | | | | | |
| 043.0 | | 1139 | | | | 1145 | | | | | |
| 048.0 | | 1200 | | | | 1305 | | | | | |
| 053.0 | | 1257 | | | | 1305 | | | | | |
| 063.0 | | 1324 | | | | 1342 | | | | | |
| DPT 052 0 10.0 | | 1422 | | | | 1440 | | | | | |
| 11 018.0 | | 1437 | | | | 1440 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>10/14/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CAPE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3 10/14/10 | | | | | | | | | | | |
| DPT0152-028.0 | 10/14/10 | 1448 | | | 10/14/10 | 1520 | | GW | 2 | ✓ | |
| 033.0 | | 1511 | | | | 1520 | | | | | |
| 038.0 | | 1542 | | | | 1605 | | | | | |
| 043.0 | | 1601 | | | | 1605 | | | | | |
| 048.0 | | 1622 | | | | 1659 | | | | | |
| DPT0153-028.0 | | 1710 | | | | 1730 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/14/10 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** HB3

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CRHE hSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0153 -033.0 | 10/15 | 08:20 | | | | | | GW | | ✓ | |
| -038.0 | | 08:42 | | | | | | | | | |
| -043.0 | | 09:05 | | | | | | | | | |
| -048.0 | | 09:26 | | | | | | | | | |
| -053.0 | | 09:48 | | | | | | | | | |
| -063.0 | | 10:14 | | | | | | | | | |
| DPT0154 - 010.0 | | 10:52 | | | | | | | | | |
| -018.0 | | 11:02 | | | | | | | | | |
| -028.0 | | 11:16 | | | | | | | | | |
| -033.0 | | 11:30 | | | | | | | | | |
| -038.0 | | 11:45 | | | | | | | | | |
| -043.0 | | 12:07 | | | | | | | | | |
| -048.0 | | 12:27 | | | | | | | | | |
| DPT0155 - 010.0 | | 13:46 | | | | | | | | | |
| -018.0 | | 13:57 | | | | | | | | | |

| | | | |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |

**Remarks and Observations**

COC hB Lab Office

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** hB3

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CRHE hsc, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0155-028.0 | 10/15 | 14:10 | | | | | | GW | | ✓ | |
| -033.0 | | 14:34 | | | | | | | | | |
| -038.0 | | 14:50 | | | | | | | | | |
| -043.0 | | 15:11 | | | | | | | | | |
| -048.0 | | 15:28 | | | | | | | | | |
| | | | | | | | | | | | |
| CRHE-IDW144955-20101015 | | | | | | | | GW | | ✓ | |
| CRHE-IDW144956-20101015 | | | | | | | | | | ✓ | |

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |

**Remarks and Observations**

Coc hB lab Office

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
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**Newberry, Florida 32669**

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***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

October 24, 2011

Jill Johnson
GeoSyntec Consultants
9515 Holsberry Road, Suite A
Pensacola, FL 32534

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 11-173**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from October 19 to 21, 2011. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 472-5830.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

*KB Labs, Inc.*
*25132 SW 1st Ave*
*Newberry, FL 32669*
*Phone: 352-472-5830*
*Fax: 352-472-5832*
*Email: info@kbmobilelabs.com*

# PROJECT NARRATIVE

## Project Scope

From October 19 to 21, 2011, a total of 58 water samples were analyzed for GeoSyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, freon 113, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB1: FDOH NELAP Certification Number E82815

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report and the results relate only to the actual samples received and analyzed in the laboratory. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example,

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if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0 ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

---

# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. As per NASA Client request for diluted samples between the lab RL and MDL are reported with FDEP Data Qualifier "I". Some results were changed from the Field Report to the Final Report to reflect this requirement.

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 11-173 |
| **On-site Dates**: 10/19/11-10/21/11 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CCS 20 | 10/19/11 | 94 | 96 | 103 | 101 | Pass | Pass | Pass | Pass |
| RSTD 20 | 10/19/11 | 95 | 101 | 103 | 96 | Pass | Pass | Pass | Pass |
| BLANK | 10/19/11 | 102 | 104 | 102 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-028.0 | 10/19/11 | 100 | 105 | 102 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-033.0 | 10/19/11 | 74 | 87 | 92 | 89 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0156-038.0 | 10/19/11 | 104 | 115 | 101 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-043.0 | 10/19/11 | 109 | 117 | 99 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-048.0 | 10/19/11 | 98 | 108 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0157-028.0 | 10/19/11 | 94 | 107 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0157-033.0 | 10/19/11 | 112 | 111 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-028.0 MS | 10/19/11 | 106 | 104 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0156-028.0 MSD | 10/19/11 | 102 | 104 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0157-038.0 | 10/19/11 | 111 | 110 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0157-043.0 | 10/19/11 | 93 | 113 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0157-048.0 | 10/19/11 | 96 | 112 | 98 | 92 | Pass | Pass | Pass | Pass |
| WILC-IDW-185534 1:10 | 10/19/11 | 115 | 117 | 96 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-028.0 | 10/19/11 | 112 | 113 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-033.0 | 10/19/11 | 105 | 111 | 96 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-038.0 | 10/19/11 | 108 | 111 | 98 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-043.0 | 10/19/11 | 109 | 116 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-048.0 | 10/19/11 | 111 | 117 | 93 | 97 | Pass | Pass | Pass | Pass |
| WILC-IDW-185535 1:10 | 10/19/11 | 112 | 119 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0158-043.0 1:5 | 10/19/11 | 112 | 114 | 93 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-028.0 | 10/19/11 | 110 | 114 | 97 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-033.0 1:5 | 10/19/11 | 109 | 113 | 96 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-038.0 | 10/19/11 | 111 | 118 | 96 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-043.0 | 10/19/11 | 113 | 117 | 97 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-048.0 | 10/19/11 | 94 | 113 | 102 | 96 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/19/11 | 110 | 113 | 98 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-028.0 1:5 | 10/19/11 | 112 | 115 | 94 | 89 | Pass | Pass | Pass | Pass |
| CCS 20 | 10/20/11 | 103 | 106 | 104 | 94 | Pass | Pass | Pass | Pass |
| RSTD 20 | 10/20/11 | 99 | 102 | 100 | 93 | Pass | Pass | Pass | Pass |
| BLANK | 10/20/11 | 110 | 122 | 101 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-028.0 | 10/20/11 | 109 | 115 | 103 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-033.0 | 10/20/11 | 107 | 116 | 104 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-038.0 | 10/20/11 | 110 | 116 | 105 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-043.0 | 10/20/11 | 106 | 114 | 102 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-048.0 | 10/20/11 | 109 | 120 | 103 | 90 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 11-173 |
| **On-site Dates**: 10/19/11-10/21/11 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0161-028.0 | 10/20/11 | 104 | 121 | 103 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-028.0 MS | 10/20/11 | 95 | 113 | 99 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0160-028.0 MSD | 10/20/11 | 88 | 104 | 96 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-033.0 | 10/20/11 | 134 | 127 | 100 | 94 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0161-038.0 | 10/20/11 | 112 | 125 | 100 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-043.0 | 10/20/11 | 112 | 128 | 99 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-048.0 | 10/20/11 | 110 | 125 | 100 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-028.0 | 10/20/11 | 104 | 126 | 98 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-033.0 1:5 | 10/20/11 | 111 | 125 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-033.0 1:20 | 10/20/11 | 118 | 132 | 101 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-038.0 | 10/20/11 | 113 | 116 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-043.0 | 10/20/11 | 116 | 118 | 99 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-048.0 | 10/20/11 | 120 | 122 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-053.0 | 10/20/11 | 116 | 122 | 100 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-063.0 | 10/20/11 | 117 | 119 | 99 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0163-028.0 | 10/20/11 | 118 | 121 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0163-033.0 | 10/20/11 | 121 | 123 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0163-038.0 | 10/20/11 | 116 | 122 | 96 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0163-043.0 | 10/20/11 | 112 | 119 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0163-048.0 | 10/20/11 | 117 | 119 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-053.0 MS | 10/20/11 | 110 | 118 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0162-053.0 MSD | 10/20/11 | 112 | 119 | 96 | 95 | Pass | Pass | Pass | Pass |
| VSTD 20 | 10/20/11 | 111 | 117 | 98 | 94 | Pass | Pass | Pass | Pass |
| CCS 20 | 10/21/11 | 94 | 102 | 97 | 95 | Pass | Pass | Pass | Pass |
| RSTD 20 | 10/21/11 | 107 | 107 | 101 | 95 | Pass | Pass | Pass | Pass |
| BLANK | 10/21/11 | 111 | 116 | 99 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-028.0 | 10/21/11 | 114 | 114 | 100 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-033.0 | 10/21/11 | 116 | 120 | 96 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-038.0 | 10/21/11 | 118 | 122 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-043.0 | 10/21/11 | 119 | 130 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-048.0 | 10/21/11 | 119 | 129 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-053.0 | 10/21/11 | 113 | 119 | 94 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0164-063.0 | 10/21/11 | 120 | 130 | 95 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0165-028.0 | 10/21/11 | 116 | 126 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0165-033.0 | 10/21/11 | 116 | 127 | 95 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0165-038.0 | 10/21/11 | 117 | 129 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0165-043.0 | 10/21/11 | 118 | 130 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0165-048.0 | 10/21/11 | 122 | 135 | 96 | 96 | > UCL | > UCL | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 11-173 |
| **On-site Dates**: 10/19/11-10/21/11 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-IDW-185537 1:10 | 10/21/11 | 124 | 137 | 96 | 93 | > UCL | > UCL | Pass | Pass |
| CRHE-IDW-185538 1:10 | 10/21/11 | 122 | 136 | 92 | 93 | > UCL | > UCL | Pass | Pass |
| VSTD 20 | 10/21/11 | 114 | 129 | 98 | 94 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (84% - 121%)
S2 = 1,2- Dichloroethane-D4 (69% - 133%)
S3 = Toluene-D8 (87% - 111%)
S4 = 4-Bromofluorobenzene (76% - 125%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 11-173 |
| **Onsite Dates:** 10/19/11-10/21/11 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0156-028.0 **Date of Analysis:** 10/19/2011

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 102 | 107 | 5 | Pass | Pass | Pass |
| Freon 113 | 50 | 143 | 20 | 107 | 99 | 8 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 112 | 112 | 0 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 94 | 98 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 92 | 93 | 0 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 103 | 108 | 5 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 115 | 120 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0160-028.0 **Date of Analysis:** 10/20/2011

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 98 | 112 | 14 | Pass | Pass | Pass |
| Freon 113 | 50 | 143 | 20 | 110 | 107 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 117 | 112 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 109 | 96 | 12 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 101 | 94 | 7 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 108 | 110 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 121 | 116 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0162-053.0 **Date of Analysis:** 10/20/2011

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 46 | 156 | 20 | 101 | 103 | 2 | Pass | Pass | Pass |
| Freon 113 | 50 | 143 | 20 | 102 | 105 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 47 | 150 | 20 | 124 | 121 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 61 | 135 | 20 | 117 | 116 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | 141 | 20 | 125 | 121 | 3 | Pass | Pass | Pass |
| Trichloroethene | 60 | 127 | 20 | 116 | 118 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 132 | 20 | 123 | 124 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** GeoSyntec Consultants | **Driller/Sampler**: GeoSyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 11-173 |
| **Onsite Dates:** 10/19/11-10/21/11 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

| **Samples:** | LCS 1 | **Date of Analysis:** | 10/19/2011 |
|---|---|---|---|
| | LCS 2 | | 10/20/2011 |
| | LCS 3 | | 10/21/2011 |

| **Spike Compounds** | **Control Limits** | | | **Percent Recoveries** | | | **Control Limit Checks** | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Lower** | | **Upper** | **LCS#1** | **LCS#2** | **LCS#3** | **LCS#1** | **LCS#2** | **LCS#3** |
| Vinyl Chloride | 52 | to | 150 | 101 | 97 | 93 | Pass | Pass | Pass |
| Freon 113 | 59 | to | 168 | 109 | 110 | 107 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 58 | to | 132 | 119 | 126 | 127 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 54 | to | 140 | 112 | 114 | 111 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | to | 126 | 105 | 106 | 106 | Pass | Pass | Pass |
| Trichloroethene | 68 | to | 119 | 105 | 111 | 113 | Pass | Pass | Pass |
| Tetrachloroethene | 58 | to | 127 | 113 | 125 | 127 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | Freon 113 | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0156-028.0-20111019 | 10/19/2011 | 0924 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0156-033.0-20111019 | 10/19/2011 | 0937 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0156-038.0-20111019 | 10/19/2011 | 0949 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0156-043.0-20111019 | 10/19/2011 | 1003 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 |
| CRHE-DPT0156-048.0-20111019 | 10/19/2011 | 1019 | Water | 1 | **12.3** | <1.0 | **5.9** | <1.0 | **2.0** | <1.0 | <1.0 |
| CRHE-DPT0157-028.0-20111019 | 10/19/2011 | 1106 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **1.3** | <1.0 | <1.0 |
| CRHE-DPT0157-033.0-20111019 | 10/19/2011 | 1118 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **3.7** | <1.0 | <1.0 |
| CRHE-DPT0157-038.0-20111019 | 10/19/2011 | 1230 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **3.3** | <1.0 | <1.0 |
| CRHE-DPT0157-043.0-20111019 | 10/19/2011 | 1245 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | **3.0** | <1.0 | <1.0 |
| CRHE-DPT0157-048.0-20111019 | 10/19/2011 | 1302 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0158-028.0-20111019 | 10/19/2011 | 1347 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0158-033.0-20111019 | 10/19/2011 | 1403 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0158-038.0-20111019 | 10/19/2011 | 1420 | Water | 1 | **110** | <1.0 | <1.0 | <1.0 | **3.3** | <1.0 | <1.0 |
| CRHE-DPT0158-043.0-20111019 | 10/19/2011 | 1435 | Water | 1, 5 | **210** | <1.0 | <1.0 | **2.2** | **6.2** | <1.0 | <1.0 |
| CRHE-DPT0158-048.0-20111019 | 10/19/2011 | 1451 | Water | 1 | **59.9** | <1.0 | <1.0 | **1.1** | **14.4** | <1.0 | <1.0 |
| CRHE-DPT0159-028.0-20111019 | 10/19/2011 | 1601 | Water | 1, 5 | **120** | <1.0 | <1.0 | <1.0 | **4.8** | <1.0 | <1.0 |
| CRHE-DPT0159-033.0-20111019 | 10/19/2011 | 1613 | Water | 5 | **49.0** | <5.0 | <5.0 | <5.0 | **140** | <5.0 | <5.0 |
| CRHE-DPT0159-038.0-20111019 | 10/19/2011 | 1628 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0159-043.0-20111019 | 10/19/2011 | 1644 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0159-048.0-20111019 | 10/19/2011 | 1657 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0160-028.0-20111020 | 10/20/2011 | 0807 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | Freon 113 | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0160-033.0-20111020 | 10/20/2011 | 0820 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0160-038.0-20111020 | 10/20/2011 | 0833 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0160-043.0-20111020 | 10/20/2011 | 0850 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0160-048.0-20111020 | 10/20/2011 | 0910 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0161-028.0-20111020 | 10/20/2011 | 0950 | Water | 1 | **110** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0161-033.0-20111020 | 10/20/2011 | 1026 | Water | 1, 20 | **1100** | <1.0 | <1.0 | **4.4** | **3.6** | <1.0 | <1.0 |
| CRHE-DPT0161-038.0-20111020 | 10/20/2011 | 1040 | Water | 1 | **2.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0161-043.0-20111020 | 10/20/2011 | 1055 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0161-048.0-20111020 | 10/20/2011 | 1114 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0162-028.0-20111020 | 10/20/2011 | 1141 | Water | 1 | **1.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0162-033.0-20111020 | 10/20/2011 | 1154 | Water | 5 | **160** | <5.0 | <5.0 | **4.2 I** | **83** | **1.5 I** | <5.0 |
| CRHE-DPT0162-038.0-20111020 | 10/20/2011 | 1249 | Water | 1 | **14.0** | <1.0 | <1.0 | <1.0 | **4.4** | <1.0 | <1.0 |
| CRHE-DPT0162-043.0-20111020 | 10/20/2011 | 1304 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0162-048.0-20111020 | 10/20/2011 | 1322 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0162-053.0-20111020 | 10/20/2011 | 1339 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0162-063.0-20111020 | 10/20/2011 | 1401 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0163-028.0-20111020 | 10/20/2011 | 1428 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0163-033.0-20111020 | 10/20/2011 | 1501 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0163-038.0-20111020 | 10/20/2011 | 1515 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0163-043.0-20111020 | 10/20/2011 | 1531 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0163-048.0-20111020 | 10/20/2011 | 1547 | Water | 1 | **2.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | Freon 113 | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0164-028.0-20111021 | 10/21/2011 | 0804 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-033.0-20111021 | 10/21/2011 | 0834 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-038.0-20111021 | 10/21/2011 | 0852 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-043.0-20111021 | 10/21/2011 | 0909 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-048.0-20111021 | 10/21/2011 | 0924 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-053.0-20111021 | 10/21/2011 | 0942 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0164-063.0-20111021 | 10/21/2011 | 1023 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0165-028.0-20111021 | 10/21/2011 | 1052 | Water | 1 | **1.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0165-033.0-20111021 | 10/21/2011 | 1104 | Water | 1 | **2.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0165-038.0-20111021 | 10/21/2011 | 1119 | Water | 1 | **1.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0165-043.0-20111021 | 10/21/2011 | 1134 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0165-048.0-20111021 | 10/21/2011 | 1148 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA IDW

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | Freon 113 | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WILC -IDW-185534-20111019 | 10/19/2011 | 1144 | Water | 10 | **28** | <10 | <10 | <10 | **77** | **3.7 I** | <10 |
| WILC- IDW-185535-20111019 | 10/19/2011 | 1145 | Water | 10 | **2.8 I** | <10 | <10 | <10 | **3.6 I** | <3.0 I | <10 |
| CRHE-IDW-185537-20111021 | 10/21/2011 | NA | Water | 10 | <10 | <10 | <10 | <10 | <10 | <3.0 I | <10 |
| CRHE-IDW-185538-20111021 | 10/21/2011 | NA | Water | 10 | <10 | <10 | <10 | <10 | <10 | <3.0 I | <10 |

Reporting units for waters are ug/L and for soils are mg/kg.

FR1681

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** K51

| CLIENT NAME | PROJECT NAME & ADDRESS | | |
|---|---|---|---|
| Geosyntec | CRTE | 155 FL | |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1KS1101911 | | | | | | | | | | | |
| DPT0155-025.0 | 10/18/11 | 0924 | | | 10/19/11 | 0925 | | GW | 2 | ✓ | changed by client |
| DPT0155-033.0 | | 0937 | | | | 0939 | | | | | |
| -038.0 | | 0949 | | | | 0950 | | | | | |
| -043.0 | | 1003 | | | | 1005 | | | | | |
| -048.0 | | 1019 | | | | 1020 | | | | | |
| DPT0157-028.0 | | 1106 | | | | 1110 | | | | | |
| 033.0 | | 1118 | | | | 1120 | | | | | |
| IDW-185534 | | 1144 | | | | 1148 | | | 1 | | |
| IDW-185535 | | 1145 | | | | 148 | | | 1 | | |
| DPT0157-038.0 | | 1230 | | | | 1231 | | | 2 | | |
| -043.0 | | 1245 | | | | 1247 | | | | | |
| 048.0 | | 1302 | | | | 1305 | | | | | |
| DPT0158-028.0 | | 1347 | | | | 1348 | | | | | |
| 033.0 | | 1403 | | | | 1403 | | | | | |
| 038.0 | | 1420 | | | | 142 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/19/11 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KS1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KS1#01911 | | | | | | | | | | | |
| DPT0158-043.0 | 10/19/11 | 1435 | | | 10/19/11 | 1435 | | GW | 2 | ✓ | |
| " -048.0 | ↓ | 1451 | | | ↓ | 1452 | | ↓ | ↓ | ↓ | |
| DPT0159-028.0 | | 1601 | | | | 1613 | | | | | |
| -033.0 | | 1613 | | | | 1615 | | | | | |
| -038.0 | | 1628 | | | | 1645 | | | | | |
| -043.0 | | 1644 | | | | 1641 | | | | | |
| -048.0 | | 1657 | | | | 1705 | | | | | |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | 10/19/11 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB1

| CLIENT NAME | PROJECT NAME & ADDRESS | | |
|---|---|---|---|
| Geosyntec | CR/TE KSC, FL | | |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT 0160-028.0 | 10/20/11 | 0817 | | | 10/20/11 | 0825 | | GW | 2 | | |
| -033.0 | | 0820 | | | | 0825 | | | | | |
| -038.0 | | 0833 | | | | 0850 | | | | | |
| -043.0 | | 0850 | | | | 0850 | | | | | |
| -048.0 | | 0910 | | | | 0918 | | | | | |
| DPT 0161 -028.0 | | 0950 | | | | 0855 | | | | | |
| -033.0 | | 1026 | | | | 1040 | | | | | |
| -038.0 | | 1040 | | | | 1040 | | | | | |
| -043.0 | | 1053 | | | | 1123 | | | | | |
| -048.0 | | 1114 | | | | 1123 | | | | | |
| DPT 0162-028.0 | | 1141 | | | | 1200 | | | | | |
| 033.0 | | 1154 | | | | 1200 | | | | | |
| 038.0 | | 1249 | | | | 1309 | | | | | |
| 043.0 | | 1304 | | | | 1309 | | | | | |
| 048.0 | | 1324 | | | | 1348 | | | | | |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/20/11 | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** ICS1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE ICSQFL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0162 053.0 | 10/20/11 | 1339 | | | 10/20/11 | 1348 | | GW | 2 | ✓ | |
| " 063.0 | | 1401 | | | | 1420 | | | | | |
| DPT0163 028.0 | | 1428 | | | | 1435 | | | | | |
| 033.0 | | 1501 | | | | 1479 | | | | | |
| 038.0 | | 1515 | | | | 1519 | | | | | |
| 043.0 | | 1531 | | | | 1553 | | | | | |
| 048.0 | | 1547 | | | | 1557 | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>10/20/11 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KBL

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CHRE ISC, FL

SAMPLERS:

CONTACT PERSON:

BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER KBL #102411 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0164-028.0 | 10/24/11 | 0804 | | | 10/24/11 | 0840 | | GW | 2 | | |
| -033.0 | | 0834 | | | | 0840 | | | | | |
| -038.0 | | 0852 | | | | 0915 | | | | | |
| -043.0 | | 0909 | | | | 0915 | | | | | |
| -048.0 | | 0924 | | | | 0947 | | | | | |
| -053.0 | | 0942 | | | | 0947 | | | | | |
| -063.0 | | 1023 | | | | 1030 | | | | | |
| DPT0165-028.0 | | 1052 | | | | 1110 | | | | | |
| -033.0 | | 1104 | | | | 1110 | | | | | |
| -038.0 | | 1119 | | | | 1140 | | | | | |
| -043.0 | | 1134 | | | | 1140 | | | | | |
| -048.0 | | 1148 | | | | 1156 | | | | | |
| IDW-185537 | | | | | | 1235 | | | | | |
| IDW-185538 | | | | | | 1235 | | | | | |
| | | | | | | | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/24/11 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**25132 SW 1st Ave**
**Newberry, Florida 32669**

***Telephone* (352) 472-5830**
***Fax* (352) 472-5832**
Email: info@kbmobilelabs.com

January 16, 2012

Jill Johnson
GeoSyntec Consultants
316 South Baylen Street, Suite 201
Pensacola, FL 32502

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project #11-173**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from January 9 to 12, 2012. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 472-5830.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

*KB Labs, Inc.*
*25132 SW 1st Ave*
*Newberry, FL 32669*
*Phone: 352-472-5830*
*Fax: 352-472-5832*
*Email: info@kbmobilelabs.com*

# PROJECT NARRATIVE

## Project Scope

From January 9 to 12, 2012, a total of 71 water samples were analyzed for Geosyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB2: FDOH NELAP Certification Number E82840
KB Mobile Labs Unit KB1: FDOH NELAP Certification Number E82815

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report and the results relate only to the actual samples received and analyzed in the laboratory. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the

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standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0 ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

---

# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. As per NASA client request for diluted samples between the lab RL and MDL are reported with FDEP Data qualifier "I".

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Glenn Jackson, Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 11-173 |
| **On-site Dates**: 1/9/12-1/12/12 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| VSTD 20 | 01/09/12 | 110 | 92 | 102 | 96 | Pass | Pass | Pass | Pass |
| RSTD 20 | 01/09/12 | 105 | 95 | 103 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 01/09/12 | 111 | 95 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0166-028.0 | 01/09/12 | 100 | 87 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0166-033.0 | 01/09/12 | 118 | 98 | 103 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0166-043.0 | 01/09/12 | 119 | 97 | 103 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0166-048.0 | 01/09/12 | 109 | 107 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0166-028.0 MS | 01/09/12 | 115 | 98 | 101 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0166-028.0 MSD | 01/09/12 | 115 | 101 | 106 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0166-038.0 | 01/09/12 | 118 | 100 | 102 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0167-028.0 | 01/09/12 | 117 | 95 | 100 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0167-033.0 | 01/09/12 | 121 | 102 | 104 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0167-038.0 | 01/09/12 | 122 | 104 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0167-043.0 | 01/09/12 | 124 | 103 | 103 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0167-048.0 | 01/09/12 | 123 | 107 | 100 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0168-028.0 | 01/09/12 | 123 | 105 | 103 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0168-033.0 | 01/09/12 | 121 | 106 | 101 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0168-038.0 | 01/09/12 | 107 | 99 | 105 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0168-043.0 | 01/09/12 | 124 | 107 | 98 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0168-048.0 | 01/09/12 | 123 | 104 | 103 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0169-028.0 | 01/09/12 | 125 | 110 | 101 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0169-033.0 | 01/09/12 | 127 | 107 | 100 | 96 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0169-038.0 | 01/09/12 | 126 | 107 | 97 | 98 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0169-043.0 | 01/09/12 | 126 | 110 | 102 | 98 | > UCL | Pass | Pass | Pass |
| CRHE-DPT0169-048.0 | 01/09/12 | 128 | 112 | 102 | 98 | > UCL | Pass | Pass | Pass |
| VSTD 20 | 01/09/12 | 123 | 105 | 102 | 94 | Pass | Pass | Pass | Pass |
| BLANK | 01/10/12 | 101 | 104 | 98 | 107 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/10/12 | 100 | 104 | 98 | 105 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/10/12 | 101 | 105 | 97 | 104 | Pass | Pass | Pass | Pass |
| BLANK | 01/10/12 | 101 | 105 | 100 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0170-028.0 | 01/10/12 | 100 | 101 | 99 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0170-033.0 | 01/10/12 | 97 | 96 | 101 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0170-038.0 | 01/10/12 | 100 | 101 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0170-043.0 | 01/10/12 | 103 | 107 | 99 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0170-048.0 | 01/10/12 | 101 | 105 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0170-028.0 MS | 01/10/12 | 98 | 97 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0170-028.0 MSD | 01/10/12 | 100 | 100 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0171-028.0 | 01/10/12 | 100 | 100 | 100 | 106 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Glenn Jackson, Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 11-173 |
| **On-site Dates**: 1/9/12-1/12/12 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0171-033.0 | 01/10/12 | 104 | 108 | 99 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0171-038.0 | 01/10/12 | 102 | 104 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0171-043.0 | 01/10/12 | 104 | 109 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0171-048.0 | 01/10/12 | 103 | 109 | 98 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0172-028.0 | 01/10/12 | 101 | 101 | 99 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0172-033.0 | 01/10/12 | 103 | 105 | 100 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0172-038.0 | 01/10/12 | 100 | 101 | 101 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0172-043.0 | 01/10/12 | 101 | 100 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0172-048.0 | 01/10/12 | 102 | 106 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0172-053.0 | 01/10/12 | 104 | 109 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0172-063.0 | 01/10/12 | 104 | 107 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0173-028.0 | 01/10/12 | 103 | 106 | 99 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0173-033.0 | 01/10/12 | 103 | 108 | 98 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0173-038.0 | 01/10/12 | 104 | 107 | 99 | 104 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/10/12 | 97 | 103 | 99 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 01/11/12 | 97 | 96 | 102 | 106 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/11/12 | 99 | 100 | 99 | 104 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/11/12 | 99 | 106 | 98 | 102 | Pass | Pass | Pass | Pass |
| BLANK | 01/11/12 | 101 | 106 | 99 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0173-043.0 | 01/11/12 | 101 | 103 | 99 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0173-048.0 | 01/11/12 | 103 | 109 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0173-053.0 | 01/11/12 | 102 | 105 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0173-063.0 | 01/11/12 | 103 | 109 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0174-028.0 | 01/11/12 | 103 | 108 | 98 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0174-033.0 1:10 | 01/11/12 | 103 | 105 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0174-033.0 1:20 | 01/11/12 | 102 | 104 | 100 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0174-038.0 1:50 | 01/11/12 | 102 | 103 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0174-043.0 1:50 | 01/11/12 | 102 | 107 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0174-048.0 1:20 | 01/11/12 | 101 | 105 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0175-028.0 | 01/11/12 | 103 | 103 | 100 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0175-033.0 | 01/11/12 | 103 | 107 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0175-038.0 | 01/11/12 | 104 | 109 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0175-043.0 | 01/11/12 | 104 | 109 | 97 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0175-048.0 | 01/11/12 | 103 | 105 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0175-048.0 MS | 01/11/12 | 101 | 107 | 98 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0175-048.0 MSD | 01/11/12 | 99 | 102 | 99 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0176-028.0 | 01/11/12 | 103 | 107 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0176-033.0 | 01/11/12 | 105 | 111 | 97 | 102 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Glenn Jackson, Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 11-173 |
| **On-site Dates**: 1/9/12-1/12/12 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0176-038.0 | 01/11/12 | 106 | 110 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0176-043.0 | 01/11/12 | 104 | 106 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0176-048.0 | 01/11/12 | 104 | 108 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-IDW 188675 | 01/11/12 | 106 | 114 | 97 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/11/12 | 98 | 99 | 101 | 95 | Pass | Pass | Pass | Pass |
| BLANK | 01/12/12 | 106 | 110 | 100 | 103 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/12/12 | 104 | 107 | 98 | 97 | Pass | Pass | Pass | Pass |
| LCS 20 | 01/12/12 | 101 | 102 | 99 | 98 | Pass | Pass | Pass | Pass |
| BLANK | 01/12/12 | 103 | 107 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-028.0 | 01/12/12 | 106 | 109 | 99 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-033.0 | 01/12/12 | 101 | 97 | 100 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-038.0 | 01/12/12 | 106 | 109 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-043.0 | 01/12/12 | 103 | 106 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-048.0 | 01/12/12 | 106 | 110 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-048.0 MS | 01/12/12 | 101 | 103 | 98 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-048.0 MSD | 01/12/12 | 100 | 100 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0178-028.0 | 01/12/12 | 101 | 97 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0178-033.0 | 01/12/12 | 104 | 106 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0178-038.0 | 01/12/12 | 104 | 102 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0178-043.0 | 01/12/12 | 105 | 109 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0178-048.0 | 01/12/12 | 104 | 104 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-IDW088675 | 01/12/12 | 109 | 115 | 96 | 101 | Pass | Pass | Pass | Pass |
| CCS 20 | 01/12/12 | 108 | 120 | 95 | 93 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Glenn Jackson, Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 11-173 |
| **Onsite Dates:** 1/9/12-1/12/12 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0166-028.0 **Date of Analysis:** 1/9/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 102 | 104 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 105 | 107 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 103 | 107 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 107 | 110 | 2 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 89 | 90 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 86 | 90 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0170-028.0 **Date of Analysis:** 1/10/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 77 | 79 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 91 | 95 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 83 | 86 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 85 | 88 | 4 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 83 | 87 | 4 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 83 | 86 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0175-048.0 **Date of Analysis:** 1/11/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 89 | 92 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 115 | 113 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 89 | 87 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 91 | 89 | 2 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 89 | 88 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 86 | 87 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0177-048.0 **Date of Analysis:** 1/12/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 93 | 90 | 4 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 115 | 110 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 86 | 84 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 89 | 86 | 3 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 89 | 86 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 86 | 84 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Glenn Jackson, Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 11-173 |
| **Onsite Dates:** 1/9/12-1/12/12 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1, LCS 2, LCS 3 **Date of Analysis:** 1/9/2012, 1/10/2012, 1/11/2012

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 58 | to | 135 | 103 | 89 | 95 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 60 | to | 141 | 100 | 104 | 116 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 99 | 102 | 97 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 95 | 105 | 99 | Pass | Pass | Pass |
| Trichloroethene | 68 | to | 128 | 83 | 106 | 99 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | to | 135 | 90 | 102 | 95 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 **Date of Analysis:**

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | | | LCS#4 | | |
| Vinyl Chloride | 58 | to | 135 | 90 | | | Pass | | |
| 1,1-Dichloroethene | 60 | to | 141 | 108 | | | Pass | | |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 88 | | | Pass | | |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 90 | | | Pass | | |
| Trichloroethene | 68 | to | 128 | 90 | | | Pass | | |
| Tetrachloroethene | 67 | to | 135 | 88 | | | Pass | | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0166-028.0-20120109 | 1/9/2012 | 0905 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0166-033.0-20120109 | 1/9/2012 | 0938 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0166-038.0-20120109 | 1/9/2012 | 1000 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0166-043.0-20120109 | 1/9/2012 | 1020 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0166-048.0-20120109 | 1/9/2012 | 1040 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0167-028.0-20120109 | 1/9/2012 | 1148 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0167-033.0-20120109 | 1/9/2012 | 1204 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0167-038.0-20120109 | 1/9/2012 | 1230 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0167-043.0-20120109 | 1/9/2012 | 1248 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0167-048.0-20120109 | 1/9/2012 | 1302 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0168-028.0-20120109 | 1/9/2012 | 1355 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0168-033.0-20120109 | 1/9/2012 | 1412 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0168-038.0-20120109 | 1/9/2012 | 1432 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0168-043.0-20120109 | 1/9/2012 | 1450 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0168-048.0-20120109 | 1/9/2012 | 1512 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0169-028.0-20120109 | 1/9/2012 | 1620 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0169-033.0-20120109 | 1/9/2012 | 1632 | Water | 1 | **1.2** | <1.0 | <1.0 | **5.0** | <1.0 | <1.0 |
| CRHE-DPT0169-038.0-20120109 | 1/9/2012 | 1646 | Water | 1 | **17.6** | <1.0 | <1.0 | **32.2** | <1.0 | <1.0 |
| CRHE-DPT0169-043.0-20120109 | 1/9/2012 | 1704 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0169-048.0-20120109 | 1/9/2012 | 1718 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0170-028.0-20120110 | 1/10/2012 | 0823 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0170-033.0-20120110 | 1/10/2012 | 0836 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0170-038.0-20120110 | 1/10/2012 | 0854 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0170-043.0-20120110 | 1/10/2012 | 0915 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0170-048.0-20120110 | 1/10/2012 | 0932 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0171-028.0-20120110 | 1/10/2012 | 1049 | Water | 1 | **6.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0171-033.0-20120110 | 1/10/2012 | 1105 | Water | 1 | **18.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0171-038.0-20120110 | 1/10/2012 | 1121 | Water | 1 | **52.6** | <1.0 | <1.0 | **1.6** | <1.0 | <1.0 |
| CRHE-DPT0171-043.0-20120110 | 1/10/2012 | 1137 | Water | 1 | **50.7** | <1.0 | <1.0 | **2.5** | <1.0 | <1.0 |
| CRHE-DPT0171-048.0-20120110 | 1/10/2012 | 1155 | Water | 1 | **7.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0172-028.0-20120110 | 1/10/2012 | 1346 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0172-033.0-20120110 | 1/10/2012 | 1402 | Water | 1 | **48.2** | <1.0 | <1.0 | **2.1** | <1.0 | <1.0 |
| CRHE-DPT0172-038.0-20120110 | 1/10/2012 | 1418 | Water | 1 | **27.7** | <1.0 | <1.0 | **4.0** | <1.0 | <1.0 |
| CRHE-DPT0172-043.0-20120110 | 1/10/2012 | 1436 | Water | 1 | **13.5** | <1.0 | <1.0 | **4.3** | <1.0 | <1.0 |
| CRHE-DPT0172-048.0-20120110 | 1/10/2012 | 1500 | Water | 1 | **27.0** | <1.0 | **2.2** | **84.4** | <1.0 | <1.0 |
| CRHE-DPT0172-053.0-20120110 | 1/10/2012 | 1526 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0172-063.0-20120110 | 1/10/2012 | 1550 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0173-028.0-20120110 | 1/10/2012 | 1635 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0173-033.0-20120110 | 1/10/2012 | 1647 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0173-038.0-20120110 | 1/10/2012 | 1705 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0173-043.0-20120111 | 1/11/2012 | 0745 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0173-048.0-20120111 | 1/11/2012 | 0805 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0173-053.0-20120111 | 1/11/2012 | 0825 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0173-063.0-20120111 | 1/11/2012 | 0850 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0174-028.0-20120111 | 1/11/2012 | 1003 | Water | 1 | **1.4** | <1.0 | **2.4** | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0174-033.0-20120111 | 1/11/2012 | 1018 | Water | 10, 20 | **720** | **6.5 I** | **48** | **1600** | **22** | <10 |
| CRHE-DPT0174-038.0-20120111 | 1/11/2012 | 1034 | Water | 50 | **740** | <50 | **80** | **2800** | <13 I | <50 |
| CRHE-DPT0174-043.0-20120111 | 1/11/2012 | 1053 | Water | 50 | **400** | <50 | **85** | **2600** | **31 I** | <50 |
| CRHE-DPT0174-048.0-20120111 | 1/11/2012 | 1134 | Water | 20 | **280** | <20 | **37** | **1100** | <5 I | <20 |
| CRHE-DPT0175-028.0-20120111 | 1/11/2012 | 1202 | Water | 1 | <1.0 | <1.0 | <1.0 | **4.5** | <1.0 | <1.0 |
| CRHE-DPT0175-033.0-20120111 | 1/11/2012 | 1248 | Water | 1 | <1.0 | <1.0 | <1.0 | **7.6** | <1.0 | <1.0 |
| CRHE-DPT0175-038.0-20120111 | 1/11/2012 | 1304 | Water | 1 | <1.0 | <1.0 | <1.0 | **19.1** | <1.0 | <1.0 |
| CRHE-DPT0175-043.0-20120111 | 1/11/2012 | 1320 | Water | 1 | **1.5** | <1.0 | <1.0 | **19.8** | <1.0 | <1.0 |
| CRHE-DPT0175-048.0-20120111 | 1/11/2012 | 1342 | Water | 1 | **6.5** | <1.0 | <1.0 | **3.3** | <1.0 | <1.0 |
| CRHE-DPT0176-028.0-20120111 | 1/11/2012 | 1437 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0176-033.0-20120111 | 1/11/2012 | 1455 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0176-038.0-20120111 | 1/11/2012 | 1512 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0176-043.0-20120111 | 1/11/2012 | 1532 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0176-048.0-20120111 | 1/11/2012 | 1555 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0177-028.0-20120112 | 1/12/2012 | 0826 | Water | 1 | **15.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report
NASA CRHE
KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0177-033.0-20120112 | 1/12/2012 | 0856 | Water | 1 | **7.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0177-038.0-20120112 | 1/12/2012 | 0918 | Water | 1 | **1.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0177-043.0-20120112 | 1/12/2012 | 0934 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0177-048.0-20120112 | 1/12/2012 | 0952 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0178-028.0-20120112 | 1/12/2012 | 1110 | Water | 1 | **35.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0178-033.0-20120112 | 1/12/2012 | 1129 | Water | 1 | **2.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0178-038.0-20120112 | 1/12/2012 | 1145 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0178-043.0-20120112 | 1/12/2012 | 1200 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0178-048.0-20120112 | 1/12/2012 | 1218 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE - IDW

KSC, FL

Prepared for: GeoSyntec

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-IDW188675-20120111 | 1/11/2012 | 1715 | Water | 1 | **8.1** | <1.0 | <1.0 | **40.4** | <1.0 | <1.0 |
| CRHE-IDW088675-20120112 | 1/12/2012 | 1410 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services


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FAX (352) 472-5832

200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB1

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER KB1K0109/2 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0166-028.0 | 4/9/12 | 0905 | | | 4/9/12 | 1050 | | GW | 2 | ✓ | |
| -033.0 | | 0938 | | | | | | | | | |
| 038.0 | | 1000 | | | | | | | | | |
| 043.0 | | 1020 | | | | | | | | | |
| 048.0 | | 1040 | | | | | | | | | |
| DPT0167-028.0 | | 1148 | | | | 1315 | | | | | |
| 033.0 | | 1204 | | | | | | | | | |
| 038.0 | | 1230 | | | | | | | | | |
| 043.0 | | 1248 | | | | | | | | | |
| 048.0 | | 1306 | | | | | | | | | |
| DPT0168 028.0 | | 1355 | | | | 1520 | | | | | |
| 033.0 | | 1412 | | | | | | | | | |
| 038.0 | | 1432 | | | | | | | | | |
| 043.0 | | 1450 | | | | | | | | | |
| 048.0 | | 1512 | | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 4/9/12 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | | Received by: *(Signature)* | | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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**MOBILE UNIT #** KSI

CLIENT NAME: Graynite

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID \ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KSI-K0109-12 | | | | | | | | | | | |
| Dpt-0169-028.0 | 1/9/12 | 1520 | | | 1/9/12 | 1720 | | aw | 2 | ✓ | |
| 033.0 | ↓ | 1632 | | | ↓ | ↓ | | ↓ | ↓ | ↓ | |
| 038.0 | | 1646 | | | | | | | | | |
| 043.0 | | 1704 | | | | | | | | | |
| 048.0 | | 1718 | | | | | | | | | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | 1/9/12 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

1/4

Mobile Laboratory Services

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**MOBILE UNIT #** KB2

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| GeoSyntec | NASA CKHC |
| SAMPLERS | CONTACT PERSON / BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB2 - 011012 | | | | | | | | | | | |
| DPT 0170 - 28 | 1/10/12 | 0823 | | | 1/10/12 | 0954 | | GW | 2 | ✓ | KB2 - 011012 |
| DPT 0170 - 33 | | 0836 | | | | 0954 | | | | | |
| DPT 0170 - 38 | | 0854 | | | | 0954 | | | | | |
| DPT 0170 - 43 | | 0915 | | | | 0954 | | | | | |
| DPT 0170 - 48 | | 0932 | | | | 0954 | | | | | |
| DPT 0171 - 28 | | 1049 | | | | 1210 | | | | | |
| DPT 0171 - 33 | | 1105 | | | | 1210 | | | | | |
| DPT 0171 - 38 | | 1121 | | | | 1210 | | | | | |
| DPT 0171 - 43 | | 1137 | | | | 1210 | | | | | |
| DPT 0171 - 48 | | 1155 | | | | 1210 | | | | | |
| DPT 0172 - 28 | | 1346 | | | | 1430 | | | | | |
| DPT 0172 - 33 | | 1402 | | | | 1430 | | | | | |
| DPT 0172 - 38 | | 1418 | | | | 1430 | | | | | |
| DPT 0172 - 43 | | 1436 | | | | 1605 | | | | | |
| DPT 0172 - 48 | | 1500 | | | | 1605 | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | | Received by: *(Signature)* BH | 1/10/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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# CHAIN-OF-CUSTODY RECORD

2 / 4

**MOBILE UNIT #** KB2

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | NASA - CRHE |
| SAMPLERS | CONTACT PERSON / BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER KB2 - 011012 - | DATE SAMPLED | TIME SAMPLED | COMP | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0172 - 53 | 1/10/12 | 1526 | | | 1/10/12 | 1605 | | GW | 2 | V | KB2 - 011112 |
| DPT0172 - 63 | | 1550 | | | | 1605 | | | | | |
| DPT0173 - 28 | | 1635 | | | | 1720 | | | | | |
| DPT0173 - 33 | | 1647 | | | | 1720 | | | | | |
| DPT0173 - 38 | | 1705 | | | | 1720 | | | | | |
| DPT0173 - 43 | 1/11/12 | 0745 | | | 1/11/12 | 0905 | | GW | 2 | V | KB2 - 011112 |
| DPT0173 - 48 | | 0805 | | | | 0905 | | | | | |
| DPT0173 - 53 | | 0825 | | | | 0905 | | | | | |
| DPT0173 - 63 | | 0850 | | | | 0905 | | | | | |
| DPT0174 - 28 | | 1003 | | | | 1045 | | | | | |
| DPT0174 - 33 | | 1018 | | | | 1045 | | | | | |
| DPT0174 - 38 | | 1034 | | | | 1045 | | | | | |
| DPT0174 - 43 | | 1053 | | | | 1134 | | | | | |
| DPT0174 - 48 | | 1109 | | | | 1134 | | | | | |
| DPT0175 - 28 | | 1202 | | | | 1355 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 1/11/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (919) 678-0030

**MOBILE UNIT #** MB2

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA - CRHE

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0175 - 33 | 1/11/12 | 1248 | | | 1/11/12 | 1355 | | GW | 2 | ✓ | MB2 - 01112 |
| DPT0175 - 38 | | 1304 | | | | 1355 | | | | | |
| DPT0175 - 43 | | 1320 | | | | 1355 | | | | | |
| DPT0175 - 48 | | 1342 | | | | 1355 | | | | | |
| DPT0176 - 28 | | 1437 | | | | 1615 | | | | | |
| DPT0176 - 33 | | 1455 | | | | 1615 | | | | | |
| DPT0176 - 38 | | 1512 | | | | 1615 | | | | | |
| DPT0176 - 43 | | 1532 | | | | 1615 | | | | | |
| DPT0176 - 48 | | 1555 | | | | 1615 | | | | | |
| IDW 188675 | | 1715 | | | | 1715 | | | | | |
| DPT0177 - 28 | 1/12/12 | 0826 | | | 1/12/12 | 0835 | | | | | MB2 - 01212 |
| DPT0177 - 33 | | 0856 | | | | 0925 | | | | | |
| DPT0177 - 38 | | 0918 | | | | 0925 | | | | | |
| DPT0177 - 43 | | 0934 | | | | 1010 | | | | | |
| DPT0177 - 48 | | 0952 | | | | 1010 | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 1/12/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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# CHAIN-OF-CUSTODY RECORD

4/4

**MOBILE UNIT #** KB2

| CLIENT NAME | PROJECT NAME & ADDRESS | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Geosyntec | NASA - CRHC | | | | | | | | | | | | | | | | |
| SAMPLERS | CONTACT PERSON | | | | | | BATCH # (Lab Use Only) | | | | | | | | | | |
| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | | | | | COMMENT / SAMPLE PRE FIX | | |
| DPT0178-28 | 1/12/12 | 1110 | | | 1/12/12 | 1309 | | GW | 2 | ✓ | | | | | KB2 - 01212 | | |
| DPT0178-33 | " | 1129 | | | " | 1309 | | " | " | " | | | | | " | | |
| DPT0178-38 | " | 1145 | | | " | 1309 | | " | " | " | | | | | " | | |
| DPT0178-43 | " | 1200 | | | " | 1309 | | " | " | " | | | | | " | | |
| DPT0178-48 | " | 1218 | | | " | 1309 | | " | " | " | | | | | " | | |
| IDW 088675 | " | 1410 | | | " | 1420 | | " | " | " | | | | | " | | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 1/12/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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February 13, 2012

Jill Johnson
Geosyntec Consultants
316 South Baylen Street, Suite 201
Pensacola, FL 32502

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project #12-28**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from February 7 to 10, 2012. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 472-5830.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

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# PROJECT NARRATIVE

## Project Scope

From February 7 to 10, 2012, a total of 53 water samples were analyzed for Geosyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB2: FDOH NELAP Certification Number E82840

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report and the results relate only to the actual samples received and analyzed in the laboratory. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example,

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if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0 ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

---

# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. As per NASA client request for diluted samples between the lab RL and MDL are reported with FDEP Data qualifier "I".

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 12-28 |
| **On-site Dates**: 2/7/12-2/10/12 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CCS 20 | 02/07/12 | 100 | 99 | 99 | 98 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/07/12 | 97 | 90 | 101 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 02/07/12 | 105 | 101 | 100 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-010.0 | 02/07/12 | 104 | 104 | 98 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-018.0 | 02/07/12 | 104 | 99 | 100 | 103 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/08/12 | 99 | 91 | 102 | 98 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/08/12 | 97 | 91 | 100 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 02/08/12 | 105 | 102 | 97 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-010.0 | 02/08/12 | 106 | 99 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0161-018.0 | 02/08/12 | 105 | 98 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0167-010.0 | 02/08/12 | 105 | 98 | 101 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0167-018.0 | 02/08/12 | 105 | 98 | 100 | 105 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/08/12 | 101 | 98 | 99 | 99 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/08/12 | 100 | 94 | 99 | 99 | Pass | Pass | Pass | Pass |
| BLANK | 02/08/12 | 107 | 104 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-010.0 | 02/08/12 | 106 | 101 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-018.0 | 02/08/12 | 101 | 96 | 101 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-028.0 | 02/08/12 | 109 | 102 | 113 | 117 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-033.0 | 02/08/12 | 104 | 96 | 102 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-038.0 | 02/08/12 | 104 | 100 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-043.0 | 02/08/12 | 109 | 104 | 98 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-048.0 | 02/08/12 | 105 | 100 | 100 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-048.0 MS | 02/08/12 | 99 | 92 | 103 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0179-048.0 MSD | 02/08/12 | 96 | 86 | 104 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0180-010.0 | 02/08/12 | 103 | 98 | 101 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0180-018.0 | 02/08/12 | 107 | 101 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0180-028.0 | 02/08/12 | 108 | 102 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0180-033.0 | 02/08/12 | 107 | 99 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0180-038.0 | 02/08/12 | 108 | 98 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0180-043.0 | 02/09/12 | 107 | 98 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0180-048.0 | 02/09/12 | 107 | 98 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0181-010.0 | 02/09/12 | 105 | 96 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0181-018.0 | 02/09/12 | 107 | 100 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0181-028.0 | 02/09/12 | 107 | 98 | 99 | 101 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 12-28 |
| **On-site Dates**: 2/7/12-2/10/12 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0181-038.0 | 02/09/12 | 108 | 100 | 98 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0181-043.0 | 02/09/12 | 106 | 99 | 98 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0181-048.0 | 02/09/12 | 105 | 94 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0182-010.0 | 02/09/12 | 107 | 98 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0182-018.0 | 02/09/12 | 107 | 99 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0182-028.0 | 02/09/12 | 108 | 102 | 97 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0182-038.0 | 02/09/12 | 106 | 97 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0182-043.0 | 02/09/12 | 107 | 99 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0182-048.0 | 02/09/12 | 107 | 98 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-010.0 | 02/09/12 | 107 | 99 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-010.0 MS | 02/09/12 | 102 | 95 | 100 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-010.0 MSD | 02/09/12 | 99 | 91 | 100 | 100 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/09/12 | 96 | 87 | 102 | 101 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/09/12 | 97 | 84 | 102 | 99 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/09/12 | 97 | 90 | 100 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 02/09/12 | 105 | 98 | 100 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-018.0 | 02/09/12 | 107 | 101 | 99 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/09/12 | 99 | 94 | 100 | 100 | Pass | Pass | Pass | Pass |
| LCS 20 | 02/09/12 | 97 | 90 | 101 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 02/09/12 | 100 | 94 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-018.0 | 02/09/12 | 100 | 92 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-028.0 | 02/09/12 | 102 | 97 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-038.0 | 02/09/12 | 103 | 97 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-043.0 | 02/09/12 | 102 | 93 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0183-048.0 | 02/09/12 | 105 | 98 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-010.0 | 02/09/12 | 106 | 96 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-014.0 | 02/09/12 | 105 | 96 | 101 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0177-023.0 | 02/09/12 | 103 | 93 | 101 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-010.0 | 02/09/12 | 102 | 93 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-018.0 | 02/09/12 | 106 | 98 | 99 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-028.0 | 02/09/12 | 105 | 99 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-033.0 | 02/09/12 | 104 | 96 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-038.0 | 02/10/12 | 104 | 92 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-043.0 | 02/10/12 | 103 | 93 | 100 | 101 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 12-28 |
| **On-site Dates**: 2/7/12-2/10/12 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0184-048.0 | 02/10/12 | 103 | 95 | 101 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-014.0 | 02/10/12 | 103 | 94 | 101 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0159-023.0 | 02/10/12 | 103 | 95 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-IDW188738 1:10 | 02/10/12 | 100 | 92 | 102 | 101 | Pass | Pass | Pass | Pass |
| CRHE-IDW188736 1:10 | 02/10/12 | 100 | 93 | 100 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-048.0 MS | 02/10/12 | 98 | 91 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0184-048.0 MSD | 02/10/12 | 98 | 89 | 102 | 101 | Pass | Pass | Pass | Pass |
| CCS 20 | 02/10/12 | 93 | 86 | 103 | 101 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 12-28 |
| **Onsite Dates:** 2/7/12-2/10/12 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0179-048.0 **Date of Analysis:** 2/8/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 110 | 106 | 4 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 103 | 97 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 102 | 96 | 6 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 89 | 86 | 4 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 102 | 97 | 5 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 105 | 101 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0183-010.0 **Date of Analysis:** 2/9/2010

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 111 | 102 | 8 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 103 | 93 | 10 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 104 | 97 | 7 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 96 | 90 | 6 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 100 | 93 | 7 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 103 | 97 | 6 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0184-048.0 **Date of Analysis:** 2/10/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 97 | 99 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 94 | 95 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 94 | 95 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 88 | 87 | 1 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 92 | 93 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 96 | 97 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 12-28 |
| **Onsite Dates:** 2/7/12-2/10/12 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 — **Date of Analysis:** 2/7/2012
LCS 2 — 2/8/2012
LCS 3 — 2/8/2012

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 58 | to | 135 | 104 | 106 | 130 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 60 | to | 141 | 98 | 99 | 119 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 93 | 100 | 122 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 99 | 94 | 115 | Pass | Pass | Pass |
| Trichloroethene | 68 | to | 128 | 101 | 97 | 119 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | to | 135 | 102 | 101 | 122 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 — **Date of Analysis:** 2/9/2012
LCS 5 — 2/9/2012

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | | LCS#4 | LCS#5 | |
| Vinyl Chloride | 58 | to | 135 | 95 | 102 | | Pass | Pass | |
| 1,1-Dichloroethene | 60 | to | 141 | 85 | 97 | | Pass | Pass | |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 89 | 98 | | Pass | Pass | |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 87 | 93 | | Pass | Pass | |
| Trichloroethene | 68 | to | 128 | 86 | 98 | | Pass | Pass | |
| Tetrachloroethene | 67 | to | 135 | 91 | 97 | | Pass | Pass | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0159-010.0-20120207 | 2/7/2012 | 0923 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0159-018.0-20120207 | 2/7/2012 | 0944 | Water | 1 | **16.8** | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 |
| CRHE-DPT0161-010.0-20120207 | 2/8/2012 | 1030 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0161-018.0-20120207 | 2/8/2012 | 1047 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0167-010.0-20120207 | 2/8/2012 | 1320 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0167-018.0-20120207 | 2/8/2012 | 1339 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0179-010.0-20120207 | 2/8/2012 | 1427 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0179-018.0-20120207 | 2/8/2012 | 1440 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0179-028.0-20120207 | 2/8/2012 | 1453 | Water | 1 | **1.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0179-033.0-20120207 | 2/8/2012 | 1511 | Water | 1 | **1.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0179-038.0-20120207 | 2/8/2012 | 1528 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0179-043.0-20120207 | 2/8/2012 | 1542 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0179-048.0-20120207 | 2/8/2012 | 1605 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0180-010.0-20120207 | 2/8/2012 | 1632 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0180-018.0-20120208 | 2/8/2012 | 0802 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0180-028.0-20120208 | 2/8/2012 | 0816 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0180-033.0-20120208 | 2/8/2012 | 0836 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0180-038.0-20120208 | 2/8/2012 | 0854 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0180-043.0-20120208 | 2/9/2012 | 0914 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0180-048.0-20120208 | 2/9/2012 | 0930 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0181-010.0-20120208 | 2/9/2012 | 1053 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0181-018.0-20120208 | 2/9/2012 | 1105 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0181-028.0-20120208 | 2/9/2012 | 1119 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0181-038.0-20120208 | 2/9/2012 | 1135 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0181-043.0-20120208 | 2/9/2012 | 1154 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0181-048.0-20120208 | 2/9/2012 | 1212 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0182-010.0-20120208 | 2/9/2012 | 1407 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0182-018.0-20120208 | 2/9/2012 | 1416 | Water | 1 | **2.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0182-028.0-20120208 | 2/9/2012 | 1423 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0182-038.0-20120208 | 2/9/2012 | 1439 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0182-043.0-20120208 | 2/9/2012 | 1505 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0182-048.0-20120208 | 2/9/2012 | 1525 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0183-010.0-20120208 | 2/9/2012 | 1645 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0183-018.0-20120209 | 2/9/2012 | 0719 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0183-028.0-20120209 | 2/9/2012 | 0732 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0183-038.0-20120209 | 2/9/2012 | 0750 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0183-043.0-20120209 | 2/9/2012 | 0807 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0183-048.0-20120209 | 2/9/2012 | 0833 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0177-010.0-20120209 | 2/9/2012 | 1107 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0177-014.0-20120209 | 2/9/2012 | 1118 | Water | 1 | **1.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report
NASA CRHE
KSC, FL

Prepared for: Geosyntec Consultants

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0177-018.0-20120209 | 2/9/2012 | 1127 | Water | 1 | **1.7** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0177-023.0-20120209 | 2/9/2012 | 1136 | Water | 1 | **2.4** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0184-010.0-20120209 | 2/9/2012 | 1336 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0184-018.0-20120209 | 2/9/2012 | 1346 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0184-028.0-20120209 | 2/9/2012 | 1356 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0184-033.0-20120209 | 2/9/2012 | 1413 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0184-038.0-20120209 | 2/10/2012 | 1430 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0184-043.0-20120209 | 2/10/2012 | 1446 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0184-048.0-20120209 | 2/10/2012 | 1500 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0159-014.0-20120207 | 2/10/2012 | 0936 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0159-023.0-20120207 | 2/10/2012 | 0956 | Water | 1 | **53.6** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-IDW188738-20120209 | 2/10/2012 | 1710 | Water | 10 | <2.4 I | <10 | <10 | <10 | <2.5 I | <10 |
| CRHE-IDW188736-20120209 | 2/10/2012 | 1711 | Water | 10 | <2.4 I | <10 | <10 | <10 | <2.5 I | <10 |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

MOBILE UNIT #: KB 2

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA - CRMS

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB2 - 020712 | | | | | | | | | | | |
| DPT0159 - 010.0 | 2/7/12 | 0923 | | | 2/7/12 | 1625 | | GW | 2 | ✓ | |
| DPT0159 - 014.0 | | 0936 | | | | | | | | | H |
| DPT0159 - 018.0 | | 0944 | | | | | | | | | |
| DPT0159 - 023.0 | | 0956 | | | | | | | | | H |
| DPT 0161 - 010.0 | | 1030 | | | | | | | | | |
| DPT 0161 - 014.0 | | 1036 | | | | | | | | | H - Do not run |
| DPT 0161 - 018.0 | | 1047 | | | | | | | | | |
| DPT 0161 - 023.0 | | 1055 | | | | | | | | | H - Do not run |
| DPT 0167 - 010.0 | | 1320 | | | | | | | | | |
| DPT 0167 - 014.0 | | 1329 | | | | | | | | | H - Do not run |
| DPT 0167 - 018.0 | | 1339 | | | | | | | | | |
| DPT 0167 - 023.0 | | 1353 | | | | | | | | | H - Do not run |
| DPT 0179 - 010.0 | | 1427 | | | | | | | | | |
| DPT 0179 - 018.0 | | 1440 | | | | | | | | | |
| DPT 0179 - 028.0 | | 1453 | | | | | | | | | |

| | | | |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time: 2/7/12 |

**Remarks and Observations**

Do not run per client on 2/7/12.

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

2/2

Mobile Laboratory Services

25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB2

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | CRHE | |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB2-020712 | | | | | | | | | | | |
| DPT0179-033.0 | 2/7/12 | 1511 | | | 2/7/12 | 1625 | | GW | 2 | ✓ | |
| DPT0179-038.0 | | 1528 | | | | 1625 | | | | | |
| DPT0179-043.0 | | 1542 | | | | 1625 | | | | | |
| DPT0179-048.0 | | 1603 | | | | 1625 | | | | | |
| DPT0180-010.0 | | 1632 | | | | 1753 | | | | | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| | | | |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 2/7/12 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB2

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | NASA - CRTE |
| SAMPLERS | CONTACT PERSON / BATCH # (Lab Use Only) |

| SAMPLE FIELD ID.\ NUMBER KB2-020812 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0180 - 018.0 | 2/8/12 | 0802 | | | 2/8/12 | 1420 | | GW | 2 | ✓ | |
| 028.0 | | 0816 | | | | 1420 | | | | | |
| 033.0 | | 0836 | | | | 1420 | | | | | |
| 038.0 | | 0854 | | | | 1420 | | | | | |
| 043.0 | | 0914 | | | | 1420 | | | | | |
| 048.0 | | 0930 | | | | 1420 | | | | | |
| DPT0181 - 010.0 | | 1053 | | | | 1420 | | | | | |
| - 018.0 | | 1105 | | | | 1420 | | | | | |
| - 028.0 | | 1119 | | | | 1420 | | | | | |
| - 038.0 | | 1135 | | | | 1420 | | | | | |
| - 043.0 | | 1154 | | | | 1420 | | | | | |
| - 048.0 | | 1212 | | | | 1420 | | | | | |
| DPT0182 - 010.0 | | 1407 | | | | 1657 | | | | | |
| 018.0 | | 1416 | | | | 1657 | | | | | |
| 028.0 | | 1423 | | | | 1657 | | | | | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 2/8/12 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** K82

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | NASA - CRH2 | |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT 0182 - 038.0 | 2/5/12 | 1439 | | | 2/5/12 | 1657 | | GW | 2 | ✓ | |
| " - 043.0 | " | 1505 | | | " | 1657 | | " | " | " | |
| " - 048.0 | " | 1525 | | | " | 1657 | | " | " | " | |
| DPT 0183 - 010.0 | " | 1645 | | | " | 1657 | | " | " | " | |

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* BM JR | Date / Time 2/5/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

1/2

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB2

| CLIENT NAME | PROJECT NAME & ADDRESS | BATCH # (Lab Use Only) |
|---|---|---|
| Geosyntec | NASA - CRHE | |
| SAMPLERS | CONTACT PERSON | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB2-020912 | | | | | | | | | | | |
| CRHE - DPT0183-018.0 | 2/9/12 | 0719 | | | 2/9/12 | 1149 | | GW | 2 | ✓ | |
| DPT 0183 - 028.0 | | 0732 | | | | 1149 | | | | | |
| DPT 0183 - 038.0 | | 0750 | | | | 1149 | | | | | |
| DPT 0183 - 043.0 | | 0807 | | | | 1149 | | | | | |
| DPT 0183 - 048.0 | | 0833 | | | | 1149 | | | | | |
| DPT 0177 - 010.0 | | 1107 | | | | 1149 | | | | | |
| DPT 0177 - 014.0 | | 1118 | | | | 1149 | | | | | |
| DPT 0177 - 018.0 | | 1127 | | | | 1149 | | | | | |
| DPT 0177 - 023.0 | | 1136 | | | | 1149 | | | | | |
| DPT 0184 - 010.0 | | 1336 | | | | 1520 | | | | | |
| DPT 0184 - 018.0 | | 1346 | | | | 1520 | | | | | |
| DPT 0184 - 028.0 | | 1356 | | | | 1520 | | | | | |
| DPT 0184 - 033.0 | | 1413 | | | | 1520 | | | | | |
| DPT 0184 - 038.0 | | 1430 | | | | 1520 | | | | | |
| DPT 0184 - 043.0 | | 1446 | | | | 1520 | | | | | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature)<br>BD JE | Date / Time<br>2/9/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (919) 678-0030

**MOBILE UNIT #** KB 2

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | NASA - CRHE |
| SAMPLERS | CONTACT PERSON / BATCH # (Lab Use Only) |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KB2 - 020912 | | | | | | | | | | | |
| DPT0154 - 048.0 | 2/9/12 | 1500 | | | 2/9/12 | 1520 | | GW | 2 | ✓ | |
| IDW 188738 | " | 1710 | | | " | 1720 | | " | " | " | |
| IDW 188736 | " | 1711 | | | " | 1720 | | " | " | " | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers Relinquished by: (Signature) | | | | |
| Relinquished by: (Signature) | | Received by: (Signature) | 2/9/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**25132 SW 1st Ave**
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Email: info@kbmobilelabs.com

October 25, 2012

Jill Johnson
Geosyntec Consultants
316 South Baylen Street
Pensacola, FL 32502

**RE: NASA CRHE, KSC, FL - Final Data Report RevA**
**KB Labs Project # 12-163**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 472-5830.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

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# PROJECT NARRATIVE

## Project Scope

From October 2 through 16, 2012, a total of 71 water samples were analyzed for Geosyntec Consultants at Wilson Corners, KSC, FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB3: FDOH NELAP Certification Number E82816

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report and the results relate only to the actual samples received and analyzed in the laboratory. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example,

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if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0 ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

---

# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. As per client, removed the V* designation for samples collected on 10/16/12.

3. As per client request, changed DPT0195-058.0-20121016 to DPT0089-058.0-2012016.

4. As per client request, removed original reported sample of DPT0089-058.0-20121016 from report (duplicate location).

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George/Greg Lamb |
| **Site:** CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 12-163 |
| **On-site Dates**: 10/2/12-10/5/12, 10/16/12 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| BLANK | 10/02/12 | 102 | 91 | 105 | 111 | Pass | Pass | Pass | Pass |
| CCS 20 | 10/02/12 | 104 | 108 | 98 | 106 | Pass | Pass | Pass | Pass |
| LCS 20 | 10/02/12 | 103 | 88 | 103 | 106 | Pass | Pass | Pass | Pass |
| BLANK | 10/02/12 | 104 | 93 | 101 | 122 | Pass | Pass | Pass | Pass |
| DPT0185-018.02 | 10/02/12 | 99 | 88 | 103 | 116 | Pass | Pass | Pass | Pass |
| DPT0185-023.02 | 10/02/12 | 103 | 91 | 107 | 110 | Pass | Pass | Pass | Pass |
| DPT0185-028.02 | 10/02/12 | 93 | 89 | 100 | 116 | Pass | Pass | Pass | Pass |
| DPT0185-028.02 MS | 10/02/12 | 110 | 101 | 101 | 105 | Pass | Pass | Pass | Pass |
| DPT0185-028.02 MSD | 10/02/12 | 101 | 102 | 101 | 99 | Pass | Pass | Pass | Pass |
| DPT0185-033.02 | 10/02/12 | 101 | 92 | 106 | 112 | Pass | Pass | Pass | Pass |
| DPT0185-038.02 | 10/02/12 | 101 | 92 | 100 | 110 | Pass | Pass | Pass | Pass |
| DPT0185-043.02 | 10/02/12 | 102 | 92 | 102 | 115 | Pass | Pass | Pass | Pass |
| DPT0185-058.02 | 10/02/12 | 96 | 95 | 100 | 112 | Pass | Pass | Pass | Pass |
| BLANK | 10/02/12 | 96 | 92 | 104 | 110 | Pass | Pass | Pass | Pass |
| DPT0186-028.02 | 10/02/12 | 87 | 81 | 99 | 113 | Pass | Pass | Pass | Pass |
| DPT0186-033.02 | 10/02/12 | 95 | 84 | 102 | 105 | Pass | Pass | Pass | Pass |
| DPT0186-038.02 | 10/02/12 | 102 | 93 | 99 | 109 | Pass | Pass | Pass | Pass |
| DPT0186-043.02 | 10/02/12 | 89 | 89 | 100 | 112 | Pass | Pass | Pass | Pass |
| DPT0186-058.02 | 10/02/12 | 101 | 92 | 100 | 111 | Pass | Pass | Pass | Pass |
| DPT0187-028.02 | 10/02/12 | 98 | 91 | 99 | 105 | Pass | Pass | Pass | Pass |
| DPT0187-033.02 | 10/02/12 | 99 | 96 | 104 | 106 | Pass | Pass | Pass | Pass |
| DPT0187-038.02 | 10/02/12 | 99 | 87 | 100 | 107 | Pass | Pass | Pass | Pass |
| DPT0187-043.02 | 10/02/12 | 96 | 95 | 99 | 108 | Pass | Pass | Pass | Pass |
| DPT0187-058.02 | 10/02/12 | 97 | 86 | 100 | 104 | Pass | Pass | Pass | Pass |
| DPT0188-028.02 | 10/02/12 | 106 | 88 | 102 | 108 | Pass | Pass | Pass | Pass |
| DPT0188-033.02 | 10/02/12 | 105 | 95 | 98 | 107 | Pass | Pass | Pass | Pass |
| CCS 20 | 10/02/12 | 102 | 102 | 96 | 98 | Pass | Pass | Pass | Pass |
| BLANK | 10/03/12 | 102 | 90 | 109 | 114 | Pass | Pass | Pass | Pass |
| CCS 20 | 10/03/12 | 104 | 103 | 100 | 103 | Pass | Pass | Pass | Pass |
| LCS 20 | 10/03/12 | 99 | 94 | 101 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 10/03/12 | 100 | 89 | 103 | 112 | Pass | Pass | Pass | Pass |
| DPT0188-033.02 10X | 10/03/12 | 107 | 96 | 97 | 110 | Pass | Pass | Pass | Pass |
| DPT0188-038.03 10X | 10/03/12 | 102 | 96 | 97 | 111 | Pass | Pass | Pass | Pass |
| DPT0188-038.03 20X | 10/03/12 | 103 | 93 | 99 | 106 | Pass | Pass | Pass | Pass |
| DPT0188-043.03 | 10/03/12 | 105 | 91 | 95 | 110 | Pass | Pass | Pass | Pass |
| DPT0188-058.03 10X | 10/03/12 | 102 | 93 | 101 | 102 | Pass | Pass | Pass | Pass |
| DPT0188-058.03 | 10/03/12 | 98 | 88 | 100 | 109 | Pass | Pass | Pass | Pass |
| DPT0174-053.03 | 10/03/12 | 98 | 85 | 105 | 105 | Pass | Pass | Pass | Pass |
| DPT0174-053.03 10X | 10/03/12 | 104 | 91 | 98 | 105 | Pass | Pass | Pass | Pass |
| DPT0174-058.03 | 10/03/12 | 104 | 88 | 100 | 106 | Pass | Pass | Pass | Pass |
| DPT0190-028.03 | 10/03/12 | 97 | 81 | 101 | 108 | Pass | Pass | Pass | Pass |
| DPT0190-033.03 | 10/03/12 | 118 | 89 | 97 | 111 | Pass | Pass | Pass | Pass |
| BLANK | 10/03/12 | 107 | 86 | 100 | 106 | Pass | Pass | Pass | Pass |
| DPT0190-038.03 | 10/03/12 | 115 | 100 | 102 | 106 | Pass | Pass | Pass | Pass |
| DPT0190-043.03 | 10/03/12 | 141 | 110 | 98 | 102 | > UCL | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George/Greg Lamb |
| **Site:** CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 12-163 |
| **On-site Dates**: 10/2/12-10/5/12, 10/16/12 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| DPT0190-058.03 | 10/03/12 | 97 | 86 | 97 | 105 | Pass | Pass | Pass | Pass |
| DPT0190-058.03 MS | 10/03/12 | 93 | 86 | 95 | 91 | Pass | Pass | Pass | Pass |
| DPT0190-058.03 MSD | 10/03/12 | 129 | 119 | 94 | 98 | > UCL | Pass | Pass | Pass |
| DPT0191-028.03 | 10/03/12 | 101 | 83 | 101 | 103 | Pass | Pass | Pass | Pass |
| DPT0191-033.03 | 10/03/12 | 102 | 90 | 93 | 105 | Pass | Pass | Pass | Pass |
| DPT0191-038.03 | 10/03/12 | 105 | 85 | 97 | 108 | Pass | Pass | Pass | Pass |
| DPT0191-043.03 | 10/03/12 | 101 | 92 | 98 | 98 | Pass | Pass | Pass | Pass |
| DPT0191-058.03 | 10/03/12 | 107 | 92 | 99 | 102 | Pass | Pass | Pass | Pass |
| DPT0149-058.03 | 10/03/12 | 121 | 98 | 97 | 105 | Pass | Pass | Pass | Pass |
| DPT0189-018.03 | 10/03/12 | 139 | 87 | 98 | 108 | > UCL | Pass | Pass | Pass |
| DPT0189-023.03 | 10/03/12 | 100 | 90 | 96 | 100 | Pass | Pass | Pass | Pass |
| DPT0189-028.03 | 10/03/12 | 117 | 86 | 97 | 102 | Pass | Pass | Pass | Pass |
| DPT0189-033.03 | 10/03/12 | 105 | 87 | 97 | 103 | Pass | Pass | Pass | Pass |
| DPT0189-038.03 | 10/03/12 | 102 | 80 | 95 | 109 | Pass | Pass | Pass | Pass |
| DPT0189-043.03 | 10/03/12 | 120 | 81 | 95 | 103 | Pass | Pass | Pass | Pass |
| DPT0189-058.03 | 10/03/12 | 96 | 80 | 97 | 106 | Pass | Pass | Pass | Pass |
| DPT0189-058.03 MS | 10/03/12 | 13 | 88 | 96 | 88 | < LCL | Pass | Pass | Pass |
| DPT0189-058.03 MSD | 10/03/12 | 103 | 84 | 93 | 89 | Pass | Pass | Pass | Pass |
| CCS 20 | 10/03/12 | 106 | 94 | 93 | 91 | Pass | Pass | Pass | Pass |
| BLANK | 10/04/12 | 98 | 78 | 108 | 108 | Pass | Pass | Pass | Pass |
| CCS 20 | 10/04/12 | 124 | 92 | 99 | 91 | Pass | Pass | Pass | Pass |
| LCS 20 | 10/04/12 | 96 | 88 | 97 | 93 | Pass | Pass | Pass | Pass |
| BLANK | 10/04/12 | 86 | 73 | 89 | 88 | Pass | < LCL | Pass | Pass |
| DPT0192-018.04 | 10/04/12 | 61 | 52 | 94 | 96 | < LCL | < LCL | Pass | Pass |
| DPT0192-023.04 | 10/04/12 | 94 | 82 | 98 | 111 | Pass | Pass | Pass | Pass |
| DPT0192-028.04 | 10/04/12 | 97 | 80 | 98 | 104 | Pass | Pass | Pass | Pass |
| DPT0192-033.04 | 10/04/12 | 109 | 94 | 99 | 105 | Pass | Pass | Pass | Pass |
| DPT0192-038.04 | 10/04/12 | 97 | 84 | 96 | 102 | Pass | Pass | Pass | Pass |
| DPT0192-018.04 RE | 10/04/12 | 126 | 93 | 96 | 100 | > UCL | Pass | Pass | Pass |
| DPT0192-018.04 MS | 10/04/12 | 100 | 95 | 90 | 89 | Pass | Pass | Pass | Pass |
| DPT0192-018.04 MSD | 10/04/12 | 130 | 106 | 97 | 88 | > UCL | Pass | Pass | Pass |
| DPT0192-043.04 | 10/04/12 | 112 | 87 | 98 | 106 | Pass | Pass | Pass | Pass |
| DPT0192-058.04 | 10/04/12 | 104 | 92 | 129 | 103 | Pass | Pass | > UCL | Pass |
| DPT0148-053.04 20X | 10/04/12 | 99 | 99 | 90 | 101 | Pass | Pass | Pass | Pass |
| DPT0148-058.04 | 10/04/12 | 76 | 93 | 87 | 95 | < LCL | Pass | Pass | Pass |
| DPT0148-058.04 RE | 10/04/12 | 112 | 85 | 96 | 98 | Pass | Pass | Pass | Pass |
| DPT0138-053.04 | 10/04/12 | 100 | 94 | 102 | 108 | Pass | Pass | Pass | Pass |
| DPT0138-058.04 | 10/04/12 | 109 | 91 | 111 | 100 | Pass | Pass | Pass | Pass |
| DPT0010-053.04 | 10/04/12 | 107 | 87 | 100 | 98 | Pass | Pass | Pass | Pass |
| DPT0010-058.04 | 10/04/12 | 105 | 87 | 96 | 97 | Pass | Pass | Pass | Pass |
| DPT0044-058.04 | 10/04/12 | 100 | 85 | 94 | 95 | Pass | Pass | Pass | Pass |
| DPT0158-053.04 | 10/04/12 | 117 | 112 | 93 | 98 | Pass | Pass | Pass | Pass |
| DPT0158-058.04 | 10/04/12 | 107 | 95 | 107 | 112 | Pass | Pass | Pass | Pass |
| DPT0193-069.04 | 10/04/12 | 106 | 93 | 94 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 10/04/12 | 123 | 88 | 94 | 86 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George/Greg Lamb |
| **Site:** CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 12-163 |
| **On-site Dates**: 10/2/12-10/5/12, 10/16/12 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| BLANK | 10/05/12 | 98 | 75 | 99 | 104 | Pass | Pass | Pass | Pass |
| CCS 20 | 10/05/12 | 108 | 94 | 98 | 94 | Pass | Pass | Pass | Pass |
| LCS 20 | 10/05/12 | 104 | 98 | 104 | 109 | Pass | Pass | Pass | Pass |
| BLANK | 10/05/12 | 106 | 93 | 100 | 111 | Pass | Pass | Pass | Pass |
| DPT0194-053.05 | 10/05/12 | 134 | 107 | 97 | 101 | > UCL | Pass | Pass | Pass |
| DPT0194-053.05 | 10/05/12 | 135 | 83 | 98 | 99 | > UCL | Pass | Pass | Pass |
| DPT0194-053.05 MS | 10/05/12 | 94 | 87 | 98 | 96 | Pass | Pass | Pass | Pass |
| DPT0194-053.05 MSD | 10/05/12 | 131 | 86 | 95 | 94 | > UCL | Pass | Pass | Pass |
| DPT0194-058.05 | 10/05/12 | 106 | 98 | 95 | 105 | Pass | Pass | Pass | Pass |
| DPT0195-053.05 | 10/05/12 | 107 | 89 | 92 | 98 | Pass | Pass | Pass | Pass |
| DPT0195-058.05 | 10/05/12 | 111 | 89 | 108 | 98 | Pass | Pass | Pass | Pass |
| DPT0044-068.05 | 10/05/12 | 103 | 81 | 94 | 96 | Pass | Pass | Pass | Pass |
| DPT0155-058.05 | 10/05/12 | 105 | 89 | 98 | 108 | Pass | Pass | Pass | Pass |
| DPT0171-058.05 | 10/05/12 | 98 | 76 | 98 | 100 | Pass | Pass | Pass | Pass |
| DPT0127-058.05 | 10/05/12 | 100 | 79 | 93 | 101 | Pass | Pass | Pass | Pass |
| IDW1905154 | 10/05/12 | 106 | 86 | 80 | 85 | Pass | Pass | < LCL | Pass |
| CCS 20 | 10/05/12 | 120 | 83 | 94 | 93 | Pass | Pass | Pass | Pass |
| CCS 20 | 10/16/12 | 108 | 109 | 92 | 108 | Pass | Pass | Pass | Pass |
| LCS 20 | 10/16/12 | 101 | 105 | 90 | 108 | Pass | Pass | Pass | Pass |
| BLANK | 10/16/12 | 108 | 98 | 96 | 116 | Pass | Pass | Pass | Pass |
| DPT0125-058.0 | 10/16/12 | 98 | 92 | 93 | 117 | Pass | Pass | Pass | Pass |
| DPT0089-058.0 Not reported | 10/16/12 | 108 | 108 | 90 | 115 | Pass | Pass | Pass | Pass |
| DPT0195-058.0 (DPT0089) | 10/16/12 | 84 | 82 | 84 | 111 | Pass | Pass | < LCL | Pass |
| DPT0089-058.0 MS | 10/16/12 | 118 | 115 | 89 | 110 | Pass | Pass | Pass | Pass |
| DPT0089-058.0 MSD | 10/16/12 | 93 | 109 | 85 | 114 | Pass | Pass | < LCL | Pass |
| CCS 20 | 10/16/12 | 113 | 115 | 92 | 109 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George/Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 12-163 |
| **Onsite Dates:** 10/2/12-10/5/12, 10/16/12 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** DPT0185-028.0 **Date of Analysis:** 10/2/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 122 | 122 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 109 | 108 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 105 | 102 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 95 | 128 | 30 | Pass | Pass | > RPDL |
| Trichloroethene | 67 | 128 | 20 | 87 | 87 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 95 | 98 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi- 0

**Samples:** DPT0190-058.0 **Date of Analysis:** 10/3/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 117 | 112 | 4 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 99 | 109 | 10 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 93 | 101 | 8 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 156 | 181 | 15 | > UCL | > UCL | Pass |
| Trichloroethene | 67 | 128 | 20 | 91 | 91 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 111 | 129 | 15 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** DPT0189-058.0 **Date of Analysis:** 10/3/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 71 | 79 | 11 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 75 | 84 | 11 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 72 | 74 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 88 | 86 | 2 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 81 | 82 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 94 | 96 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** DPT0192-018.0 **Date of Analysis:** 10/4/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 81 | 64 | 24 | Pass | Pass | > RPDL |
| 1,1-Dichloroethene | 62 | 136 | 20 | 94 | 75 | 22 | Pass | Pass | > RPDL |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 86 | 73 | 16 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 184 | 153 | 19 | > UCL | > UCL | Pass |
| Trichloroethene | 67 | 128 | 20 | 103 | 83 | 21 | Pass | Pass | > RPDL |
| Tetrachloroethene | 60 | 140 | 20 | 116 | 98 | 16 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George/Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 12-163 |
| **Onsite Dates:** 10/2/12-10/5/12, 10/16/12 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

**Samples:** DPT0194-053.0 **Date of Analysis:** 10/4/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 126 | 123 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 109 | 113 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 102 | 107 | 5 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 94 | 142 | 41 | Pass | > UCL | > RPDL |
| Trichloroethene | 67 | 128 | 20 | 111 | 114 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 134 | 135 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** DPT0089-058.0 **Date of Analysis:** 10/16/2012

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 117 | 94 | 21 | Pass | Pass | > RPDL |
| 1,1-Dichloroethene | 62 | 136 | 20 | 114 | 73 | 43 | Pass | Pass | > RPDL |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 107 | 77 | 33 | Pass | Pass | > RPDL |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 126 | 94 | 29 | Pass | Pass | > RPDL |
| Trichloroethene | 67 | 128 | 20 | 137 | 118 | 15 | > UCL | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 132 | 113 | 16 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George/Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 12-163 |
| **Onsite Dates:** 10/2/12-10/5/12, 10/16/12 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 **Date of Analysis:** 10/2/2012
LCS 2 10/3/2012
LCS 3 10/4/2012

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 58 | to | 135 | 84 | 126 | 76 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 60 | to | 141 | 80 | 111 | 78 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 80 | 108 | 73 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 77 | 100 | 82 | Pass | Pass | Pass |
| Trichloroethene | 68 | to | 128 | 76 | 99 | 96 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | to | 135 | 87 | 112 | 109 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 **Date of Analysis:** 10/5/2012
LCS 5 10/16/2012

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | | LCS#4 | LCS#5 | |
| Vinyl Chloride | 58 | to | 135 | 100 | 94 | | Pass | Pass | |
| 1,1-Dichloroethene | 60 | to | 141 | 87 | 69 | | Pass | Pass | |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 79 | 69 | | Pass | Pass | |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 107 | 77 | | Pass | Pass | |
| Trichloroethene | 68 | to | 128 | 116 | 99 | | Pass | Pass | |
| Tetrachloroethene | 67 | to | 135 | 145 | 99 | | > UCL | Pass | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0185-018.0-20121002 | 10/2/2012 | 0911 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0185-023.0-20121002 | 10/2/2012 | 0921 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0185-028.0-20121002 | 10/2/2012 | 0937 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0185-033.0-20121002 | 10/2/2012 | 0949 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0185-038.0-20121002 | 10/2/2012 | 1004 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0185-043.0-20121002 | 10/2/2012 | 1022 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0185-058.0-20121002 | 10/2/2012 | 1047 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0186-028.0-20121002 | 10/2/2012 | 1212 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0186-033.0-20121002 | 10/2/2012 | 1227 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0186-038.0-20121002 | 10/2/2012 | 1240 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0186-043.0-20121002 | 10/2/2012 | 1257 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0186-058.0-20121002 | 10/2/2012 | 1314 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0187-028.0-20121002 | 10/2/2012 | 1349 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0187-033.0-20121002 | 10/2/2012 | 1403 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0187-038.0-20121002 | 10/2/2012 | 1418 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0187-043.0-20121002 | 10/2/2012 | 1457 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0187-058.0-20121002 | 10/2/2012 | 1517 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report
NASA CRHE
KSC, FL

Prepared for: Geosyntec Consultants

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0188-028.0-20121002 | 10/2/2012 | 1559 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0188-033.0-20121002 | 10/2/2012 | 1613 | Water | 1, 10 | **420** | <1.0 | **10.5** | **100** | <1.0 | <1.0 |
| CRHE-DPT0188-038.0-20121003 | 10/3/2012 | 0814 | Water | 10, 20 | **800** | <10 | **26** | **990** | <10 | <10 |
| CRHE-DPT0188-043.0-20121003 | 10/3/2012 | 0832 | Water | 20 | **1100** | <20 | **27** | **2000** | <20 | <20 |
| CRHE-DPT0188-058.0-20121003 | 10/3/2012 | 0850 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.2** | <1.0 | <1.0 |
| CRHE-DPT0174-053.0-20121003 | 10/3/2012 | 0952 | Water | 1, 10 | **76** | <1.0 | **3.5** | **170** | <1.0 | <1.0 |
| CRHE-DPT0174-058.0-20121003 | 10/3/2012 | 1017 | Water | 1 | <1.0 | <1.0 | <1.0 | **3.8** | <1.0 | <1.0 |
| CRHE-DPT0190-028.0-20121003 | 10/3/2012 | 1054 | Water | 1 | **22.1** | <1.0 | <1.0 | **14.9** | <1.0 | <1.0 |
| CRHE-DPT0190-033.0-20121003 | 10/3/2012 | 1107 | Water | 1 | **34.0** | <1.0 | <1.0 | **13.5** | <1.0 | <1.0 |
| CRHE-DPT0190-038.0-20121003 | 10/3/2012 | 1122 | Water | 1 | **8.7** | <1.0 | <1.0 | **1.0** | <1.0 | <1.0 |
| CRHE-DPT0190-043.0-20121003 | 10/3/2012 | 1134 | Water | 1 | **7.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0190-058.0-20121003 | 10/3/2012 | 1152 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0191-028.0-20121003 | 10/3/2012 | 1329 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0191-033.0-20121003 | 10/3/2012 | 1344 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0191-038.0-20121003 | 10/3/2012 | 1359 | Water | 1 | **3.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0191-043.0-20121003 | 10/3/2012 | 1420 | Water | 1 | **73.9** | <1.0 | **1.4** | **7.4** | <1.0 | <1.0 |
| CRHE-DPT0191-058.0-20121003 | 10/3/2012 | 1437 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0149-058.0-20121003 | 10/3/2012 | 1517 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0189-018.0-20121003 | 10/3/2012 | 1546 | Water | 1 | **3.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0189-023.0-20121003 | 10/3/2012 | 1558 | Water | 1 | **5.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0189-028.0-20121003 | 10/3/2012 | 1629 | Water | 1 | **55.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0189-033.0-20121003 | 10/3/2012 | 1640 | Water | 1 | **62.7** | <1.0 | <1.0 | **3.5** | <1.0 | <1.0 |
| CRHE-DPT0189-038.0-20121003 | 10/3/2012 | 1654 | Water | 1 | **11.1** | <1.0 | <1.0 | **2.0** | <1.0 | <1.0 |
| CRHE-DPT0189-043.0-20121003 | 10/3/2012 | 1706 | Water | 1 | **4.2** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0189-058.0-20121003 | 10/3/2012 | 1720 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0192-018.0-20121004 | 10/4/2012 | 0820 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0192-023.0-20121004 | 10/4/2012 | 0832 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0192-028.0-20121004 | 10/4/2012 | 0842 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0192-033.0-20121004 | 10/4/2012 | 0855 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0192-038.0-20121004 | 10/4/2012 | 0908 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0192-043.0-20121004 | 10/4/2012 | 0925 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0192-058.0-20121004 | 10/4/2012 | 0944 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0148-053.0-20121004 | 10/4/2012 | 1216 | Water | 20 | **370** | <20 | **13 I** | **750** | <20 | <20 |
| CRHE-DPT0148-058.0-20121004 | 10/4/2012 | 1233 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report
NASA CRHE
KSC, FL

Prepared for: Geosyntec Consultants

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0138-053.0-20121004 | 10/4/2012 | 1332 | Water | 1 | **5.0** | <1.0 | <1.0 | **1.5** | <1.0 | <1.0 |
| CRHE-DPT0138-058.0-20121004 | 10/4/2012 | 1346 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0010-053.0-20121004 | 10/4/2012 | 1435 | Water | 1 | **2.0** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0010-058.0-20121004 | 10/4/2012 | 1454 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0044-058.0-20121004 | 10/4/2012 | 1529 | Water | 1 | **28.3** | <1.0 | <1.0 | **51.7** | <1.0 | <1.0 |
| CRHE-DPT0158-053.0-20121004 | 10/4/2012 | 1616 | Water | 1 | **2.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0158-058.0-20121004 | 10/4/2012 | 1636 | Water | 1 | **1.1** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0193-069.0-20121004 | 10/4/2012 | 1744 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0194-053.0-20121005 | 10/5/2012 | 1106 | Water | 1 | **3.3** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0194-058.0-20121005 | 10/5/2012 | 1128 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0195-053.0-20121005 | 10/5/2012 | 1210 | Water | 1 | **5.9** | <1.0 | <1.0 | **6.1** | <1.0 | <1.0 |
| CRHE-DPT0195-058.0-20121005 | 10/5/2012 | 1225 | Water | 1 | <1.0 | <1.0 | <1.0 | **1.3** | <1.0 | <1.0 |
| CRHE-DPT0044-068.0-20121005 | 10/5/2012 | 1329 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0155-058.0-20121005 | 10/5/2012 | 1454 | Water | 1 | **1.5** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0171-058.0-20121005 | 10/5/2012 | 1559 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-DPT0127-058.0-20121005 | 10/5/2012 | 1715 | Water | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CRHE-IDW190515-20121005 | 10/5/2012 | 0000 | Water | 1 | **1.9** | <1.0 | <1.0 | **2.2** | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Samplel ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl Chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0089-058.0-20121016 | 10/16/2012 | 0836 | Water | 1 | **2.0** | <1.0 | <1.0 | **4.7** | <1.0 | <1.0 |
| CRHE-DPT0125-058.0-20121016 | 10/16/2012 | 0920 | Water | 1 | <1.0 | <1.0 | <1.0 | **5.1** | <1.0 | <1.0 |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CRHE KSC, FL |
| **SAMPLERS** | **CONTACT PERSON** / **BATCH # (Lab Use Only)** |

**PRESERVATION**: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER KB3-100212 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0185-018.0 | 10/2/12 | 0911 | | | 10/2/12 | 0952 | | GW | 2 | ✓ | |
| -DPT0185-023.0 | | 0921 | | | | 0952 | | GW | 2 | ✓ | |
| -DPT0185-028.0 | | 0937 | | | | 0952 | | GW | 2 | ✓ | |
| DPT0185-033.0 | | 0949 | | | | 1123 | | GW | 2 | ✓ | |
| DPT0185-038.0 | | 1004 | | | | 1123 | | GW | 2 | ✓ | |
| DPT0185-043.0 | | 1022 | | | | 1123 | | GW | 2 | ✓ | |
| DPT0185-048.0 | | 1047 | | | | 1123 | | GW | 2 | ✓ | |
| DPT0186-029.0 | | 1212 | | | | 1330 | | GW | 2 | ✓ | |
| DPT0186-033.0 | | 1227 | | | | 1330 | | GW | 2 | ✓ | |
| DPT0186-038.0 | | 1240 | | | | 1330 | | GW | 2 | ✓ | |
| DPT0186-043.0 | | 1257 | | | | 1330 | | GW | 2 | ✓ | |
| DPT0186-048.0 | | 1314 | | | | 1330 | | GW | 2 | ✓ | |
| DPT0187-028.0 | | 1349 | | | | 1517 | | GW | 2 | ✓ | |
| DPT0187-033.0 | | 1403 | | | | 1517 | | GW | 2 | ✓ | |
| DPT0187-038.0 | | 1418 | | | | 1517 | | GW | 2 | ✓ | |

| | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Precleaned Containers / Relinquished by: *(Signature)* | | | | |
| Relinquished by: *(Signature)* | | Received by: *(Signature)* | 10/2/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

2/2

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Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

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Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** FB3

| CLIENT NAME | PROJECT NAME & ADDRESS | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Geosyntec | CRHE KSC, FL | | | | | | | | | | | | | | | | | |
| SAMPLERS | CONTACT PERSON | | | | | | BATCH # (Lab Use Only) | | | | | | | | | | | |
| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | | | | | | COMMENT / SAMPLE PRE FIX | | |
| FB3-100212 | | | | | | | | | | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS | | | | | | | | |
| CHRE-DPT0187-043.0 | 10/2/12 | 1457 | | | 10/2/12 | 157 | | GW | 2 | ✓ | | | | | | | | |
| DPT0187-055.0 | " | 1517 | | | " | 1633 | | GW | 2 | ✓ | | | | | | | | |
| DPT0188-028.0 | " | 1559 | | | " | 1633 | | GW | 2 | ✓ | | | | | | | | |
| DPT0188-033.0 | " | 1613 | | | " | 1633 | | GW | 2 | ✓ | | | | | | | | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | [signature] | 10/2/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

1/2


Mobile Laboratory Services

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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3-100312 | | | | | | | | | | | | | | |
| DPT0188-038.0 | 10/3/12 | 0814 | | | 10/3/12 | 0940 | | GW | 2 | V | | | | CRHE - |
| -043.0 | | 0832 | | | | 0940 | | | | | | | | |
| -058.0 | | 0850 | | | | 0940 | | | | | | | | |
| DPT0174-053.0 | | 0952 | | | | 1127 | | | | | | | | |
| -058.0 | | 1017 | | | | 1127 | | | | | | | | |
| DPT0150-028.0 | | 1054 | | | | 1127 | | | | | | | | |
| -033.0 | | 1107 | | | | 1127 | | | | | | | | |
| -038.0 | | 1122 | | | | 1340 | | | | | | | | |
| -043.0 | | 1134 | | | | 1340 | | | | | | | | |
| -058.0 | | 1152 | | | | 1340 | | | | | | | | |
| DPT0191-028.0 | | 1329 | | | | 1515 | | | | | | | | |
| -033.0 | | 1344 | | | | 195 | | | | | | | | |
| -038.0 | | 1359 | | | | 1515 | | | | | | | | |
| -043.0 | | 1420 | | | | 1515 | | | | | | | | |
| -058.0 | | 1437 | | | | 1515 | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | Received by: *(Signature)* | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | | |
| Relinquished by: *(Signature)* | | Received by: *(Signature)* | Date / Time 10/3/12 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

2/2

Mobile Laboratory Services

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Cary, NC 27513
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**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0149-058.0 | 10/3/12 | 1517 | | | 10/3/12 | 1707 | | GW | 2 | V | | | | | |
| DPT0189-018.0 | | 1546 | | | | 1707 | | | | | | | | | |
| -023.0 | | 1558 | | | | 1707 | | | | | | | | | |
| -028.0 | | 1629 | | | | 1707 | | | | | | | | | |
| -033.0 | | 1640 | | | | 1707 | | | | | | | | | |
| -038.0 | | 1654 | | | | 1707 | | | | | | | | | |
| -043.0 | | 1706 | | | | 1750 | | | | | | | | | |
| -058.0 | | 1720 | | | | 1750 | | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 10/3/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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TEL (919) 678-0030


1/

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: NASA - CRHE KSC

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3 - 100412 | | | | | | | | | | | | | | |
| DPT 0192 - 018.0 | 10/4/12 | 0820 | | ✓ | 10/4/12 | 0930 | | GW | 2 | ✓ | | | | CRHE - |
| - 023.0 | | 0832 | | | | 0930 | | | | | | | | |
| - 028.0 | | 0842 | | | | 0930 | | | | | | | | |
| - 033.0 | | 0855 | | | | 0930 | | | | | | | | |
| - 038.0 | | 0908 | | | | 0930 | | | | | | | | |
| - 043.0 | | 0925 | | | | 1225 | | | | | | | | |
| - 058.0 | | 0944 | | | | 1225 | | | | | | | | |
| DPT 0148 - 053.0 | | 1216 | | | | 1225 | | | | | | | | |
| - 058.0 | | 1233 | | | | 1330 | | | | | | | | |
| DPT 0138 - 053.0 | | 1332 | | | | 1730 | | | | | | | | |
| - 058.0 | | 1346 | | | | | | | | | | | | |
| 0010 - 053.0 | | 1435 | | | | | | | | | | | | |
| - 058.0 | | 1454 | | | | | | | | | | | | |
| 0044 - 058.0 | | 1529 | | | | | | | | | | | | |
| 0158 - 053.0 | | 1616 | | | | | | | | | | | | |

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|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>10/4/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


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Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #**

CLIENT NAME: GeoSynTec

PROJECT NAME & ADDRESS: KSC CRHE

SAMPLERS:

CONTACT PERSON: Meghan

BATCH # (Lab Use Only):

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0158-058.0 | 10/4/12 | 1636 | | ✓ | 10/4/12 | 1730 | | GW | 2 | ✓ | |
| DPT0193-069.0 | | 1744 | | | | 1800 | | ↓ | ↓ | ↓ | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>10/4/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #**

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: KCRHQ KSL

SAMPLERS

CONTACT PERSON: Rachel

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES (IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT 0194-053.0 2012 | 10/5 | 1106 | | | 10/5/12 | 1120 | | W | 2 | ✓ | |
| 0194 058.0 | | 1128 | | | | 1130 | | | | | |
| 0195-053.0 | | 1210 | | | | 1225 | | | | | |
| 0195 058.0 | | 1225 | | | | ↓ | | | | | |
| 0044-068.0 | | 1329 | | ✓ | | 1400 | | | | | |
| 0155-058.0 | | 1454 | | | | 1510 | | | | | |
| 0171-058.0 | | 1559 | | | | 1630 | | | | | |
| 0127-058.0 | | 1715 | | | | 1725 | | | | | |
| FDW 190515 | ↓ | | | | ↓ | 1830 | | ↓ | ↓ | ↓ | |

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|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>10/5/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

1/1


Mobile Laboratory Services

25132 SW 1st Avenue
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FAX (352) 472-5832

200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KB3-101612 | | | | | | | | | | | | | | |
| V2-DPT 095-0580 | 10/4/12 | 0836 | | | 10/4/12 | 1115 | | GW | 2 | ✓ | | | | CRHE - |
| V4-DPT 025-0580 | 1 | 0920 | | | 1 | 1115 | | GW | 2 | ✓ | | | | |
| V3-DPT 089-0580 | 1 | 1011 | | | 1 | 1115 | | GW | 2 | ✓ | | | | |
| | | | | | | | | | | | | | | |
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| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>10/16/12 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

New Age/Landmark, Inc.
*Mobile Laboratory Services*

April 23, 2013

**Geosyntec Consultants**
316 South Baylen Street, Suite 201
Pensacola, FL 32502
ATTN: Ms. Jill Johnson

SUBJECT: NARRATIVE FOR PROJECT NAL13-041, NASA, Kennedy Space Center.

Dear Ms. Johnson,

Enclosed is the final report containing the analytical results for the mobile laboratory services provided for Geosyntec Consultants, Kennedy Space Center site, Florida. The report consists of 587 pages inclusive of all sample results, QC analyses, chains of custody, and this cover letter.

New Age/Landmark, Inc. certifies that to our best knowledge this data package is in compliance with the terms and conditions of the contract, both technically and for completeness and that test results meet all requirements of New Age/Landmark's Quality Assurance Manual. Release of the data has been authorized by the laboratory's president or his designee.

Volatile analysis of samples was performed utilizing USEPA Method 8260B on a Purge and Trap system coupled with a Hewlett Packard 5890 GC/MS. All water samples are reported in µg/L (ppb). Reporting limits reflect any sample dilutions that may have been performed.

Please review the report and contact our office if you have any questions or need additional information. Thank you for choosing New Age/Landmark, Inc. for this important project. We look forward to working with you again in the future.

Sincerely,
New Age/Landmark, Inc.

Scott D. Wall
President

Maria C. Paraschivescu
QA/QC Officer

This report is for the exclusive use of the client. Any reproduction or dissemination without express permission of the client is strictly prohibited.

Client Name & Project Name: ~~CHE~~ FR1681 Geosyntec Consultants

Project No.: FR1681

Project Contact: Laurel Petty / Jill Johnson

Phone Number: 832-445 5614 / 904 591 4016

Project Location: Contractors Rd / KSC

Types of Analysis: VOC

New Age/Landmark, Inc.
*Mobile Laboratory Services*

Tel. No.: 888-685-1628
www.newagelandmark.com

**№ 5201**

## Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | VOC | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ~~CRHE-DPT0196-0100-20130318~~ CRHE-DPT0196-0100-20130318 | 3/18/13 | 1007 | | | 2 | X | N | N | A | | NAL 13041-001 |
| 2 | CRHE-DPT0196-018.0-20130318 | 3/18/13 | 1020 | | | 2 | X | N | N | A | | NAL -002 |
| 3 | CRHE-DPT0196-023.0-20130318 | 3/18/13 | 1031 | | | 2 | X | N | N | A | | NAL -003 |
| 4 | CRHE-DPT0196-028.0-20130318 | 3/18/13 | 1046 | | | 2 | X | N | N | A | | NAL -004 |
| 5 | CRHE-DPT0196-033.0-20130318 | 3/18/13 | 1059 | | | 2 | X | N | N | A | | NAL -005 |
| 6 | CRHE-DPT0196-036.0-20130318 | 3/18/13 | 1118 | | | 2 | X | N | N | A | | NAL -006 |
| 7 | CRHE-DPT0196-043.0-20130318 | 3/18/13 | 1134 | | | 2 | X | N | N | A | | NAL 007 |
| 8 | CRHE-DPT0196058.0-20130318 | 3/18/13 | 1152 | | | 2 | X | N | N | A | | NAL -008 |
| 9 | CRHE-DPT0197-010.0-20130318 | 3/18/13 | 1300 | | | 2 | X | N | N | A | | NAL -009 |
| 10 | CRHE-DPT0197-018.0-20130318 | 3/18/13 | 1311 | | | 2 | X | N | N | A | | NAL -010 |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1–10 | Crystal Towns / Geosyntec | Celeste E Wheeler | 3/18/13 | 1430 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Recieved in acceptable condition. CEW 3/18/13

Sampler's Signature: Crystal Towns

Print Name: Crystal Towns

COCs rev.5 Date: 2/27/08 Copyright © 2008 All Rights Reserved

White: New Age/Landmark, Inc. File Copy•Yellow: Laboratory Copy•Pink: Client Copy

CRHE/FR1681

Client Name & Project Name: Geosyntec Consultants

Project No.: FR1681

Project Contact: Lauren Petty / Jill Johnson

Phone Number: 832 265 5614 / 904 521 4076

Project Location: Contractors Rd / KSC

New Age/Landmark, Inc.
*Mobile Laboratory Services*

Tel. No.: 888-685-1628
www.newagelandmark.com

№ 5202

Chain-of Custody Record

Types of Analysis: VOC

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | VOC | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0197-023.0-20130318 | 3/18/13 | 1324 | | | 2 | X | N | N | A | | NAL 1304 1-011 |
| 2 | CRHE-DPT0197-028.0-20130318 | 3/18/13 | 1334 | | | 2 | X | N | N | A | | NAL -012 |
| 3 | CRHE-DPT0197-033.0-20130318 | 3/18/13 | 1349 | | | 2 | X | N | N | A | | NAL -013 |
| 4 | CRHE-DPT0197-038.0-20130318 | 3/18/13 | 1400 | | | 2 | X | N | N | A | | NAL -014 |
| 5 | CRHE-DPT0197-043.0-20130318 | 3/18/13 | 1424 | | | 2 | X | N | N | A | | NAL -015 |
| 6 | | | | | | | | | | | | NAL - |
| 7 | | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | | NAL - |

CEW 3/18/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-5 | Crystal Towns/Geosyntec | Celeste E Wheeler | 3/18/13 | 1430 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only)
Recieved in acceptable condition.
CEW 3/18/13

Sampler's Signature: Crystal Towns

Print Name: Crystal Towns

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Client Name & Project Name: Geosyntec Consultants / CRHE FR1681

Project No.: FR1681

Project Contact: Lauren Petty / Jill Johnson lpetty@geosyntec.com / JJohnson@geosyntec.com

Phone Number: ~~850-(illegible)~~ 832-2655614 / 904-591-4076

Project Location: Contractors Rd / KSC

Types of Analysis: 8260B-CVOC

New Age/Landmark, Inc.
*Mobile Laboratory Services*

Tel. No.: 888-685-1628
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№ 5252

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0197-058.0-20130318 | 3/18/13 | 1446 | | X | 2 | N | N | A | | NAL 43041-016 |
| 2 | CRHE-DPT0198-010.0-20130318 | 3/18/13 | 1526 | | X | 2 | | | | | NAL -017 |
| 3 | CRHE-DPT0198-018.0-20130318 | 3/18/13 | 1538 | | X | 2 | | | | | NAL -018 |
| 4 | CRHE-DPT0198-023.0-20130318 | 3/18/13 | 1548 | | X | 2 | | | | | NAL -019 |
| 5 | CRHE-DPT0198-028.0-20130318 | 3/18/13 | 1600 | | X | 2 | | | | | NAL -020 |
| 6 | CRHE-DPT0198-033.0-20130318 | 3/18/13 | 1611 | | X | 2 | | | | | NAL -021 |
| 7 | CRHE-DPT0198-038.0-20130318 | 3/18/13 | 1623 | | X | 2 | | | | | NAL -022 |
| 8 | CRHE-DPT0198-043.0-20130318 | 3/18/13 | 1638 | | X | 2 | | | | | NAL -023 |
| 9 | ~~CRHE~~ CR CRHE-DPT0198-058.0-20130318 | 3/18/13 | 1655 | | X | 2 | | | | | NAL -024 |
| 10 | | | | | | | | | | | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-9 | Crystal Towns / Geosyntec | Colyte E. Mahan | 3/18/13 | 1702 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Delivered in acceptable condition

Crystal Towns
Sampler's Signature

Crystal Towns
Print Name

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Client Name & Project Name: CRHE

Project No.: FR1681/25*2

Project Contact: Lauren Petty lpetty@geosyntecom

Phone Number: 832-265-(cell) 5614

Project Location: KSC-CRHE

Types of Analysis: 8260B CVOC

New Age/Landmark, Inc.
*Mobile Laboratory Services*

Tel. No.: 888-685-1628
www.newagelandmark.com

**№ 5253**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0199-010.0-20130319 | 3/19/13 | 0753 | | X | 2 | N | Y | A | | NAL 13041-025 |
| 2 | CRHE-DPT0199-018.0-20130319 | | 0804 | | | | | | | | NAL -026 |
| 3 | CRHE-DPT0199-023.0-20130319 | | 0818 | | | | | | | | NAL -027 |
| 4 | CRHE-DPT0199-028.0-20130319 | | 0830 | | | | | | | | NAL -028 |
| 5 | CRHE-DPT0199-033.0-20130319 | | 0844 | | | | | | | | NAL -029 |
| 6 | CRHE-DPT0199-038.0-20130319 | | 0857 | | | | | | | | NAL -030 |
| 7 | CRHE-DPT0199-043.0-20130319 | | 0912 | | | | | | | | NAL -031 |
| 8 | CRHE-DPT0199-058.0-20130319 | | 093 | | | | | | | | NAL -032 |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | CRW | 3/19/13 | | | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-8 | Crystal Towns/Geosyntec | Robert E. Nhuch | 3/19/13 | 0935 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Recieved in acceptable condition CRW 3/19/13

Sampler's Signature: Crystal Towns

Print Name

COCs rev.5 Date: 2/27/08 Copyright © 2008 All Rights Reserved

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Client Name & Project Name: CRHE

Project No.: FRL601/25*2

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number: 832-265-5614

Project Location: KSC

Types of Analysis: 8260B-CVOCs

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*Mobile Laboratory Services*

Tel. No.: 888-685-1628
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**Nº 5254**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Types of Analysis: 8260B-CVOCs | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0200-010.0-20130319 | 3/19/13 | 1011 | | X | 2 | X | N | Y | A | | NAL 13041-033 |
| 2 | CRHE-DPT0200-018.0-20130319 | | 1021 | | | | | | | | | NAL 034 |
| 3 | CRHE-DPT0200-023.0-20130319 | | 1036 | | | | | | | | | NAL 035 |
| 4 | CRHE-DPT0200-028.0-20130319 | | 1047 | | | | | | | | | NAL -036 |
| 5 | CRHE-DPT0200-033.0-20130319 | | 1102 | | | | | | | | | NAL -037 |
| 6 | CRHE-DPT0200-038.0-20130319 | | 1118 | | | | | | | | | NAL -038 |
| 7 | CRHE-DPT0200-043.0-20130319 | | 1134 | | | | | | | | | NAL -039 |
| 8 | CRHE-DPT0200-058.0-20130319 | | 1152 | | | | | | | | | NAL -040 |
| 9 | CRHE-DPT0201-010.0-20130319 | | 1258 | | | | | | | | | NAL -041 |
| 10 | CRHE-DPT0201-018.0-20130319 | | ~~1324~~ CRW | | | | | | | | | NAL -042 |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-10 | Crystal Towns/geosyntec | Celeste E. Wheeler | 3/19/13 | 1345 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Recieved in acceptable condition CRW

Sampler's Signature: Crystal Towns

Print Name: Crystal Towns

COCs rev.5 Date: 2/27/08 Copyright © 2008 All Rights Reserved

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR-1681

Project Contact: Lauren Petty LPetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B - CVOC

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*Mobile Laboratory Services*

Tel. No.: 888-685-1628
www.newagelandmark.com

**№ 5255**

## Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | 8260B - CVOC | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0201-023.0-20130319 | 3/19/13 | 1324 | | X | 2 | X | N | Y | A | | NAL 13041-043 |
| 2 | | | | | | | | | | | | NAL - |
| 3 | | | | | | | | | | | | NAL - |
| 4 | | | | | | | | | | | | NAL - |
| 5 | | | | | | | | | | | | NAL - |
| 6 | | | | | | | | | | | | NAL - |
| 7 | | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | | NAL - |

CRW 3/19/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1 | Crystal Towns / Geosyntec | Christe E. Wilson | 3/19/13 | 1345 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Recieved in acceptable condition CRW

Sampler's Signature: Crystal Towns

Print Name:

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Client Name & Project Name: Geosyntec / CRHF

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B-VOCS

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*Mobile Laboratory Services*

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**Nº 5256**

## Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | 8260B-VOCS | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0201-028.0-20130319 | 3/19/13 | 1331 | | X | 2 | X | N | Y | A | | NAL 1204-045 |
| 2 | CRHE-DPT0201-033.0-20130319 | | 1349 | | | | | | | | | NAL -045 |
| 3 | CRHE-DPT0201-038.0-20130319 | | 1402 | | | | | | | | | NAL -046 |
| 4 | CRHE-DPT0201-043.0-20130319 | | 1417 | | | | | | | | | NAL -047 |
| 5 | CRHE-DPT0201-058.0-20130319 | | 1434 | | | | | | | | | NAL -048 |
| 6 | CRHE-DPT0196-068.0-20130319 | | 1539 | | | | | | | | | NAL -049 |
| 7 | | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-6 | Crystal Towns / Geosyntec | Celeste E Wheeler | 3/19/13 | 1539 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Delivered in acceptable condition CEW

Sampler's Signature: Crystal Towns

Print Name

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B

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*Mobile Laboratory Services*

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**№ 5257**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0202-010.0-20130320 | ~~3/20/13~~ (3/21/13) | 0810 | | X | 2 | N | Y | A | | NAL 13041-050 |
| 2 | CRHE-DPT0202-018.0-20130320 | 3/20/13 | 0820 | | | | | | | | NAL -051 |
| 3 | CRHE-DPT0202-023.0-20130320 | | 0830 | | | | | | | | NAL -052 |
| 4 | CRHE-DPT0202-028.0-20130320 | | 0842 | | | | | | | | NAL -053 |
| 5 | CRHE-DPT0202-033.0-20130320 | | 0856 | | | | | | | | NAL -054 |
| 6 | CRHE-DPT0202-038.0-20130320 | | 0910 | | | | | | | | NAL -055 |
| 7 | CRHE-DPT0202-043.0-20130320 | | 0925 | | | | | | | | NAL -056 |
| 8 | | | | | | | | CEW 3/20/13 | | | NAL - |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-7 | Crystal Towns/Geosyntec | Celest. E Wheeler | 3/20/13 | 0930 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Received in acceptable condition CEW

Sampler's Signature: Crystal Towns

Print Name

COCs rev.5 Date: 2/27/08 Copyright © 2008 All Rights Reserved

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B CVOCs

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*Mobile Laboratory Services*

Tel. No.: 888-685-1628
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**№ 5258**

## Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | 8260B CVOCs | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0202-058.0-20130320 | 3/20/13 | 0941 | | X | 2 | X | N | Y | A | | NAL 13041 - 057 (058) |
| 2 | CRHE-DPT0203-010.0-20130320 | | 1256 | | | | X | | | | | NAL - 058 |
| 3 | CRHE-DPT0203-018.0-20130320 | | 1308 | | | | X | | | | | NAL - 059 |
| 4 | CRHE-DPT0203-023.0-20130320 | | 1318 | | | | X | | | | | NAL - 060 |
| 5 | CRHE-DPT0203-028.0-20130320 | | 1330 | | | | X | | | | | NAL - 061 |
| 6 | CRHE-DPT0203-033.0-20130320 | | 1342 | | | | X | | | | | NAL - 062 |
| 7 | | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | | NAL - |

COC 3/20/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-6 | Crystal Toms / Geosyntec | Collette E Wheeler | 3/20/13 | 1350 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Recieved in acceptable Condition

Sampler's Signature: Crystal Toms

Print Name

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B CVOCs

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*Mobile Laboratory Services*

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**№ 5259**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | 8260B CVOCs | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0203-038.0-20130320 | 3/20/13 | 1357 | | X | 2 | X | N | Y | A | | NAL 13241-063 |
| 2 | CRHE-DPT0203-043.0-20130320 | | 1411 | | | | | | | | | NAL -064 |
| 3 | CRHE-DPT0203-058.0-20130320 | | 1428 | | | | | | | | | NAL -065 |
| 4 | CRHE-DPT0204-010.0-20130320 | | 1512 | | | | | | | | | NAL -066 |
| 5 | CRHE-DPT0204-018.0-20130320 | | 1523 | | | | | | | | | NAL -067 |
| 6 | CRHE-DPT0204-023.0-20130320 | | 1533 | | | | | | | | | NAL -068 |
| 7 | CRHE-DPT0204-028.0-20130320 | | 1543 | | | | | | | | | NAL -069 |
| 8 | | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | CW 3/20/13 | NAL - |
| 10 | | | | | | | | | | | | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-7 | Crystal Towns/Geosyntec | Celeste E Wheeler | 3/20/13 | 1600 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable

Sampler's Signature: Crystal Towns

Print Name

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Client Name & Project Name: Geosyntec CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B VOCs

New Age/Landmark, Inc.
*Mobile Laboratory Services*

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**No 5260**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0204-033.0-20130321 | 3/21/13 | 0733 | | X | 2 | N | Y | A | | NAL 32411-070 |
| 2 | CRHE-DPT0204-038.0-20130321 | | 0748 | | | | | | | | NAL 071 |
| 3 | CRHE-DPT0204-043.0-20130321 | | 0801 | | | | | | | | NAL 072 |
| 4 | CRHE-DPT0204-058.0-20130321 | | 0817 | | | | | | | | NAL 073 |
| 5 | CRHE-DPT0205-010.0-20130321 | | 0841 | | | | | | | | NAL 074 |
| 6 | CRHE-DPT0205-018.0-20130321 | | 0851 | | | | | | | | NAL 075 |
| 7 | CRHE-DPT0205-023.0-20130321 | | 0901 | | | | | | | | NAL 076 |
| 8 | CRHE-DPT0205-028.0-20130321 | | 0910 | | | | | | | | NAL 077 |
| 9 | CRHE-DPT0205-033.0-20130321 | | 0920 | | | | | | | | NAL 078 |
| 10 | CRHE-DPT0205-038.0-20130321 | | 0931 | | | | | | | | NAL 079 |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-10 | Crystal Towns/Geosyntec | Christie Whelan | 3/21/13 | 1010 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable

Crystal Towns

Sampler's Signature

Crystal Towns

Print Name

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B cVOCs

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**№ 5261**

## Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHEDPT0205-043.0-20130321 | 3/21/13 | 0944 | | X | 2 | N | Y | A | | NAL 13041-080 |
| 2 | CRHE-DPT0205-058.0-20130321 | ↓ | 0958 | | ↓ | ↓ | N | Y | A | | NAL -081 |
| 3 | | | | | | | | | | | NAL - |
| 4 | | | | | | | | | | | NAL - |
| 5 | | | | | | | | | | | NAL - |
| 6 | | | | | | | | | | | NAL - |
| 7 | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

CW3/21/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-2 | Crystal Towns / Geosyntec | | 3/21/13 | 1100 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only)
Accepted

Sampler's Signature: Crystal Towns

Print Name: Crystal Towns

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B (VOCs)

New Age/Landmark, Inc.
*Mobile Laboratory Services*

Tel. No.: 888-685-1628
www.newagelandmark.com

**Nº 5262**

## Chain-of-Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0206-010.0-20130321 | 3/21/13 | 1025 | | X | 2 | N | Y | A | | NAL 1324 -082 |
| 2 | CRHE-DPT0206-018.0-20130321 | | 1034 | | | | | | | | NAL -083 |
| 3 | CRHE-DPT0206-023.0-20130321 | | 1049 | | | | | | | | NAL -084 |
| 4 | CRHE-DPT0206-028.0-20130321 | | 1053 | | | | | | | | NAL -085 |
| 5 | CRHE-DPT0206-033.0-20130321 | | 1106 | | | | | | | | NAL -086 |
| 6 | CRHE-DPT0206-038.0-20130321 | | 1136 | | | | | | | | NAL -087 |
| 7 | CRHE-DPT0206-043.0-20130321 | | 1150 | | | | | | | | NAL -088 |
| 8 | CRHE-DPT0206-058.0-20130321 | | 1204 | | | | | | | | NAL -089 |
| 9 | CRHE-DPT0207-010.0-20130321 | | 1348 | | | | | | | | NAL -090 |
| 10 | CRHE-DPT0207-018.0-20130321 | | 1358 | | | | | | | | NAL -091 |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-10 | Gwyn Lamb / Geosyntec | Celeste Wh | 3/21/13 | 1613 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Delivered in acceptable condition

Sampler's Signature: Gwyn Lamb

Print Name: Crystal Towns

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B | COCs

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**No 5263**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0207-023.0-20130321 | 3/21/13 | 1409 | | X | 2 | N | Y | A | | NAL 1304-092 |
| 2 | CRHE-DPT0207-028.0-20130321 | | 1419 | | | | | | | | NAL -093 |
| 3 | CRHE-DPT0207-033.0-20130321 | | 1433 | | | | | | | | NAL -094 |
| 4 | CRHE-DPT0207-038.0-20130321 | | 1446 | | | | | | | | NAL -095 |
| 5 | CRHE-DPT0207-043.0-20130321 | | 1500 | | | | | | | | NAL -096 |
| 6 | CRHE-DPT0207-058.0-20130321 | | 1515 | | | | | | | | NAL -097 |
| 7 | CRHE-DPT0202-68.0-20130321 | | 1532 | | | | | | | | NAL -098 |
| 8 | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

CEW 3/21/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-7 | Geosyntec | | 3/21/13 | 1616 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only)
Accepted

Sampler's Signature: Crystal Towns

Print Name

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1691

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B-CVOCs

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*Mobile Laboratory Services*

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**No 5264**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0208-010.0-20130321 | 3/21/13 | 1637 | | X | 2 | N | Y | A | | NAL 1304[1] - 099 |
| 2 | CRHE-DPT0208-16.0-20130321 | | 1647 | | | | | | | | NAL 100 |
| 3 | CRHE-DPT0208-023.0-20130321 | | 1658 | | | | | | | | NAL - 101 |
| 4 | CRHE-DPT0208-028.0-20130321 | | 1710 | | | | | | | | NAL - 102 |
| 5 | CRHE-DPT0208-033.0-20130321 | | 1723 | | | | | | | | NAL - 103 |
| 6 | ~~IDW~~ CRHE-IDW193558-20130321 | | 1753 | | | | | | | | NAL 104 |
| 7 | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

CRW 3/21/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-6 | Crystal Towns/Geosyntec | Celeste Miller | 3/21/13 | 1800 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only)
Delivered in acceptable condition CRW

Sampler's Signature: Crystal Towns

Print Name:

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B CVOC

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**№ 5265**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0208-038.0-20130322 | 3/22/13 | 0739 | | X | 2 | N | Y | A | | NAL 13041105 |
| 2 | CRHE-DPT0208-043.0-20130322 | | 0752 | | | | | | | | NAL -106 |
| 3 | CRHE-DPT0208-058.0-20130322 | | 0811 | | | | | | | | NAL -107 |
| 4 | CRHE-DPT0209-010.0-20130322 | | 0903 | | | | | | | | NAL -125 |
| 5 | CRHE-DPT0209-018.0-20130322 | | 0913 | | | | | | | | NAL -109 |
| 6 | | | | | | | | | | | NAL - |
| 7 | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-5 | Crystal Towns / Geosyntec | Alisha E Wheeler | 3/22/13 | 0915 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only)
Delivered in acceptable condition

Sampler's Signature: Crystal Towns

Print Name: Crystal Towns

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B CVOC

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№ 5266

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0209-023.0-20130322 | 3/22/13 | 0923 | | X | 2 | N | Y | A | | NAL 13041-110 |
| 2 | CRHE-DPT-0209-028.0-20130322 | | 0933 | | | | | | | | NAL -111 |
| 3 | CRHE-DPT0209-033.0-20130322 | | 0944 | | | | | | | | NAL -112 |
| 4 | CRHE-DPT0209-038.0-20130322 | | 0957 | | | | | | | | NAL -113 |
| 5 | CRHE-DPT0209-043.0-20130322 | | 1012 | | | | | | | | NAL -114 |
| 6 | CRHE-DPT0209-058.0-20130322 | | 1029 | | | | | | | | NAL -115 |
| 7 | CRHE-DPT0210-010.0-20130322 | | 1104 | | | | | | | | NAL -116 |
| 8 | CRHE-DPT0210-018.0-20130322 | | 1113 | | | | | | | | NAL -117 |
| 9 | CRHE-DPT0210-023.0-20130322 | | 1122 | | | | | | | | NAL -118 |
| 10 | CRHE-DPT0210-028.0-20130322 | | 1131 | | | | | | | | NAL -119 |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-10 | Crystal Towns / Geosyntec | Client SUB | 3/22/13 | 1215 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only)

Acceptable CEW 3/22/13

Sampler's Signature: Crystal Towns

Print Name: Crystal Towns

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty / lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B, VOC

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**№ 5267**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0210-033.0-20130322 | 3/22/13 | 1141 | | X | 2 | N | Y | A | | NAL 13041-120 |
| 2 | CRHE-DPT0210-038.0-20130322 | " | 1152 | | " | " | " | " | " | | NAL -121 |
| 3 | CRHE-DPT0210-043.0-20130322 | " | 1204 | | " | " | " | " | " | | NAL -122 |
| 4 | CRHE-DPT0210-058.0-20130322 | " | 1219 | | " | " | " | " | " | | NAL -123 |
| 5 | | | | | | | | | | | NAL - |
| 6 | | | | | | | | | | | NAL - |
| 7 | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

CEW 3/22/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-4 | Crystal Towns / Geosyntec | Celeste E. Wheeler | 3/22/13 | 1215 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable CEW 3/22/13

Sampler's Signature: Crystal Towns

Print Name

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR7681

Project Contact: Lauren Petty

Phone Number: lpetty@geosyntec.com

Project Location: KSC

Types of Analysis: 8260B CVOCs

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**Nº 5268**

## Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0211-010.0-20130322 | 3/22/13 | 1246 | | X | 2 | N | Y | A | | NAL 1304-124 |
| 2 | CRHE-IDW193860-20130322 | 3/22/13 | 1628 | | ↓ | ↓ | ↓ | ↓ | ↓ | | NAL -125 |
| 3 | | | | | | | | | | | NAL - |
| 4 | | | | | | | | | | | NAL - |
| 5 | | | | | | | | | | | NAL - |
| 6 | | | | | | | | | | | NAL - |
| 7 | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

COC 3/22/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-2 | Crystal Towns/Geosyntec | Calvert E Whyte | 3/22/13 | 1634 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Delivered in acceptable condition

Crystal Towns

Sampler's Signature: Crystal Towns

Print Name:

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 82603 CVOC

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**№ 5269**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0211-018.0-20130325 | 3/25/13 | 0810 | | X | 2 | N | Y | A | | NAL 1304/-~~07~~/26 |
| 2 | CRHE-DPT0211-023.0-20130325 | | 0821 | | | | | | | | NAL -127 |
| 3 | CRHE-DPT0211-028.0-20130325 | | 0831 | | | | | | | | NAL -128 |
| 4 | CRHE-DPT0211-033.0-20130325 | | 0844 | | | | | | | | NAL -129 |
| 5 | CRHE-DPT0211-038.0-20130325 | | 0856 | | | | | | | | NAL -130 |
| 6 | CRHE-DPT0211-043.0-20130325 | | 0910 | | | | | | | | NAL -131 |
| 7 | CRHE-DPT0211-058.0-20130325 | | 0928 | | | | | | | | NAL -132 |
| 8 | | | | | | | | | | | NAL - |
| 9 | | | | | | | CEW | | | 3/25/13 | NAL - |
| 10 | | | | | | | | | | | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-7 | Crystal Towns / Geosyntec | Celeste Wheeler | 3/25/13 | 0930 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only)
Delivered in acceptable condition.
CEW 3/25/13

Sampler's Signature

Print Name: Crystal Towns

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

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**№ 5270**

## Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Types of Analysis: 8260B VOC | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0212-010.0-20130325 | 3/25/13 | 0951 | | X | 2 | X | N | Y | A | | NAL 1341-133 |
| 2 | CRHE-DPT0212-018.0-20130325 | | 1006 | | | | | | | | | NAL -134 |
| 3 | CRHE-DPT0212-023.0-20130325 | | 1016 | | | | | | | | | NAL -135 |
| 4 | CRHE-DPT0212-028.0-20130325 | | 1026 | | | | | | | | | NAL -136 |
| 5 | CRHE-DPT0212-033.0-20130325 | | 1038 | | | | | | | | | NAL -137 |
| 6 | CRHE-DPT0212-038.0-20130325 | | 1053 | | | | | | | | | NAL -138 |
| 7 | CRHE-DPT0212-043.0-20130325 | | 1108 | | | | | | | | | NAL -139 |
| 8 | CRHE-DPT0212-0580-20130325 | | 1125 | | | | | | | | | NAL -140 |
| 9 | CRHE-DPT0213-010.0-20130325 | | 1156 | | | | | | | | | NAL -141 |
| 10 | CRHE-DPT0213-018.0-20130325 | | 1205 | | | | | | | | | NAL -142 |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-10 | Crystal Towns/Geosyntec | Celeste Wh | 3/25/13 | 1419 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only)
Acceptable

Sampler's Signature: Crystal Towns

Print Name

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: LaurenPetty

Phone Number: lpetty@geosyntec.com

Project Location: KSC

Types of Analysis: 8260B, CVOCs

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**№ 5271**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0213-023.0-20130325 | 3/25/13 | 1214 | | X | 2 | N | Y | A | | NAL 1344 143 |
| 2 | CRHE-DPT0213-028.0-20130325 | | 1310 | | | | | | | | NAL -144 |
| 3 | CRHE-DPT0213-033.0-20130325 | | 1323 | | | | | | | | NAL -145 |
| 4 | CRHE-DPT0213-038.0-20130325 | | 1334 | | | | | | | | NAL -146 |
| 5 | CRHE-DPT0213-043.0-20130325 | | 1347 | | | | | | | | NAL -147 |
| 6 | CRHE-DPT0213-058.0-20130325 | | 1403 | | | | | | | | NAL -148 |
| 7 | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

CEW 3/25/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-6 | Crysta L. Towns / Geosyntec | Crysta L. Towns | 3/25/13 | 1419 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable

Crysta L Towns
Sampler's Signature

Crysta L Towns
Print Name

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B CVOC

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**№ 5272**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0214-010.0-20130325 | 3/25/13 | 1434 | | X | 2 | N | Y | A | | NAL 13041-149 |
| 2 | CRHE-DPT0214-018.0-20130325 | | 1446 | | | | | | | | NAL -150 |
| 3 | CRHE-DPT0214-023.0-20130325 | | 1449 | | | | | | | | NAL -151 |
| 4 | CRHE-DPT0214-028.0-20130325 | | 1459 | | | | | | | | NAL -152 |
| 5 | CRHE-DPT0214-033.0-20130325 | | 1509 | | | | | | | | NAL -153 |
| 6 | CRHE-DPT0214-038.0-20130325 | | 1520 | | | | | | | | NAL -154 |
| 7 | CRHE-DPT0214-043.0-20130325 | | 1532 | | | | | | | | NAL -155 |
| 8 | CRHE-DPT0214-058.0-20130325 | | 1546 | | | | | | | | NAL -156 |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

CRH 3/25/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-8 | Crystal Towns/Geosyntec | CRH & WH | 3/25/13 | 1648 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable CRH 3/25/13

Sampler's Signature: Crystal Towns

Print Name

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR-1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B-COCs

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*Mobile Laboratory Services*

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**№ 5273**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0213-069.0-20130326 | 3/26/13 | 0751 | | X | 2 | N | Y | A | | NAL 130411 57 |
| 2 | CRHE-DPT0215-010.0-20130326 | | 0855 | | | | | | | | NAL -158 |
| 3 | CRHE-DPT0215-018.0-20130326 | | 0915 | | | | | | | | NAL -159 |
| 4 | CRHE-DPT0215-023.0-20130326 | | 0929 | | | | | | | | NAL -160 |
| 5 | CRHE-DPT0215-028.0-20130326 | | 0937 | | | | | | | | NAL -161 |
| 6 | CRHE-DPT0215-033.0-20130326 | | 0949 | | | | | | | | NAL -162 |
| 7 | CRHE-DPT0215-038.0-20130326 | | 1003 | | | | | | | | NAL -163 |
| 8 | CRHE-DPT0215-043.0-20130326 | | 1016 | | | | | | | | NAL -164 |
| 9 | CRHE-DPT0215-058.0-20130326 | | 1033 | | | | | | | | NAL -165 |
| 10 | CRHE-DPT0216-010.0-20130326 | | 1117 | | | | | | | | NAL -166 |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-10 | Crystal Towns / Geosyntec | Christine Nhan | 3/26/13 | 1245 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable COC 3/26/13

Sampler's Signature: Crystal Towns

Print Name

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B CVOC

New Age/Landmark, Inc.
*Mobile Laboratory Services*

Tel. No.: 888-685-1628
www.newagelandmark.com

**Nº 5274**

## Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0216-018.0-20130326 ~~13~~ CT | 3/26/13 | 1128 | | X | 2 | N | Y | A | | NAL 13041-167 |
| 2 | CRHE-DPT0216-023.0-20130326 | " | 1138 | | " | " | " | " | " | | NAL - 168 |
| 3 | CRHE-DPT0216-028.0-20130326 | " | 1148 | | " | " | " | " | " | | NAL - 169 |
| 4 | CRHE-DPT0216-033.0-20130326 | " | 1200 | | " | " | " | " | " | | NAL - 170 |
| 5 | CRHE-DPT0216-038.0-20130326 | " | 1212 | | " | " | " | " | " | | NAL - 171 |
| 6 | | | | | | | | | | | NAL - |
| 7 | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

CEW 3/26/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-5 | Crystal Towns Geosyntec | Celeste Weh | 3/26/13 | 1215 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable CEW 3/26/13

Sampler's Signature: Crystal Towns

Print Name: Crystal Towns

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B-VOC

New Age/Landmark, Inc.
*Mobile Laboratory Services*

Tel. No.: 888-685-1628
www.newagelandmark.com

**№ 5275**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0216-043.0-20130326 | 3/26/13 | 1258 | | X | 2 | N | Y | A | | NAL 1304 - 172 |
| 2 | CRHE-DPT0216-058.0-20130326 | | 1315 | | | | | | | | NAL - 173 |
| 3 | CRHE-DPT0217-010.0-20130326 | | 1355 | | | | | | | | NAL - 174 |
| 4 | CRHE-DPT0217-018.0-20130326 | | 1404 | | | | | | | | NAL - 175 |
| 5 | CRHE-DPT0217-023.0-20130326 | | 1413 | | | | | | | | NAL - 176 |
| 6 | CRHE-DPT0217-028.0-20130326 | | 1423 | | | | | | | | NAL - 177 |
| 7 | CRHE-DPT0217-033.0-20130326 | | 1433 | | | | | | | | NAL - 178 |
| 8 | CRHE-DPT0217-038.0-20130326 | | 1446 | | | | | | | | NAL - 179 |
| 9 | CRHE-DPT0217-043.0-20130326 | | 1500 | | | | | | | | NAL - 180 |
| 10 | CRHE-DPT0217-058.0-20130326 | ↓ | 1517 | | ↓ | ↓ | ↓ | ↓ | ↓ | | NAL - 181 |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-10 | Crystal Towns / Geosyntec | [illegible] | 3/26/13 | 1600 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable CEW 3/26/13

Sampler's Signature: Crystal Towns

Print Name: Crystal Towns

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B CVOC

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*Mobile Laboratory Services*

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**No 5276**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Types of Analysis: 8260B CVOC | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0214-068.0-20130326 | 3/26/13 | 1601 | | X | 2 | X | N | Y | A | | NAL 1304 - 182 |
| 2 | | | | | | | | | | | | NAL - |
| 3 | | | | | | | | | | | | NAL - |
| 4 | | | | | | | | | | | | NAL - |
| 5 | | | | | | | | | | | | NAL - |
| 6 | | | | | | | | | | | | NAL - |
| 7 | | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | | NAL - |

CRW 3/26/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1 | Crystal Towns / Geosyntec | | 3/26/13 | 1600 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only)
Acceptable
Crystal Towns

Sampler's Signature
Crystal Towns

Print Name

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B, CrOC

New Age/Landmark, Inc.
*Mobile Laboratory Services*

Tel. No.: 888-685-1628
www.newagelandmark.com

**№ 5277**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0218-010.0-20130327 | 3/27/13 | 0749 | | X | 2 | N | Y | A | | NAL 13041 - 183 |
| 2 | CRHE-DPT0218-18.0-20130327 | " | 0759 | | " | " | " | " | " | | NAL - 184 |
| 3 | CRHE-DPT0218-023.0-20130327 | " | 0810 | | " | " | " | " | " | | NAL - 185 |
| 4 | CRHE-DPT0218-028.0-20130327 | " | 0822 | | " | " | " | " | " | | NAL - 186 |
| 5 | CRHE-DPT0218-033.0-20130327 | " | 0837 | | " | " | " | " | " | | NAL - 187 |
| 6 | CRHE-DPT0218-038.0-20130327 | " | 0851 | | " | " | " | " | " | | NAL - 188 |
| 7 | CRHE-DPT0218-043.0-20130327 | " | 0907 | | " | " | " | " | " | | NAL - 189 |
| 8 | CRHE-DPT0218-058.0-20130327 | " | 0929 | | " | " | " | " | " | | NAL - 190 |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

CEW 3/27/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-8 | Crystal Towns/Geosyntec | Celeste Weaver | 3/27/13 | 0947 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable CEW 3/27/13

Sampler's Signature: Crystal Towns

Print Name: Crystal Towns

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Client Name & Project Name: Geosyntec for HE

Project No.: FR 1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B-CVOCs

New Age/Landmark, Inc.
*Mobile Laboratory Services*

Tel. No.: 888-685-1628
www.newagelandmark.com

**No 5278**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0219-010.0-20130327 | 3/27/13 | 1006 | | X | 2 | N | Y | A | | NAL 13041-191 |
| 2 | CRHE-DPT0219-018.0-~~20130327~~ 20130327 | | 1028 | | | | | | | | NAL -192 |
| 3 | CRHE-DPT0219-023.0-20130327 | | 1041 | | | | | | | | NAL -193 |
| 4 | CRHE-DPT0219-028.0-20130327 | | 1055 | | | | | | | | NAL -194 |
| 5 | CRHE-DPT0219-033.0-20130327 | | 1107 | | | | | | | | NAL -195 |
| 6 | CRHE-DPT0219-038.0-20130327 | | 1119 | | | | | | | | NAL -196 |
| 7 | CRHE-DPT0219-043.0-20130327 | | 1133 | | | | | | | | NAL -197 |
| 8 | CRHE-DPT0219-058.0-20130327 | | 1157 | | | | | | | | NAL -198 |
| 9 | CRHE-DPT0220-010.0-20130327 | | 1322 | | | | | | | | NAL -199 |
| 10 | CRHE-DPT0220-018.0-20130327 | | 1331 | | | | | | | | NAL -200 |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-10 | Crystal Towns | [illegible] | 3/28/13 | 1621 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Delivered on ice

Sampler's Signature: Crystal Towns 3/27/13

Print Name: Crystal Towns

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B CVOC

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**№ 5279**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0220-023.0-20130327 | 3/27/13 | 1340 | | X | 2 | X | N | Y | A | NAL 1304-201 |
| 2 | CRHE-DPT0220-028.0-20130327 | | 1351 | | | | | | | | NAL -202 |
| 3 | CRHE-DPT0220-033.0-20130327 | | 1403 | | | | | | | | NAL -203 |
| 4 | CRHE-DPT0220-038.0-20130327 | | 1415 | | | | | | | | NAL -204 |
| 5 | CRHE-DPT0220-043.0-20130327 | | 1428 | | | | | | | | NAL -205 |
| 6 | CRHE-IDW193861-20130327 | | 1206 | | | | | | | | NAL 206 |
| 7 | CRHE-DPT0220-058.0-20130327 | | 1443 | | | | | | | | NAL -207 |
| 8 | CRHE-DPT0220-068.0-20130327 | | 1503 | | | | | | | | NAL -208 |
| 9 | CRHE-DPT0216-068.0-20130327 | | 1542 | | | | | | | | NAL -209 |
| 10 | CRHE-DPT0217-068.0-20130327 | | 1625 | | | | | | | | NAL -210 |

| Transfer Number | Item Numbers | Transfers Relinquished By | @ | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|---|
| 1 | 1-10 | [signature] | @ | [signature] | 3/27/13 | 1630 |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |

Remarks (for lab use only): Acceptable 3/27/13

Sampler's Signature: Crystal Towns

Print Name: Crystal Towns

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B-CVOC

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**№ 5280**

## Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0221-010.0-20130328 | 3/28/13 | 0750 | | X | 2 | N | Y | A | | NAL 13241-211 |
| 2 | CRHE-DPT0221-018.0-20130328 | | 0802 | | | | | | | | NAL -212 |
| 3 | CRHE-DPT0221-023.0-20130328 | | 0812 | | | | | | | | NAL -213 |
| 4 | CRHE-DPT0221-028.0-20130328 | | 0830 | | | | | | | | NAL -214 |
| 5 | CRHE-DPT0221-033.0-20130328 (DT) | | 0841 | | | | | | | | NAL -215 |
| 6 | CRHE-DPT0221-038.0-20130328 | | 0857 | | | | | | | | NAL -216 |
| 7 | CRHE-DPT0221-043.0-20130328 | | 0918 | | | | | | | | NAL -217 |
| 8 | CRHE-DPT0221-058.0-20130328 | | 0936 | | | | | | | | NAL -218 |
| 9 | CRHE-DPT0222-010.0-20130328 | | 1009 | | | | | | | | NAL -219 |
| 10 | CRHE-DPT0222-018.0-20130328 | | 1019 | | | | | | | | NAL -220 |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-10 | Crystal Toms | [illegible] | 3/28/13 | 1134 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only)
Accepted AEW 3/28/13

Sampler's Signature: Crystal Toms

Print Name

COCs rev.5 Date: 2/27/08 Copyright © 2008 All Rights Reserved

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681

Project Contact: Lauren Petty

Phone Number:

Project Location: KSC

lpetty@geosyntec.com

Types of Analysis: 8260B VOC

New Age/Landmark, Inc.
*Mobile Laboratory Services*

Tel. No.: 888-685-1628
www.newagelandmark.com

**№ 5281**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0222-023.0-20130328 | 3/28/13 | 1032 | | X | 2 | N | Y | A | | NAL 1304-221 |
| 2 | CRHE-DPT0222-028.0-20130328 | | 1045 | | | | | | | | NAL -222 |
| 3 | CRHE-DPT0222-033.0-20130328 | | 1057 | | | | | | | | NAL -223 |
| 4 | CRHE-DPT0222-038.0-20130328 | | 1110 | | | | | | | | NAL -224 |
| 5 | CRHE-DPT0222-043.0-20130328 | | 1125 | | | | | | | | NAL -225 |
| 6 | CRHE-DPT0222-058.0-20130328 | | 1141 | | | | | | | | NAL -226 |
| 7 | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

CRW 3/28/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-6 | Crystal Towns | CRW | 3/28/13 | 1159 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable -

Crystal Towns

Sampler's Signature

Crystal Towns

Print Name

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR 1681/25*2

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: RSC

Types of Analysis: 8260B cVOC

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*Mobile Laboratory Services*

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№ 5282

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0223-010.0-20130328 | 3/28/13 | 1259 | | X | 2 | N | Y | A | | NAL 1341 ~~1344~~ 127 |
| 2 | CRHE-DPT0223-018.0-20130328 | | 1309 | | | | | | | | NAL 128 |
| 3 | CRHE-DPT0223-023.0-20130328 | | 1320 | | | | | | | | NAL 229 |
| 4 | CRHE-DPT0223-028.0-20130328 | | 1330 | | | | | | | | NAL 230 |
| 5 | CRHE-DPT0223-033.0-20130328 | | 1340 | | | | | | | | NAL 231 |
| 6 | CRHE-DPT0223-038.0-20130328 | | 1350 | | | | | | | | NAL 232 |
| 7 | CRHE-DPT0223-043.0-20130328 | | 1418 | | | | | | | | NAL 233 |
| 8 | CRHE-DPT0223-058.0-20130328 | | 1428 | | | | | | | | NAL 234 |
| 9 | CRHE-DPT0224-010.0-20130328 | | 1504 | | | | | | | | NAL 235 |
| 10 | CRHE-DPT0224-018.0-20130328 | | 1512 | | | | | | | | NAL 236 |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-10 | Claire Osborn | | 3/28/13 | 1712 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable

Sampler's Signature: Claire Osborn

Print Name: Claire Osborn

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681/25*2

Project Contact: Lauren Petty lpettye geosyntec.com

Phone Number:

Project Location: KSC

Types of Analysis: 8260B - Cl,V

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**№ 5283**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | 8260B - Cl,V | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0224-0230-20130328 | 3/28/13 | 1522 | | X | 2 | X | N | Y | A | | NAL 304/237 |
| 2 | CRHE-DPT0224-0260-20130328 | 3/28/13 | 1532 | | " | " | X | N | Y | A | | NAL -238 |
| 3 | ~~CRHE-DPT0224-0330-20130328~~ | | | | | | | | | | | NAL - |
| 4 | ~~CRHE-DPT0224-0380-20130328~~ IDW193 | | | | | | | | | | | NAL - |
| 5 | CRHE-~~DPT0224-0380~~-20130328 | 3/28/13 | 1710 | | X | 2 | X | N | Y | A | | NAL -239 |
| 6 | | | | | | | | | | | | NAL - |
| 7 | | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1,2,5 | Claire Osborn | [signature] | 3/28/13 | 1712 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable

Sampler's Signature: Claire Osborn

Print Name: Claire Osborn

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR1681/25*2

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: RSC

Types of Analysis: 8260B - CVOC

New Age/Landmark, Inc.
*Mobile Laboratory Services*

Tel. No.: 888-685-1628
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№ 5284

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | 8260B - CVOC | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0224-0330-20130329 | 3/29/13 | 820 | | X | 2 | X | N | Y | A | | NAL 13241240 |
| 2 | CRHE-DPT0224-0380-20130329 | | 840 | | | | | | | | | NAL 241 |
| 3 | CRHE-DPT0224-0430-20130329 | | 855 | | | | | | | | | NAL 242 |
| 4 | CRHE-DPT0224-0580-20130329 | | 911 | | | | | | | | | NAL 243 |
| 5 | | | | | | | | | | | | NAL - |
| 6 | | | | | | | | | | | | NAL - |
| 7 | | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 4 | Claire Osborn | Sebastian Wheeler | 3/29/13 | 930 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable

Sampler's Signature: Claire Osborn

Print Name: Claire Osborn

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Client Name & Project Name: Geosyntec / CRHE

Project No.:

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: RSC

Types of Analysis: 8260B-VOC

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Tel. No.: 888-685-1628
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№ 5285

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0225-010.0-20130329 | 3/29/13 | 950 | | X | 2 | X | N | Y | A | | NAL 32011-244 |
| 2 | CRHE-DPT0225-018.0-20130329 | | 1000 | | | | | | | | NAL -245 |
| 3 | CRHE-DPT0225-023.0-20130329 | | 1020 | | | | | | | | NAL -246 |
| 4 | CRHE-DPT0225-028.0-20130329 | | 1030 | | | | | | | | NAL -247 |
| 5 | CRHE-DPT0225-033.0-20130329 | | 1040 | | | | | | | | NAL -248 |
| 6 | CRHE-DPT0225-038.0-20130329 | | 1050 | | | | | | | | NAL -249 |
| 7 | CRHE-DPT0225-043.0-20130329 (EW) | | 1100 | | | | | | | | NAL -250 |
| 8 | CRHE-DPT0225-~~048.0~~ 053.0-20130329 | | 1110 | | | | | | | | NAL -251 |
| 9 | | | | | | | CR | 3/29/13 | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 8 | Claire Osborn | Celeste Wh | 3/29/13 | 1145 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only)
* please analyze CRHE-DPT0225-010.0-20130329 next week as to stay in 125 samples/wk quota

Sampler's Signature: Claire Osborn

Print Name: Claire Osborn

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Client Name & Project Name: Geosyntec / CRHE

Project No.:

Project Contact: Lauren Petty lpetty@geosyntec.com

Phone Number:

Project Location: RSC

Types of Analysis: 8260B-OOC

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**№ 5286**

## Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0225-0680-20130329 | 3/29/13 | 1358 | | X | 2 | N | Y | A | | NAL 13041-252 |
| 2 | | | | | | | | | | | NAL - |
| 3 | | | | | | | | | | | NAL - |
| 4 | | | | | | | | | | | NAL - |
| 5 | | | | | | | | | | | NAL - |
| 6 | | | | | | | | | | | NAL - |
| 7 | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

DLW 3/29/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1 | Claire Osborn | | 3/29/13 | 1410 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable

Sampler's Signature: Claire Osborn

Print Name: Claire Osborn

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Client Name & Project Name: Geosyntec - CRHE

Project No.: FR1681

Project Contact: Lauren Petty

Phone Number: (850) 477-6547

Project Location: NASA - CRHE

Types of Analysis: 8260 (cvocs+1,4-D)

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**№ 5288**

## Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0226-010.0-20130401 | 04/01/13 | 08:59 | | X | 2 | N | Y | A | | NAL 13041-253 |
| 2 | CRHE-DPT0226-018.0-20130401 | 04/01/13 | 09:12 | | X | 2 | N | | | | NAL -254 |
| 3 | CRHE-DPT0226-023.0-20130401 | 04/01/13 | 09:22 | | X | 2 | N | | | | NAL -255 |
| 4 | CRHE-DPT0226-028.0-20130401 | 04/01/13 | 09:38 | | X | 2 | N | | | | NAL -256 |
| 5 | CRHE-DPT0226-033.0-20130401 | 04/01/13 | 09:52 | | X | 2 | N | | | | NAL -257 |
| 6 | CRHE-DPT0226-038.0-20130401 | 04/01/13 | 10:09 | | X | 2 | N | | | | NAL -258 |
| 7 | CRHE-DPT0226-043.0-20130401 | 04/01/13 | 10:30 | | X | 2 | N | | | | NAL -259 |
| 8 | CRHE-DPT0226-058.0-20130401 | 04/01/13 | 10:49 | | X | 2 | N | | | | NAL 260 |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

CCV 4/1/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-8 | Christel Schultz | Courtney Walker | 4/1/13 | 1153 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable CCV 4/1/13

Sampler's Signature: Christel Schultz

Print Name: Christel Schultz

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Client Name & Project Name: Geosyntec - CRHE

Project No.: FR1681

Project Contact: Lauren Petty

Phone Number: (850) 477-6547

Project Location: NASA - CRHE

Types of Analysis: 8260 (expanded list)

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№ 5289

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0227-010.0-20130401 | 04/01/13 | 11:23 | | X | 2 | N | Y | A | | NAL 1304 1-261 |
| 2 | CRHE-DPT0227-018.0-20130401 | 04/01/13 | 11:33 | | X | 2 | N | | | | NAL -262 |
| 3 | CRHE-DPT0227-023.0-20130401 | 04/01/13 | 11:49 | | X | 2 | N | | | | NAL -263 |
| 4 | CRHE-DPT0227-028.0-20130401 | 04/01/13 | 12:07 | | X | 2 | N | | | | NAL -264 |
| 5 | CRHE-DPT0227-033.0-20130401 | 04/01/13 | 12:45 | | X | 2 | N | | | | NAL -265 |
| 6 | CRHE-DPT0227-038.0-20130401 | 04/01/13 | 13:02 | | X | 2 | N | | | | NAL -266 |
| 7 | CRHE-DPT0227-0430-20130401 | 04/01/13 | 13:21 | | X | 2 | N | | | | NAL -267 |
| 8 | CRHE-DPT0227-058.0-20130401 | 04/01/13 | 13:40 | | X | 2 | N | | | | NAL -268 |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-8 | Christel Schultz | Christel Schultz | 4/1/13 | 1449 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable CEW

Sampler's Signature: Christel Schultz

Print Name: Christel Schultz

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Client Name & Project Name: Geosyntec - CRHE

Project No.: FR1681

Project Contact: Lauren Petty

Phone Number: (850)477-6547

Project Location: NASA - CRHE

Types of Analysis: 8260 (VOCs not-4 list)

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№ 5290

## Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0228-010.0-20130401 | 04/01/13 | 14:21 | | X | 2 | N | Y | A | | NAL 13041-269 |
| 2 | CRHE-DPT0228-018.0-20130401 | 04/01/13 | 14:34 | | X | 2 | N | | | | NAL -270 |
| 3 | CRHE-DPT0228-028.0-20130401 | 04/01/13 | 14:59 | | X | 2 | N | | | | NAL -271 |
| 4 | CRHE-DPT0228-030.0-20130401 | 04/01/13 | 15:12 | | X | 2 | N | | | | NAL -272 |
| 5 | CRHE-DPT0228-038.0-20130401 | 04/01/13 | 15:29 | | X | 2 | N | | | | NAL -273 |
| 6 | CRHE-DPT0228-043.0-20130401 | 04/01/13 | 15:47 | | X | 2 | N | | | | NAL -274 |
| 7 | CRHE-DPT0228-023.0-20130401 | 04/01/13 | 14:45 | | X | 2 | N | | | | NAL -275 |
| 8 | CRHE-DPT0228-058.0-20130401 | 04/01/13 | 16:06 | | X | 2 | N | | | | NAL -276 |
| 9 | | | | | | | N | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-8 | | | 4/1/13 | 16:36 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable

Sampler's Signature:

Print Name: Christel Schultz

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Client Name & Project Name: Geosyntec - CRHE

Project No.: FR1681

Project Contact: Lauren Petty

Phone Number: (850)477-6547

Project Location: NASA - CRHE

Types of Analysis: 8260 (Once Point List)

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**№ 5291**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0229-010.0-20130401 | 4/1/13 | 10:51 | | X | 2 | N | Y | A | | NAL 1304177 |
| 2 | | | | | | | | | | | NAL - |
| 3 | | | | | | | | | | | NAL - |
| 4 | | | | | | | | | | | NAL - |
| 5 | | | | | | | | | | | NAL - |
| 6 | | | | | | | | | | | NAL - |
| 7 | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

CRW 4/1/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1 | Christ Schultz | Christ W | 4/1/13 | 1712 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable CRW

Sampler's Signature: Christ Schultz

Print Name: Christel Schultz

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Client Name & Project Name: Geosyntec / CRHE

Project No.: FR16F1

Project Contact: Lauren Petty

Phone Number: (850) 477-6547

Project Location: NASA - CRHE

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**№ 5292**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Types of Analysis: 8260 (w/ acetone list) | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0229-018.0-20130402 | 04/02/13 | 07:39 | | X | 2 | X | N | Y | A | | NAL 13041-278 |
| 2 | CRHE-DPT0229-023.0-20130402 | 04/02/13 | 07:53 | | X | 2 | X | N | | | | NAL -279 |
| 3 | CRHE-DPT0229-028.0-20130402 | 04/02/13 | 08:25 | | X | 2 | X | N | | | | NAL -280 |
| 4 | CRHE-DPT0229-033.0-20130402 | 04/02/13 | 08:43 | | X | 2 | X | N | | | | NAL -281 |
| 5 | CRHE-DPT0229-038.0-20130402 | 04/02/13 | 09:05 | | X | 2 | X | N | | | | NAL -282 |
| 6 | CRHE-DPT0229-043.0-20130402 | 04/02/13 | 09:21 | | X | 2 | X | N | | | | NAL -283 |
| 7 | CRHE-DPT0229-058.0-20130402 | 04/02/13 | 09:45 | | X | 2 | X | N | | | | NAL -284 |
| 8 | | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | | NAL - |

4/4/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-7 | Christel Schultz | Celeste Wr | 4/4/13 | 1020 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only)
Acceptable

Sampler's Signature: Christel Schultz

Print Name: Christel Schultz

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Project No.: FR1681

Project Contact: Lauren Petty

Phone Number: (850) 477-4547

Project Location: NASA - CRHE

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**№ 5293**

## Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Types of Analysis: 8260 (VOC short list) | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0230-010.0-20130402 (CS) | 04/02/13 | 10:25 | | X | 2 | X | N | Y | A | | NAL 13041285 |
| 2 | CRHE-DPT0230-018.0-20130402 | 04/02/13 | 10:36 | | X | 2 | X | N | | | | NAL -286 |
| 3 | CRHE-DPT0230-023.0-20130402 | 04/02/13 | 10:50 | | X | 2 | X | N | | | | NAL -287 |
| 4 | CRHE-DPT0230-028.0-20130402 | 04/02/13 | 11:05 | | X | 2 | X | N | | | | NAL -288 |
| 5 | CRHE-DPT0230-033.0-20130402 | 04/02/13 | 11:19 | | X | 2 | X | N | | | | NAL -289 |
| 6 | CRHE-DPT0230-038.0-20130402 | 04/02/13 | 11:32 | | X | 2 | X | N | | | | NAL -290 |
| 7 | CRHE-DPT0230-043.0-20130402 (CS) | 04/02/13 (CS) | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | | NAL - |

CCW 4/2/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-6 | Christel Schultz | Christie Wh | 4/2/13 | 1229 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable

Sampler's Signature: Christel Schultz

Print Name: Christel Schultz

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Client Name & Project Name: Geosyntec - CRHE

Project No.: FR16811

Project Contact: Lauren Petty

Phone Number: (850)477-6547

Project Location: NASA - CRHE

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№ 5294

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Types of Analysis: 8260 (Civic Airport list) | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0230-043.0-20130402 | 04/02/13 | 13:28 | | X | 2 | X | N | Y | A | | NAL 13041-291 |
| 2 | CRHE-DPT0230-058.0-20130402 | 04/02/13 | 13:50 | | X | 2 | X | N | Y | A | | NAL -292 |
| 3 | | | | | | | | | | | | NAL - |
| 4 | | | | | | | | | | | | NAL - |
| 5 | | | | | | | | | | | | NAL - |
| 6 | | | | | | | | | | | | NAL - |
| 7 | | | | | | | | | | | | NAL - |
| 8 | | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-2 | Christ Schultz | Celyste Wh | 4/2/13 | 1530 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable

Sampler's Signature: Christ Schultz

Print Name: Christ Schultz

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Client Name & Project Name: Geosyntec - CRHE

Project No.: FR1681

Project Contact: Lauren Petty

Phone Number: (850) 477-6547

Project Location: NASA - CRHE

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**№ 5295**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Types of Analysis: 8260 (Circle short list) | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0231-018.0-20130402 | 04/02/13 | 16:27 | | X | 2 | X | N | Y | A | | NAL 13041293 |
| 2 | CRHE-DPT0231-023.0-20130402 | 04/02/13 | 16:39 | | X | 2 | X | N | | | | NAL -294 |
| 3 | CRHE-DPT0231-028.0-20130402 | 04/02/13 | 16:51 | | X | 2 | X | N | | | | NAL -295 |
| 4 | CRHE-DPT0231-~~033.0~~ 023.0 -20130402 | 04/02/13 | 17:05 | | X | 2 | X | N | | | | NAL -296 |
| 5 | CRHE-DPT0231-038.0-20130402 | 04/02/13 | 17:19 | | X | 2 | X | N | | | | NAL -297 |
| 6 | CRHE-DPT0231-043.0-20130402 | 04/02/13 | 17:34 | | X | 2 | X | N | | | | NAL -298 |
| 7 | CRHE-DPT0231-010.0-20130402 | 04/02/13 | 16:07 | | X | 2 | X | N | | | | NAL -299 |
| 8 | CRHE-DPT0231-058.0-20130402 | 04/02/13 | 17:54 | | X | 2 | X | N | | A | | NAL -300 |
| 9 | | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | | NAL - |

CRW 4/2/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-8 | Christ Schultz | [illegible] | 4/2/13 | 1522 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only)
Accepted

Sampler's Signature: Christ Schultz

Print Name: Christ Schultz

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Client Name & Project Name: Geosyntec - CRHE

Project No.: FR16681

Project Contact: Lauren Petty

Phone Number: (850)477-6547

Project Location: ETES NASA - CRHE

Types of Analysis: PAH (CVOC short list)

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№ 5296

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Types of Analysis: PAH (CVOC short list) | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0232-010.0-20130403 | 04/03/13 | 08:54 | | X | 2 | X | N | Y | A | | NAL 13041-301 |
| 2 | CRHE-DPT0232-018.0-20130403 | 04/03/13 | 09:09 | | X | 2 | X | N | | | | NAL -302 |
| 3 | CRHE-DPT0232-023.0-20130403 | 04/03/13 | 09:24 | | X | 2 | X | N | | | | NAL -303 |
| 4 | CRHE-DPT0232-028.0-20130403 | 04/03/13 | 09:36 | | X | 2 | X | N | | | | NAL 304 |
| 5 | CRHE-DPT0232-033.0-20130403 | 04/03/13 | 09:50 | | X | 2 | X | N | | | | NAL 305 |
| 6 | CRHE-DPT0232-038.0-20130403 | 04/03/13 | 10:07 | | X | 2 | X | N | | | | NAL 306 |
| 7 | CRHE-DPT0232-043.0-20130403 | 04/03/13 | 10:25 | | X | 2 | X | N | | | | NAL -307 |
| 8 | CRHE-DPT0232-058.0-20130403 | 04/03/13 | 10:44 | | X | 2 | X | N | | | | NAL -308 |
| 9 | | | | | | | CEW | 4/3/13 | | | | NAL - |
| 10 | | | | | | | | | | | | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-8 | Christel Schultz | Celeste Ethridge | 4/3/13 | 1115 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable (CEW)

Sampler's Signature: Christel Schultz

Print Name: Christel Schultz

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Client Name & Project Name: GeoSyntec - CRHE

Project No.: FR1681

Project Contact: Lauren Petty

Phone Number: (850)477-6547

Project Location: NASA - CRHE

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№ 5297

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Types of Analysis: 8260 (VOC Method) | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0233-010.0-20130403 | 04/03/13 | 11:43 | | X | 2 | X | N | Y | A | | NAL 13041-309 |
| 2 | CRHE-DPT0233-018.0-20130403 | 04/03/13 | 11:55 | | X | 2 | X | N | | | | NAL -310 |
| 3 | CRHE-DPT0233-023.0-20130403 | 04/03/13 | 12:07 | | X | 2 | X | N | | | | NAL -311 |
| 4 | CRHE-DPT0233-028.0-20130403 | 04/03/13 | 12:49 | | X | 2 | X | N | | | | NAL -312 |
| 5 | CRHE-DPT0233-033.0-20130403 | 04/03/13 | 13:01 | | X | 2 | X | N | | | | NAL -313 |
| 6 | CRHE-DPT0233-038.0-20130403 | 04/03/13 | 13:9 | | X | 2 | X | N | | | | NAL -314 |
| 7 | CRHE-DPT0233-043.0-20130403 | 04/03/13 | 13:35 | | X | 2 | X | N | | | | NAL -315 |
| 8 | CRHE-DPT0233-058.0-20130403 | 04/03/13 | 13:53 | | X | 2 | X | N | | | | NAL -316 |
| 9 | | | | | | | | | | | 4/4/13 | NAL - |
| 10 | | | | | | | | | | | | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-8 | | | 4/3/13 | 1443 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable

Sampler's Signature

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Client Name & Project Name: Beaufort EC - CRHE

Project No.: FR1681

Project Contact: Lauren Petty

Phone Number: (850)477-6547

Project Location: NASA - CRHE

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№ 5298

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Types of Analysis: Aqeo (cvoc short list) | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0234-010.0-20130403 | 04/03/13 | 14:35 | | X | 2 | X | N | Y | A | | NAL 1304/-317 |
| 2 | CRHE-DPT0234-018.0-20130403 | 04/03/13 | 14:47 | | X | 2 | X | N | | | | NAL -318 |
| 3 | CRHE-DPT0234-023.0-20130403 | 04/03/13 | 14:59 | | X | 2 | X | N | | | | NAL -319 |
| 4 | CRHE-DPT0234-028.0-20130403 | 04/03/13 | 15:11 | | X | 2 | X | N | | | | NAL -320 |
| 5 | CRHE-DPT0234-033.0-20130403 | 04/03/13 | 15:25 | | X | 2 | X | N | | | | NAL -321 |
| 6 | CRHE-DPT0234-038.0-20130403 | 04/03/13 | 15:43 | | X | 2 | X | N | | | | NAL -322 |
| 7 | CRHE-DPT0234-043.0-20130403 | 04/03/13 | 16:01 | | X | 2 | X | N | | | | NAL -323 |
| 8 | CRHE-DPT0234-058.0-20130403 | 04/03/13 | 16:23 | | X | 2 | X | N | | | | NAL -324 |
| 9 | CRHE-DPT0235-010.0-20130403 | 04/03/13 | 16:53 | | X | 2 | X | N | | | | NAL -325 |
| 10 | CRHE-IDW-193864-~~IDW-193864~~ CS 20130403 | 04/03/13 | 17:30 | | X | 2 | X | N | | | | NAL -326 |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-9 | Christel Schutte | Celyste Wh | 4/3/13 | 1734 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only)

Acceptable OBW

Sampler's Signature: Christel Schutte

Print Name: Christel Schutte

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Client Name & Project Name: Geosyntec - CRHE

Project No.: FR1681

Project Contact: Lauren Petty

Phone Number: (850)477-6547

Project Location: NASA - CRHE

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№ 5299

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Types of Analysis: 8260 (CVOC+Naphthalene) | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0235-018.0-20130404 | 04/04/13 | 09:03 | | X | 2 | X | N | Y | A | | NAL 1304157327 |
| 2 | CRHE-DPT0235-023.0-20130404 | 04/04/13 | 09:15 | | X | 2 | X | N | | | | NAL 328 |
| 3 | CRHE-DPT0235-028.0-20130404 | 04/04/13 | 09:31 | | X | 2 | X | N | | | | NAL 329 |
| 4 | CRHE-DPT0235-033.0-20130404 | 04/04/13 | 09:47 | | X | 2 | X | N | | | | NAL 330 |
| 5 | CRHE-DPT0235-038.0-20130404 | 04/04/13 | 10:03 | | X | 2 | X | N | | | | NAL 331 |
| 6 | CRHE-DPT0235-~~038.0~~ 043.0 -20130404 | 04/04/13 | 10:23 | | X | 2 | X | N | | | | NAL 332 |
| 7 | CRHE-DPT0235-058.0-20130404 | 04/04/13 | 10:40 | | X | 2 | X | N | | | | NAL 333 |
| 8 | | | | | | | | | | | | NAL - |
| 9 | | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | | NAL - |

CEW 4/4/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-7 | Christel Schultz | Edward E Wise | 4/4/13 | 1125 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable (CEW)

Sampler's Signature: Christel Schultz

Print Name: Christel Schultz

COCs rev.5 Date: 2/27/08 Copyright © 2008 All Rights Reserved

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Client Name & Project Name: Geosyntec - CRHE

Project No.: FR1681

Project Contact: Lauren Petty

Phone Number: (850)477-6547

Project Location: NASA - CRHE

Types of Analysis: 8260 (CVOC short list)

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**№ 5300**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0236-010.0-20130404 | 04/04/13 | 13:05 | | X | 2 | N | Y | A | | NAL 13041-334 |
| 2 | CRHE-DPT0236-018.0-20130404 | 04/04/13 | 13:20 | | X | 2 | N | | | | NAL -335 |
| 3 | CRHE-DPT0236-023.0-20130404 | 04/04/13 | 13:37 | | X | 2 | N | | | | NAL -336 |
| 4 | CRHE-DPT0236-028.0-20130404 | 04/04/13 | 13:48 | | X | 2 | N | | | | NAL -337 |
| 5 | CRHE-DPT0236-033.0-20130404 | 04/04/13 | 14:04 | | X | 2 | N | | | | NAL -338 |
| 6 | CRHE-DPT0236-038.0-20130404 | 04/04/13 | 14:24 | | X | 2 | N | | | | NAL -339 |
| 7 | CRHE-DPT0236-043.0-20130404 | 04/04/13 | 14:41 | | X | 2 | N | | | | NAL -340 |
| 8 | CRHE-DPT0236-058-20130404 | 04/04/13 | 15:00 | | X | 2 | N | | | | NAL -341 |
| 9 | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | NAL - |

COC rev 4/4/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-8 | Christ Schultz | Robert Whitt | 4/4/13 | 1547 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable

Sampler's Signature: Christ Schultz

Print Name: Christel Schultz

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Client Name & Project Name: Berry Petroleum - CRHE

Project No.: CRHE01

Project Contact: Lauren Petty

Phone Number: (650) 477-6547

Project Location: NASA - CRHE

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**№ 5203**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Types of Analysis: PH20 (Short list) | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0237-010.0-20130405 | 04/05/13 | 07:31 | | X | 2 | X | N | Y | A | | NAL 1341342 |
| 2 | CRHE-DPT0237-018.0-20130405 | 04/05/13 | 09:45 | | X | 2 | X | N | | | | NAL -343 |
| 3 | CRHE-DPT0237-028.0-20130405 | 04/05/13 | 09:54 | | X | 2 | X | N | | | | NAL -344 |
| 4 | CRHE-DPT0237-028.0-20130405 | 04/05/13 | 10:07 | | X | 2 | X | N | | | | NAL -345 |
| 5 | CRHE-DPT0237-033.0-20130405 | 04/05/13 | 10:20 | | X | 2 | X | N | | | | NAL -346 |
| 6 | CRHE-DPT0237-038.0-20130405 | 04/05/13 | 11:23 | | X | 2 | X | N | | | | NAL -347 |
| 7 | CRHE-DPT0237-043.0-20130405 | 04/05/13 | 11:37 | | X | 2 | X | N | | | | NAL -348 |
| 8 | CRHE-DPT0237-058.0-20130405 | 04/05/13 | 11:52 | | X | 2 | X | N | | | | NAL -349 |
| 9 | | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | | NAL - |

CEW 4/5/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-8 | Christel Schultz | Alyssa White | 4/5/13 | 1214 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

Remarks (for lab use only): Acceptable CEW

Sampler's Signature: Christel Schultz

Print Name: Christel Schultz

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Client Name & Project Name: GeoSynTec - CRHE

Project No.: FR1681

Project Contact: Lauren Petty

Phone Number: (850)471-6547

Project Location: NASA - CRHE

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**№ 5204**

Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Types of Analysis: PAHs (Direct Input List) | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0238-~~010.0~~ 010.0 (CS) -20130405 | 04/05/13 | 12:23 | | X | 2 | X | N | Y | A | | NAL 13041-350 |
| 2 | CRHE-DPT0238-018.0-20130405 | 04/05/13 | 12:30 | | X | 2 | X | N | | | | NAL -351 |
| 3 | CRHE-DPT0238-028.0-20130405 | 04/05/13 | 12:48 | | X | 2 | X | N | | | | NAL -352 |
| 4 | CRHE-DPT0238-028.0-20130405 | 04/05/13 | 12:58 | | X | 2 | X | N | | | | NAL 353 |
| 5 | CRHE-DPT0238-033.0-20130405 | 04/05/13 | 13:11 | | X | 2 | X | N | | | | NAL -354 |
| 6 | CRHE-DPT0238-038.0-20130405 | 04/05/13 | 13:27 | | X | 2 | X | N | | | | NAL -355 |
| 7 | CRHE-DPT0238-043.0-20130405 | 04/05/13 | 13:42 | | X | 2 | X | N | | | | NAL -356 |
| 8 | CRHE-DPT0238-058.0-20130405 | 04/05/13 | 14:02 | | X | 2 | X | N | | | | NAL -357 |
| 9 | | | | | | | | | | | | NAL - |
| 10 | | | | | | | | | | | | NAL |

CEW 4/5/13

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1-8 | Christel Schulte | Alyssa Smith | 4/5/13 | 1722 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

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Sampler's Signature: Christel Schulte

Print Name: Christel Schulte

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Client Name & Project Name: Geosyntec - CRHE

Project No.: FR1681

Project Contact: Christel Schultz

Phone Number: (850)477-6547

Project Location: NASA - CRHE

Types of Analysis: 8260 (cVOC short list)

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Chain-of Custody Record

| Item No. | Sample ID | Date | Time | Sample Type: Comp | Sample Type: Grab | No. of Containers | Preserved (Y/N) | 4°C (Y/N) | Condition (A or NA) | Comments/Remarks Sample Description | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-DPT0239-010.0-20130405 | 04/05/13 | 14:30 | | X | 2 | N | Y | A | | NAL 1304358 |
| 2 | CRHE-DPT0239-018.0-20130405 | 04/05/13 | 14:40 | | X | 2 | N | | | | NAL -359 |
| 3 | CRHEDPT0239-023.0-20130405 | 04/05/13 | 14:50 | | X | 2 | N | | | | NAL -360 |
| 4 | CRHE-DPT0239-028.0-20130405 | 04/05/13 | 15:04 | | X | 2 | N | | | | NAL -361 |
| 5 | CRHE-DPT0239-033.0-20130405 | 04/05/13 | 15:17 | | X | 2 | N | | | | NAL -362 |
| 6 | CRHE-DPT0239-038.0-20130405 | 04/05/13 | 15:34 | | X | 2 | N | | | | NAL -363 |
| 7 | CRHE-DPT0239-043.0-20130405 | 04/05/13 | 15:50 | | X | 2 | N | | | | NAL -364 |
| 8 | CRHE-DPT0239-(05)48.0-20130405 | 04/05/13 | 16:08 | | X | 2 | N | | | | NAL -365 |
| 9 | CRHE-IDW 193865-20130405 | 04/05/13 | 17:40 | | X | 2 | N | | | | NAL -366 |
| 10 | | | | | | | | | | COC 4/5/13 | NAL - |

| Transfer Number | Item Numbers | Transfers Relinquished By | Transfers Accepted By | Date | Time |
|---|---|---|---|---|---|
| 1 | 1 | Christel Schultz | Celeste Wheeler | 4/5/13 | 1818 |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

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Sampler's Signature: Christel Schultz

Print Name: Christel Schultz

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# FINAL ANALYTICAL REPORT

**Geosyntec Consultants**
**316 S Baylen Str., Suite 201**
**Pensacola, FL 32502**
**ATTN: Ms. Jill Johnson**

**Project #:** **NAL13-041**
**Project Site: NASA, Kennedy Space Center**

Analytical results meet the requirements of NELAC Standards. The results reported apply solely to the sample analyzed and all results are reported on a dry weight basis unless stated otherwise. Any questions concerning this report should be directed to Scott D. Wall, President.
**V** = Analyte was detected in both the sample and the associated method blank.
**L** = Off-scale high. Actual value is known to be greater than value given.
**J** = Estimated value; value not accurate. All results with a "J" qualifier require comment.
**I** = The reported value is between the laboratory MDL and the laboratory PQL
**K** = Off-scale low. Actual value is known to be less than the value given.
**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-001 | CRHE-DPT0196-010.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7268 | | | | |
| NAL13041-001 | CRHE-DPT0196-010.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7268 | | | | |
| NAL13041-001 | CRHE-DPT0196-010.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7268 | | | | |
| NAL13041-001 | CRHE-DPT0196-010.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7268 | | | | |
| NAL13041-001 | CRHE-DPT0196-010.0-20130318 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7268 | | | | |
| NAL13041-001 | CRHE-DPT0196-010.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7268 | | | | |
| NAL13041-001 | CRHE-DPT0196-010.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7268 | 50 | 92 | | |
| NAL13041-001 | CRHE-DPT0196-010.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 42 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7268 | 50 | 84 | | |
| NAL13041-001 | CRHE-DPT0196-010.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7268 | 50 | 94 | | |
| NAL13041-001 | CRHE-DPT0196-010.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7268 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

**Geosyntec Consultants**
**316 S Baylen Str., Suite 201**
**Pensacola, FL 32502**
**ATTN: Ms. Jill Johnson**

**Project #:** **NAL13-041**
**Project Site: NASA, Kennedy Space Center**

Analytical results meet the requirements of NELAC Standards. The results reported apply solely to the sample analyzed and all results are reported on a dry weight basis unless stated otherwise. Any questions concerning this report should be directed to Scott D. Wall, President.
**V** = Analyte was detected in both the sample and the associated method blank.
**L** = Off-scale high. Actual value is known to be greater than value given.
**J** = Estimated value; value not accurate. All results with a "J" qualifier require comment.
**I** = The reported value is between the laboratory MDL and the laboratory PQL
**K** = Off-scale low. Actual value is known to be less than the value given.
**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-002 | CRHE-DPT0196-018.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | 290 | L | ug/L | 1.0 | 0.13 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7269 | | | | |
| NAL13041-002 | CRHE-DPT0196-018.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7269 | | | | |
| NAL13041-002 | CRHE-DPT0196-018.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 77 | | ug/L | 1.0 | 0.28 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7269 | | | | |
| NAL13041-002 | CRHE-DPT0196-018.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1600 | L | ug/L | 1.0 | 0.20 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7269 | | | | |
| NAL13041-002 | CRHE-DPT0196-018.0-20130318 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7269 | | | | |
| NAL13041-002 | CRHE-DPT0196-018.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7269 | | | | |
| NAL13041-002 | CRHE-DPT0196-018.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7269 | 50 | 92 | | |
| NAL13041-002 | CRHE-DPT0196-018.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7269 | 50 | 86 | | |
| NAL13041-002 | CRHE-DPT0196-018.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7269 | 50 | 96 | | |
| NAL13041-002 | CRHE-DPT0196-018.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7269 | 50 | 90 | | |

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# FINAL ANALYTICAL REPORT

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**316 S Baylen Str., Suite 201**
**Pensacola, FL 32502**
**ATTN: Ms. Jill Johnson**

**Project #:** **NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-003 | CRHE-DPT0196-023.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | 1300 | L | ug/L | 2.0 | 0.26 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7281 | | | | |
| NAL13041-003 | CRHE-DPT0196-023.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | 86 | | ug/L | 2.0 | 0.36 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7281 | | | | |
| NAL13041-003 | CRHE-DPT0196-023.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 2300 | L | ug/L | 2.0 | 0.56 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7281 | | | | |
| NAL13041-003 | CRHE-DPT0196-023.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 24000 | L | ug/L | 2.0 | 0.40 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7281 | | | | |
| NAL13041-003 | CRHE-DPT0196-023.0-20130318 | TRG | 79-01-6 | Trichloroethene | 7700 | L | ug/L | 2.0 | 0.44 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7281 | | | | |
| NAL13041-003 | CRHE-DPT0196-023.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7281 | | | | |
| NAL13041-003 | CRHE-DPT0196-023.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7281 | 50 | 100 | | |
| NAL13041-003 | CRHE-DPT0196-023.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7281 | 50 | 100 | | |
| NAL13041-003 | CRHE-DPT0196-023.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 52 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7281 | 50 | 104 | | |
| NAL13041-003 | CRHE-DPT0196-023.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7281 | 50 | 104 | | |

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**Project #:** **NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-004 | CRHE-DPT0196-028.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | 8000 | LJL | ug/L | 2.0 | 0.26 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7282 | | | | |
| NAL13041-004 | CRHE-DPT0196-028.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | 51 | | ug/L | 2.0 | 0.36 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7282 | | | | |
| NAL13041-004 | CRHE-DPT0196-028.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 920 | LJL | ug/L | 2.0 | 0.56 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7282 | | | | |
| NAL13041-004 | CRHE-DPT0196-028.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 15000 | LJL | ug/L | 2.0 | 0.40 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7282 | | | | |
| NAL13041-004 | CRHE-DPT0196-028.0-20130318 | TRG | 79-01-6 | Trichloroethene | 140 | JL | ug/L | 2.0 | 0.44 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7282 | | | | |
| NAL13041-004 | CRHE-DPT0196-028.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7282 | | | | |
| NAL13041-004 | CRHE-DPT0196-028.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7282 | 50 | 102 | | |
| NAL13041-004 | CRHE-DPT0196-028.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7282 | 50 | 98 | | |
| NAL13041-004 | CRHE-DPT0196-028.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7282 | 50 | 92 | | |
| NAL13041-004 | CRHE-DPT0196-028.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7282 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-006 | CRHE-DPT0196-038.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | 2600 | LJL | ug/L | 2.0 | 0.26 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7284 | | | | |
| NAL13041-006 | CRHE-DPT0196-038.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | 150 | | ug/L | 2.0 | 0.36 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7284 | | | | |
| NAL13041-006 | CRHE-DPT0196-038.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 260 | JL | ug/L | 2.0 | 0.56 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7284 | | | | |
| NAL13041-006 | CRHE-DPT0196-038.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 14000 | LJL | ug/L | 2.0 | 0.40 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7284 | | | | |
| NAL13041-006 | CRHE-DPT0196-038.0-20130318 | TRG | 79-01-6 | Trichloroethene | 15000 | LJL | ug/L | 2.0 | 0.44 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7284 | | | | |
| NAL13041-006 | CRHE-DPT0196-038.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7284 | | | | |
| NAL13041-006 | CRHE-DPT0196-038.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7284 | 50 | 98 | | |
| NAL13041-006 | CRHE-DPT0196-038.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7284 | 50 | 102 | | |
| NAL13041-006 | CRHE-DPT0196-038.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 52 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7284 | 50 | 104 | | |
| NAL13041-006 | CRHE-DPT0196-038.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 53 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7284 | 50 | 106 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-008 | CRHE-DPT0196-058.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | 12 | JL | ug/L | 2.0 | 0.26 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7271 | | | | |
| NAL13041-008 | CRHE-DPT0196-058.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7271 | | | | |
| NAL13041-008 | CRHE-DPT0196-058.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 5.6 | | ug/L | 2.0 | 0.56 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7271 | | | | |
| NAL13041-008 | CRHE-DPT0196-058.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 220 | | ug/L | 2.0 | 0.40 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7271 | | | | |
| NAL13041-008 | CRHE-DPT0196-058.0-20130318 | TRG | 79-01-6 | Trichloroethene | 120 | | ug/L | 2.0 | 0.44 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7271 | | | | |
| NAL13041-008 | CRHE-DPT0196-058.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7271 | | | | |
| NAL13041-008 | CRHE-DPT0196-058.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7271 | 50 | 102 | | |
| NAL13041-008 | CRHE-DPT0196-058.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 46 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7271 | 50 | 92 | | |
| NAL13041-008 | CRHE-DPT0196-058.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7271 | 50 | 92 | | |
| NAL13041-008 | CRHE-DPT0196-058.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7271 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-011 | CRHE-DPT0197-023.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | 54 | JL | ug/L | 2.0 | 0.26 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7288 | | | | |
| NAL13041-011 | CRHE-DPT0197-023.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7288 | | | | |
| NAL13041-011 | CRHE-DPT0197-023.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.56 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7288 | | | | |
| NAL13041-011 | CRHE-DPT0197-023.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 430 | LJL | ug/L | 2.0 | 0.40 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7288 | | | | |
| NAL13041-011 | CRHE-DPT0197-023.0-20130318 | TRG | 79-01-6 | Trichloroethene | 11 | JL | ug/L | 2.0 | 0.44 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7288 | | | | |
| NAL13041-011 | CRHE-DPT0197-023.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7288 | | | | |
| NAL13041-011 | CRHE-DPT0197-023.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 36 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7288 | 50 | 72 | | |
| NAL13041-011 | CRHE-DPT0197-023.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7288 | 50 | 104 | | |
| NAL13041-011 | CRHE-DPT0197-023.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7288 | 50 | 96 | | |
| NAL13041-011 | CRHE-DPT0197-023.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7288 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-012 | CRHE-DPT0197-028.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | 10 | JL | ug/L | 2.0 | 0.26 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7289 | | | | |
| NAL13041-012 | CRHE-DPT0197-028.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7289 | | | | |
| NAL13041-012 | CRHE-DPT0197-028.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.56 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7289 | | | | |
| NAL13041-012 | CRHE-DPT0197-028.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 26 | JL | ug/L | 2.0 | 0.40 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7289 | | | | |
| NAL13041-012 | CRHE-DPT0197-028.0-20130318 | TRG | 79-01-6 | Trichloroethene | 8.6 | JL | ug/L | 2.0 | 0.44 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7289 | | | | |
| NAL13041-012 | CRHE-DPT0197-028.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7289 | | | | |
| NAL13041-012 | CRHE-DPT0197-028.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7289 | 50 | 108 | | |
| NAL13041-012 | CRHE-DPT0197-028.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7289 | 50 | 102 | | |
| NAL13041-012 | CRHE-DPT0197-028.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7289 | 50 | 96 | | |
| NAL13041-012 | CRHE-DPT0197-028.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7289 | 50 | 100 | | |

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# FINAL ANALYTICAL REPORT

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**Pensacola, FL 32502**
**ATTN: Ms. Jill Johnson**

**Project #:** **NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-013 | CRHE-DPT0197-033.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 2.0 | 0.26 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7290 | | | | |
| NAL13041-013 | CRHE-DPT0197-033.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7290 | | | | |
| NAL13041-013 | CRHE-DPT0197-033.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.56 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7290 | | | | |
| NAL13041-013 | CRHE-DPT0197-033.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.40 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7290 | | | | |
| NAL13041-013 | CRHE-DPT0197-033.0-20130318 | TRG | 79-01-6 | Trichloroethene | 6.7 | JL | ug/L | 2.0 | 0.44 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7290 | | | | |
| NAL13041-013 | CRHE-DPT0197-033.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7290 | | | | |
| NAL13041-013 | CRHE-DPT0197-033.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7290 | 50 | 104 | | |
| NAL13041-013 | CRHE-DPT0197-033.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7290 | 50 | 106 | | |
| NAL13041-013 | CRHE-DPT0197-033.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7290 | 50 | 94 | | |
| NAL13041-013 | CRHE-DPT0197-033.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7290 | 50 | 98 | | |

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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**K** = Off-scale low. Actual value is known to be less than the value given.
**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-015 | CRHE-DPT0197-043.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | 65 | | ug/L | 2.0 | 0.26 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7292 | | | | |
| NAL13041-015 | CRHE-DPT0197-043.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7292 | | | | |
| NAL13041-015 | CRHE-DPT0197-043.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 8.3 | | ug/L | 2.0 | 0.56 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7292 | | | | |
| NAL13041-015 | CRHE-DPT0197-043.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1200 | L | ug/L | 2.0 | 0.40 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7292 | | | | |
| NAL13041-015 | CRHE-DPT0197-043.0-20130318 | TRG | 79-01-6 | Trichloroethene | 390 | JL | ug/L | 2.0 | 0.44 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7292 | | | | |
| NAL13041-015 | CRHE-DPT0197-043.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7292 | | | | |
| NAL13041-015 | CRHE-DPT0197-043.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7292 | 50 | 104 | | |
| NAL13041-015 | CRHE-DPT0197-043.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7292 | 50 | 104 | | |
| NAL13041-015 | CRHE-DPT0197-043.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7292 | 50 | 96 | | |
| NAL13041-015 | CRHE-DPT0197-043.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7292 | 50 | 96 | | |

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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-016 | CRHE-DPT0197-058.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 2.0 | 0.26 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7272 | | | | |
| NAL13041-016 | CRHE-DPT0197-058.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7272 | | | | |
| NAL13041-016 | CRHE-DPT0197-058.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.56 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7272 | | | | |
| NAL13041-016 | CRHE-DPT0197-058.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 4.6 | | ug/L | 2.0 | 0.40 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7272 | | | | |
| NAL13041-016 | CRHE-DPT0197-058.0-20130318 | TRG | 79-01-6 | Trichloroethene | 3.5 | | ug/L | 2.0 | 0.44 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7272 | | | | |
| NAL13041-016 | CRHE-DPT0197-058.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7272 | | | | |
| NAL13041-016 | CRHE-DPT0197-058.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7272 | 50 | 98 | | |
| NAL13041-016 | CRHE-DPT0197-058.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7272 | 50 | 90 | | |
| NAL13041-016 | CRHE-DPT0197-058.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7272 | 50 | 94 | | |
| NAL13041-016 | CRHE-DPT0197-058.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7272 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-017 | CRHE-DPT0198-010.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 2.0 | 0.26 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7293 | | | | |
| NAL13041-017 | CRHE-DPT0198-010.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7293 | | | | |
| NAL13041-017 | CRHE-DPT0198-010.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.56 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7293 | | | | |
| NAL13041-017 | CRHE-DPT0198-010.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.40 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7293 | | | | |
| NAL13041-017 | CRHE-DPT0198-010.0-20130318 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 2.0 | 0.44 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7293 | | | | |
| NAL13041-017 | CRHE-DPT0198-010.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7293 | | | | |
| NAL13041-017 | CRHE-DPT0198-010.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7293 | 50 | 106 | | |
| NAL13041-017 | CRHE-DPT0198-010.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7293 | 50 | 104 | | |
| NAL13041-017 | CRHE-DPT0198-010.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7293 | 50 | 96 | | |
| NAL13041-017 | CRHE-DPT0198-010.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7293 | 50 | 98 | | |

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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-018 | CRHE-DPT0198-018.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 2.0 | 0.26 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7294 | | | | |
| NAL13041-018 | CRHE-DPT0198-018.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7294 | | | | |
| NAL13041-018 | CRHE-DPT0198-018.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.56 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7294 | | | | |
| NAL13041-018 | CRHE-DPT0198-018.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.40 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7294 | | | | |
| NAL13041-018 | CRHE-DPT0198-018.0-20130318 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 2.0 | 0.44 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7294 | | | | |
| NAL13041-018 | CRHE-DPT0198-018.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7294 | | | | |
| NAL13041-018 | CRHE-DPT0198-018.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7294 | 50 | 108 | | |
| NAL13041-018 | CRHE-DPT0198-018.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7294 | 50 | 106 | | |
| NAL13041-018 | CRHE-DPT0198-018.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7294 | 50 | 96 | | |
| NAL13041-018 | CRHE-DPT0198-018.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7294 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**Pensacola, FL 32502**
**ATTN: Ms. Jill Johnson**

**Project #:** **NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-019 | CRHE-DPT0198-023.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 2.0 | 0.26 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7295 | | | | |
| NAL13041-019 | CRHE-DPT0198-023.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7295 | | | | |
| NAL13041-019 | CRHE-DPT0198-023.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.56 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7295 | | | | |
| NAL13041-019 | CRHE-DPT0198-023.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.40 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7295 | | | | |
| NAL13041-019 | CRHE-DPT0198-023.0-20130318 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 2.0 | 0.44 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7295 | | | | |
| NAL13041-019 | CRHE-DPT0198-023.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7295 | | | | |
| NAL13041-019 | CRHE-DPT0198-023.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7295 | 50 | 110 | | |
| NAL13041-019 | CRHE-DPT0198-023.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7295 | 50 | 102 | | |
| NAL13041-019 | CRHE-DPT0198-023.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7295 | 50 | 98 | | |
| NAL13041-019 | CRHE-DPT0198-023.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7295 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-020 | CRHE-DPT0198-028.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | 2.5 | | ug/L | 2.0 | 0.26 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7296 | | | | |
| NAL13041-020 | CRHE-DPT0198-028.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7296 | | | | |
| NAL13041-020 | CRHE-DPT0198-028.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.56 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7296 | | | | |
| NAL13041-020 | CRHE-DPT0198-028.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 6.2 | | ug/L | 2.0 | 0.40 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7296 | | | | |
| NAL13041-020 | CRHE-DPT0198-028.0-20130318 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 2.0 | 0.44 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7296 | | | | |
| NAL13041-020 | CRHE-DPT0198-028.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7296 | | | | |
| NAL13041-020 | CRHE-DPT0198-028.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7296 | 50 | 106 | | |
| NAL13041-020 | CRHE-DPT0198-028.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7296 | 50 | 102 | | |
| NAL13041-020 | CRHE-DPT0198-028.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7296 | 50 | 94 | | |
| NAL13041-020 | CRHE-DPT0198-028.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7296 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-021 | CRHE-DPT0198-033.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 2.0 | 0.26 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7297 | | | | |
| NAL13041-021 | CRHE-DPT0198-033.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7297 | | | | |
| NAL13041-021 | CRHE-DPT0198-033.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.56 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7297 | | | | |
| NAL13041-021 | CRHE-DPT0198-033.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 5.2 | | ug/L | 2.0 | 0.40 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7297 | | | | |
| NAL13041-021 | CRHE-DPT0198-033.0-20130318 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 2.0 | 0.44 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7297 | | | | |
| NAL13041-021 | CRHE-DPT0198-033.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7297 | | | | |
| NAL13041-021 | CRHE-DPT0198-033.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7297 | 50 | 106 | | |
| NAL13041-021 | CRHE-DPT0198-033.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7297 | 50 | 102 | | |
| NAL13041-021 | CRHE-DPT0198-033.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7297 | 50 | 96 | | |
| NAL13041-021 | CRHE-DPT0198-033.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/18/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7297 | 50 | 100 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-024 | CRHE-DPT0198-058.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 2.0 | 0.26 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7273 | | | | |
| NAL13041-024 | CRHE-DPT0198-058.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7273 | | | | |
| NAL13041-024 | CRHE-DPT0198-058.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.56 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7273 | | | | |
| NAL13041-024 | CRHE-DPT0198-058.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 6.8 | | ug/L | 2.0 | 0.40 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7273 | | | | |
| NAL13041-024 | CRHE-DPT0198-058.0-20130318 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 2.0 | 0.44 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7273 | | | | |
| NAL13041-024 | CRHE-DPT0198-058.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7273 | | | | |
| NAL13041-024 | CRHE-DPT0198-058.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7273 | 50 | 100 | | |
| NAL13041-024 | CRHE-DPT0198-058.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7273 | 50 | 94 | | |
| NAL13041-024 | CRHE-DPT0198-058.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7273 | 50 | 94 | | |
| NAL13041-024 | CRHE-DPT0198-058.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7273 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P031813CCVA | P031813CCVA | TRG | 75-01-4 | Vinyl Chloride | 67 | | ug/L | 1.0 | 0.13 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7265 | 50 | 134 | | |
| P031813CCVA | P031813CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 45 | | ug/L | 1.0 | 0.18 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7265 | 50 | 90 | | |
| P031813CCVA | P031813CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 60 | | ug/L | 1.0 | 0.28 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7265 | 50 | 120 | | |
| P031813CCVA | P031813CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.20 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7265 | 50 | 106 | | |
| P031813CCVA | P031813CCVA | TRG | 79-01-6 | Trichloroethene | 47 | | ug/L | 1.0 | 0.22 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7265 | 50 | 94 | | |
| P031813CCVA | P031813CCVA | TRG | 127-18-4 | Tetrachloroethene | 52 | | ug/L | 1.0 | 0.16 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7265 | 50 | 104 | | |
| P031813CCVA | P031813CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 45 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7265 | 50 | 90 | | |
| P031813CCVA | P031813CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7265 | 50 | 86 | | |
| P031813CCVA | P031813CCVA | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7265 | 50 | 100 | | |
| P031813CCVA | P031813CCVA | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7265 | 50 | 92 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P031813MBKA | P031813MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7267 | | | | |
| P031813MBKA | P031813MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7267 | | | | |
| P031813MBKA | P031813MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7267 | | | | |
| P031813MBKA | P031813MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7267 | | | | |
| P031813MBKA | P031813MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7267 | | | | |
| P031813MBKA | P031813MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7267 | | | | |
| P031813MBKA | P031813MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7267 | 50 | 92 | | |
| P031813MBKA | P031813MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 42 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7267 | 50 | 84 | | |
| P031813MBKA | P031813MBKA | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7267 | 50 | 96 | | |
| P031813MBKA | P031813MBKA | SUR | 460-00-4 | Bromofluorobenzene | 44 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7267 | 50 | 88 | | |

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# FINAL ANALYTICAL REPORT

**Geosyntec Consultants**
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**ATTN: Ms. Jill Johnson**

**Project #:** **NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P031813CCVB | P031813CCVB | TRG | 75-01-4 | Vinyl Chloride | 53 | | ug/L | 1.0 | 0.13 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7276 | 50 | 106 | | |
| P031813CCVB | P031813CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 40 | | ug/L | 1.0 | 0.18 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7276 | 50 | 80 | | |
| P031813CCVB | P031813CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.28 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7276 | 50 | 108 | | |
| P031813CCVB | P031813CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.20 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7276 | 50 | 106 | | |
| P031813CCVB | P031813CCVB | TRG | 79-01-6 | Trichloroethene | 48 | | ug/L | 1.0 | 0.22 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7276 | 50 | 96 | | |
| P031813CCVB | P031813CCVB | TRG | 127-18-4 | Tetrachloroethene | 53 | | ug/L | 1.0 | 0.16 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7276 | 50 | 106 | | |
| P031813CCVB | P031813CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 45 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7276 | 50 | 90 | | |
| P031813CCVB | P031813CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 41 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7276 | 50 | 82 | | |
| P031813CCVB | P031813CCVB | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7276 | 50 | 102 | | |
| P031813CCVB | P031813CCVB | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7276 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P031813MBKB | P031813MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7280 | | | | |
| P031813MBKB | P031813MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7280 | | | | |
| P031813MBKB | P031813MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7280 | | | | |
| P031813MBKB | P031813MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7280 | | | | |
| P031813MBKB | P031813MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7280 | | | | |
| P031813MBKB | P031813MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7280 | | | | |
| P031813MBKB | P031813MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7280 | 50 | 104 | | |
| P031813MBKB | P031813MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7280 | 50 | 100 | | |
| P031813MBKB | P031813MBKB | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7280 | 50 | 96 | | |
| P031813MBKB | P031813MBKB | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7280 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P031813ALCS | P031813ALCS | TRG | 75-01-4 | Vinyl Chloride | 56 | | ug/L | 1.0 | 0.13 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7274 | 50 | 112 | | |
| P031813ALCS | P031813ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 42 | | ug/L | 1.0 | 0.18 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7274 | 50 | 84 | | |
| P031813ALCS | P031813ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 60 | | ug/L | 1.0 | 0.28 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7274 | 50 | 120 | | |
| P031813ALCS | P031813ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 58 | | ug/L | 1.0 | 0.20 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7274 | 50 | 116 | | |
| P031813ALCS | P031813ALCS | TRG | 79-01-6 | Trichloroethene | 49 | | ug/L | 1.0 | 0.22 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7274 | 50 | 98 | | |
| P031813ALCS | P031813ALCS | TRG | 127-18-4 | Tetrachloroethene | 53 | | ug/L | 1.0 | 0.16 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7274 | 50 | 106 | | |
| P031813ALCS | P031813ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7274 | 50 | 94 | | |
| P031813ALCS | P031813ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7274 | 50 | 86 | | |
| P031813ALCS | P031813ALCS | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7274 | 50 | 102 | | |
| P031813ALCS | P031813ALCS | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7274 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P031813ALCD | P031813ALCD | TRG | 75-01-4 | Vinyl Chloride | 58 | | ug/L | 1.0 | 0.13 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7275 | 50 | 116 | 4 | |
| P031813ALCD | P031813ALCD | TRG | 75-35-4 | 1,1-Dichloroethene | 83 | | ug/L | 1.0 | 0.18 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7275 | 50 | 166 | 66 | |
| P031813ALCD | P031813ALCD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 61 | | ug/L | 1.0 | 0.28 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7275 | 50 | 122 | 2 | |
| P031813ALCD | P031813ALCD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 59 | | ug/L | 1.0 | 0.20 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7275 | 50 | 118 | 2 | |
| P031813ALCD | P031813ALCD | TRG | 79-01-6 | Trichloroethene | 49 | | ug/L | 1.0 | 0.22 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7275 | 50 | 98 | 0 | |
| P031813ALCD | P031813ALCD | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7275 | 50 | 108 | 2 | |
| P031813ALCD | P031813ALCD | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7275 | 50 | 94 | 0 | |
| P031813ALCD | P031813ALCD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7275 | 50 | 88 | 2 | |
| P031813ALCD | P031813ALCD | SUR | 2037-26-5 | Toluene d8 | 52 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7275 | 50 | 104 | 2 | |
| P031813ALCD | P031813ALCD | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 3/18/2013 | 3/18/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7275 | 50 | 96 | 2 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-001MS | CRHE-DPT0196-010.0-20130318MS | TRG | 75-01-4 | Vinyl Chloride | 54 | | ug/L | 1.0 | 0.13 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7277 | 50 | 108 | | |
| NAL13041-001MS | CRHE-DPT0196-010.0-20130318MS | TRG | 75-35-4 | 1,1-Dichloroethene | 43 | | ug/L | 1.0 | 0.18 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7277 | 50 | 86 | | |
| NAL13041-001MS | CRHE-DPT0196-010.0-20130318MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 56 | | ug/L | 1.0 | 0.28 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7277 | 50 | 112 | | |
| NAL13041-001MS | CRHE-DPT0196-010.0-20130318MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.20 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7277 | 50 | 110 | | |
| NAL13041-001MS | CRHE-DPT0196-010.0-20130318MS | TRG | 79-01-6 | Trichloroethene | 55 | | ug/L | 1.0 | 0.22 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7277 | 50 | 110 | | |
| NAL13041-001MS | CRHE-DPT0196-010.0-20130318MS | TRG | 127-18-4 | Tetrachloroethene | 53 | | ug/L | 1.0 | 0.16 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7277 | 50 | 106 | | |
| NAL13041-001MS | CRHE-DPT0196-010.0-20130318MS | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7277 | 50 | 92 | | |
| NAL13041-001MS | CRHE-DPT0196-010.0-20130318MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 42 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7277 | 50 | 84 | | |
| NAL13041-001MS | CRHE-DPT0196-010.0-20130318MS | SUR | 2037-26-5 | Toluene d8 | 52 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7277 | 50 | 104 | | |
| NAL13041-001MS | CRHE-DPT0196-010.0-20130318MS | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7277 | 50 | 100 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-001MSD | CRHE-DPT0196-010.0-20130318MSD | TRG | 75-01-4 | Vinyl Chloride | 56 | | ug/L | 1.0 | 0.13 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7278 | 50 | 112 | 4 | |
| NAL13041-001MSD | CRHE-DPT0196-010.0-20130318MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 44 | | ug/L | 1.0 | 0.18 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7278 | 50 | 88 | 2 | |
| NAL13041-001MSD | CRHE-DPT0196-010.0-20130318MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 56 | | ug/L | 1.0 | 0.28 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7278 | 50 | 112 | 0 | |
| NAL13041-001MSD | CRHE-DPT0196-010.0-20130318MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.20 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7278 | 50 | 108 | 2 | |
| NAL13041-001MSD | CRHE-DPT0196-010.0-20130318MSD | TRG | 79-01-6 | Trichloroethene | 61 | | ug/L | 1.0 | 0.22 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7278 | 50 | 122 | 10 | |
| NAL13041-001MSD | CRHE-DPT0196-010.0-20130318MSD | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7278 | 50 | 108 | 2 | |
| NAL13041-001MSD | CRHE-DPT0196-010.0-20130318MSD | SUR | 1868-53-7 | Dibromofluoromethane | 44 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7278 | 50 | 88 | 4 | |
| NAL13041-001MSD | CRHE-DPT0196-010.0-20130318MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7278 | 50 | 86 | 2 | |
| NAL13041-001MSD | CRHE-DPT0196-010.0-20130318MSD | SUR | 2037-26-5 | Toluene d8 | 52 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7278 | 50 | 104 | 0 | |
| NAL13041-001MSD | CRHE-DPT0196-010.0-20130318MSD | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 3/18/2013 | 3/18/2013 | 3/18/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7278 | 50 | 102 | 2 | |

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# FINAL ANALYTICAL REPORT

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**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-028 | CRHE-DPT0199-028.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7307 | | | | |
| NAL13041-028 | CRHE-DPT0199-028.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7307 | | | | |
| NAL13041-028 | CRHE-DPT0199-028.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7307 | | | | |
| NAL13041-028 | CRHE-DPT0199-028.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7307 | | | | |
| NAL13041-028 | CRHE-DPT0199-028.0-20130319 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7307 | | | | |
| NAL13041-028 | CRHE-DPT0199-028.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7307 | | | | |
| NAL13041-028 | CRHE-DPT0199-028.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7307 | 50 | 96 | | |
| NAL13041-028 | CRHE-DPT0199-028.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7307 | 50 | 86 | | |
| NAL13041-028 | CRHE-DPT0199-028.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7307 | 50 | 94 | | |
| NAL13041-028 | CRHE-DPT0199-028.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 44 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7307 | 50 | 88 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-029 | CRHE-DPT0199-033.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7306 | | | | |
| NAL13041-029 | CRHE-DPT0199-033.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7306 | | | | |
| NAL13041-029 | CRHE-DPT0199-033.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7306 | | | | |
| NAL13041-029 | CRHE-DPT0199-033.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7306 | | | | |
| NAL13041-029 | CRHE-DPT0199-033.0-20130319 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7306 | | | | |
| NAL13041-029 | CRHE-DPT0199-033.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7306 | | | | |
| NAL13041-029 | CRHE-DPT0199-033.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 44 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7306 | 50 | 88 | | |
| NAL13041-029 | CRHE-DPT0199-033.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 37 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7306 | 50 | 74 | | |
| NAL13041-029 | CRHE-DPT0199-033.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7306 | 50 | 96 | | |
| NAL13041-029 | CRHE-DPT0199-033.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7306 | 50 | 90 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-030 | CRHE-DPT0199-038.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | 450 | | ug/L | 5.0 | 0.65 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7304 | | | | |
| NAL13041-030 | CRHE-DPT0199-038.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7302 | | | | |
| NAL13041-030 | CRHE-DPT0199-038.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.56 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7302 | | | | |
| NAL13041-030 | CRHE-DPT0199-038.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 19 | | ug/L | 2.0 | 1.00 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7302 | | | | |
| NAL13041-030 | CRHE-DPT0199-038.0-20130319 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 2.0 | 1.10 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7302 | | | | |
| NAL13041-030 | CRHE-DPT0199-038.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.80 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7302 | | | | |
| NAL13041-030 | CRHE-DPT0199-038.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7302 | 50 | 98 | | |
| NAL13041-030 | CRHE-DPT0199-038.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7302 | 50 | 88 | | |
| NAL13041-030 | CRHE-DPT0199-038.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7302 | 50 | 96 | | |
| NAL13041-030 | CRHE-DPT0199-038.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7302 | 50 | 92 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-031 | CRHE-DPT0199-043.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | 200 | | ug/L | 2.0 | 0.26 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7301 | | | | |
| NAL13041-031 | CRHE-DPT0199-043.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7301 | | | | |
| NAL13041-031 | CRHE-DPT0199-043.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.56 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7301 | | | | |
| NAL13041-031 | CRHE-DPT0199-043.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 88 | | ug/L | 2.0 | 0.40 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7301 | | | | |
| NAL13041-031 | CRHE-DPT0199-043.0-20130319 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 2.0 | 0.44 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7301 | | | | |
| NAL13041-031 | CRHE-DPT0199-043.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7301 | | | | |
| NAL13041-031 | CRHE-DPT0199-043.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7301 | 50 | 102 | | |
| NAL13041-031 | CRHE-DPT0199-043.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7301 | 50 | 94 | | |
| NAL13041-031 | CRHE-DPT0199-043.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7301 | 50 | 94 | | |
| NAL13041-031 | CRHE-DPT0199-043.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7301 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-032 | CRHE-DPT0199-058.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | 7.6 | | ug/L | 2.0 | 0.26 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7300 | | | | |
| NAL13041-032 | CRHE-DPT0199-058.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7300 | | | | |
| NAL13041-032 | CRHE-DPT0199-058.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.56 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7300 | | | | |
| NAL13041-032 | CRHE-DPT0199-058.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 21 | | ug/L | 2.0 | 0.40 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7300 | | | | |
| NAL13041-032 | CRHE-DPT0199-058.0-20130319 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 2.0 | 0.44 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7300 | | | | |
| NAL13041-032 | CRHE-DPT0199-058.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7300 | | | | |
| NAL13041-032 | CRHE-DPT0199-058.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7300 | 50 | 96 | | |
| NAL13041-032 | CRHE-DPT0199-058.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7300 | 50 | 86 | | |
| NAL13041-032 | CRHE-DPT0199-058.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7300 | 50 | 98 | | |
| NAL13041-032 | CRHE-DPT0199-058.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7300 | 50 | 92 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-035 | CRHE-DPT0200-023.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | 1300 | | ug/L | 250.0 | 32.50 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7325 | | | | |
| NAL13041-035 | CRHE-DPT0200-023.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250.0 | 45.00 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7325 | | | | |
| NAL13041-035 | CRHE-DPT0200-023.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250.0 | 70.00 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7325 | | | | |
| NAL13041-035 | CRHE-DPT0200-023.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 10000 | | ug/L | 250.0 | 50.00 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7325 | | | | |
| NAL13041-035 | CRHE-DPT0200-023.0-20130319 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 250.0 | 55.00 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7325 | | | | |
| NAL13041-035 | CRHE-DPT0200-023.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250.0 | 40.00 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7325 | | | | |
| NAL13041-035 | CRHE-DPT0200-023.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7325 | 50 | 100 | | |
| NAL13041-035 | CRHE-DPT0200-023.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7325 | 50 | 88 | | |
| NAL13041-035 | CRHE-DPT0200-023.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7325 | 50 | 90 | | |
| NAL13041-035 | CRHE-DPT0200-023.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 42 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7325 | 50 | 84 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-036 | CRHE-DPT0200-028.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | 4900 | | ug/L | 250.0 | 32.50 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7326 | | | | |
| NAL13041-036 | CRHE-DPT0200-028.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250.0 | 45.00 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7326 | | | | |
| NAL13041-036 | CRHE-DPT0200-028.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 1300 | | ug/L | 250.0 | 70.00 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7326 | | | | |
| NAL13041-036 | CRHE-DPT0200-028.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 110000 | L | ug/L | 250.0 | 50.00 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7326 | | | | |
| NAL13041-036 | CRHE-DPT0200-028.0-20130319 | TRG | 79-01-6 | Trichloroethene | 13000 | | ug/L | 250.0 | 55.00 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7326 | | | | |
| NAL13041-036 | CRHE-DPT0200-028.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250.0 | 40.00 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7326 | | | | |
| NAL13041-036 | CRHE-DPT0200-028.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7326 | 50 | 98 | | |
| NAL13041-036 | CRHE-DPT0200-028.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7326 | 50 | 86 | | |
| NAL13041-036 | CRHE-DPT0200-028.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7326 | 50 | 92 | | |
| NAL13041-036 | CRHE-DPT0200-028.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 43 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7326 | 50 | 86 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-037 | CRHE-DPT0200-033.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | 19000 | | ug/L | 250.0 | 32.50 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7327 | | | | |
| NAL13041-037 | CRHE-DPT0200-033.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250.0 | 45.00 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7327 | | | | |
| NAL13041-037 | CRHE-DPT0200-033.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 650 | | ug/L | 250.0 | 70.00 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7327 | | | | |
| NAL13041-037 | CRHE-DPT0200-033.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 58000 | LJL | ug/L | 250.0 | 50.00 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7327 | | | | |
| NAL13041-037 | CRHE-DPT0200-033.0-20130319 | TRG | 79-01-6 | Trichloroethene | 3300 | | ug/L | 250.0 | 55.00 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7327 | | | | |
| NAL13041-037 | CRHE-DPT0200-033.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250.0 | 40.00 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7327 | | | | |
| NAL13041-037 | CRHE-DPT0200-033.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7327 | 50 | 104 | | |
| NAL13041-037 | CRHE-DPT0200-033.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7327 | 50 | 88 | | |
| NAL13041-037 | CRHE-DPT0200-033.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7327 | 50 | 92 | | |
| NAL13041-037 | CRHE-DPT0200-033.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 43 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7327 | 50 | 86 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-038 | CRHE-DPT0200-038.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 250.0 | 32.50 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7328 | | | | |
| NAL13041-038 | CRHE-DPT0200-038.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250.0 | 45.00 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7328 | | | | |
| NAL13041-038 | CRHE-DPT0200-038.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250.0 | 70.00 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7328 | | | | |
| NAL13041-038 | CRHE-DPT0200-038.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 2700 | JL | ug/L | 250.0 | 50.00 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7328 | | | | |
| NAL13041-038 | CRHE-DPT0200-038.0-20130319 | TRG | 79-01-6 | Trichloroethene | 340 | | ug/L | 250.0 | 55.00 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7328 | | | | |
| NAL13041-038 | CRHE-DPT0200-038.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250.0 | 40.00 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7328 | | | | |
| NAL13041-038 | CRHE-DPT0200-038.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7328 | 50 | 94 | | |
| NAL13041-038 | CRHE-DPT0200-038.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 41 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7328 | 50 | 82 | | |
| NAL13041-038 | CRHE-DPT0200-038.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7328 | 50 | 94 | | |
| NAL13041-038 | CRHE-DPT0200-038.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 42 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7328 | 50 | 84 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-039 | CRHE-DPT0200-043.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7309 | | | | |
| NAL13041-039 | CRHE-DPT0200-043.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7309 | | | | |
| NAL13041-039 | CRHE-DPT0200-043.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7309 | | | | |
| NAL13041-039 | CRHE-DPT0200-043.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 8.2 | | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7309 | | | | |
| NAL13041-039 | CRHE-DPT0200-043.0-20130319 | TRG | 79-01-6 | Trichloroethene | 2.5 | | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7309 | | | | |
| NAL13041-039 | CRHE-DPT0200-043.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7309 | | | | |
| NAL13041-039 | CRHE-DPT0200-043.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7309 | 50 | 98 | | |
| NAL13041-039 | CRHE-DPT0200-043.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7309 | 50 | 88 | | |
| NAL13041-039 | CRHE-DPT0200-043.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7309 | 50 | 94 | | |
| NAL13041-039 | CRHE-DPT0200-043.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 44 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7309 | 50 | 88 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-040 | CRHE-DPT0200-058.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7308 | | | | |
| NAL13041-040 | CRHE-DPT0200-058.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7308 | | | | |
| NAL13041-040 | CRHE-DPT0200-058.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7308 | | | | |
| NAL13041-040 | CRHE-DPT0200-058.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 28 | | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7308 | | | | |
| NAL13041-040 | CRHE-DPT0200-058.0-20130319 | TRG | 79-01-6 | Trichloroethene | 2.9 | | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7308 | | | | |
| NAL13041-040 | CRHE-DPT0200-058.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7308 | | | | |
| NAL13041-040 | CRHE-DPT0200-058.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7308 | 50 | 100 | | |
| NAL13041-040 | CRHE-DPT0200-058.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7308 | 50 | 88 | | |
| NAL13041-040 | CRHE-DPT0200-058.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7308 | 50 | 94 | | |
| NAL13041-040 | CRHE-DPT0200-058.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7308 | 50 | 90 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-046 | CRHE-DPT0201-038.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7313 | | | | |
| NAL13041-046 | CRHE-DPT0201-038.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7313 | | | | |
| NAL13041-046 | CRHE-DPT0201-038.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7313 | | | | |
| NAL13041-046 | CRHE-DPT0201-038.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 5.6 | | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7313 | | | | |
| NAL13041-046 | CRHE-DPT0201-038.0-20130319 | TRG | 79-01-6 | Trichloroethene | 15 | | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7313 | | | | |
| NAL13041-046 | CRHE-DPT0201-038.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7313 | | | | |
| NAL13041-046 | CRHE-DPT0201-038.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7313 | 50 | 98 | | |
| NAL13041-046 | CRHE-DPT0201-038.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7313 | 50 | 90 | | |
| NAL13041-046 | CRHE-DPT0201-038.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7313 | 50 | 94 | | |
| NAL13041-046 | CRHE-DPT0201-038.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 44 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7313 | 50 | 88 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-047 | CRHE-DPT0201-043.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7312 | | | | |
| NAL13041-047 | CRHE-DPT0201-043.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7312 | | | | |
| NAL13041-047 | CRHE-DPT0201-043.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7312 | | | | |
| NAL13041-047 | CRHE-DPT0201-043.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1.8 | | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7312 | | | | |
| NAL13041-047 | CRHE-DPT0201-043.0-20130319 | TRG | 79-01-6 | Trichloroethene | 2.0 | | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7312 | | | | |
| NAL13041-047 | CRHE-DPT0201-043.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7312 | | | | |
| NAL13041-047 | CRHE-DPT0201-043.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7312 | 50 | 98 | | |
| NAL13041-047 | CRHE-DPT0201-043.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 42 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7312 | 50 | 84 | | |
| NAL13041-047 | CRHE-DPT0201-043.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7312 | 50 | 94 | | |
| NAL13041-047 | CRHE-DPT0201-043.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 43 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7312 | 50 | 86 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-048 | CRHE-DPT0201-058.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7311 | | | | |
| NAL13041-048 | CRHE-DPT0201-058.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7311 | | | | |
| NAL13041-048 | CRHE-DPT0201-058.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7311 | | | | |
| NAL13041-048 | CRHE-DPT0201-058.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 20 | | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7311 | | | | |
| NAL13041-048 | CRHE-DPT0201-058.0-20130319 | TRG | 79-01-6 | Trichloroethene | 2.2 | | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7311 | | | | |
| NAL13041-048 | CRHE-DPT0201-058.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7311 | | | | |
| NAL13041-048 | CRHE-DPT0201-058.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7311 | 50 | 92 | | |
| NAL13041-048 | CRHE-DPT0201-058.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 39 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7311 | 50 | 78 | | |
| NAL13041-048 | CRHE-DPT0201-058.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7311 | 50 | 96 | | |
| NAL13041-048 | CRHE-DPT0201-058.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 42 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7311 | 50 | 84 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-049 | CRHE-DPT0196-068.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7310 | | | | |
| NAL13041-049 | CRHE-DPT0196-068.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7310 | | | | |
| NAL13041-049 | CRHE-DPT0196-068.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7310 | | | | |
| NAL13041-049 | CRHE-DPT0196-068.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 84 | | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7310 | | | | |
| NAL13041-049 | CRHE-DPT0196-068.0-20130319 | TRG | 79-01-6 | Trichloroethene | 33 | | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7310 | | | | |
| NAL13041-049 | CRHE-DPT0196-068.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7310 | | | | |
| NAL13041-049 | CRHE-DPT0196-068.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7310 | 50 | 92 | | |
| NAL13041-049 | CRHE-DPT0196-068.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 40 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7310 | 50 | 80 | | |
| NAL13041-049 | CRHE-DPT0196-068.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7310 | 50 | 94 | | |
| NAL13041-049 | CRHE-DPT0196-068.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 44 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7310 | 50 | 88 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P031913CCVA | P031913CCVA | TRG | 75-01-4 | Vinyl Chloride | 55 | | ug/L | 1.0 | 0.13 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7298 | 50 | 110 | | |
| P031913CCVA | P031913CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 42 | | ug/L | 1.0 | 0.18 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7298 | 50 | 84 | | |
| P031913CCVA | P031913CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.28 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7298 | 50 | 110 | | |
| P031913CCVA | P031913CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.20 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7298 | 50 | 110 | | |
| P031913CCVA | P031913CCVA | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7298 | 50 | 102 | | |
| P031913CCVA | P031913CCVA | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7298 | 50 | 108 | | |
| P031913CCVA | P031913CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7298 | 50 | 92 | | |
| P031913CCVA | P031913CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 42 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7298 | 50 | 84 | | |
| P031913CCVA | P031913CCVA | SUR | 2037-26-5 | Toluene d8 | 52 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7298 | 50 | 104 | | |
| P031913CCVA | P031913CCVA | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7298 | 50 | 104 | | |

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# FINAL ANALYTICAL REPORT

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**316 S Baylen Str., Suite 201**
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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P031913MBKA | P031913MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7299 | | | | |
| P031913MBKA | P031913MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7299 | | | | |
| P031913MBKA | P031913MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7299 | | | | |
| P031913MBKA | P031913MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7299 | | | | |
| P031913MBKA | P031913MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7299 | | | | |
| P031913MBKA | P031913MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7299 | | | | |
| P031913MBKA | P031913MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7299 | 50 | 98 | | |
| P031913MBKA | P031913MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 46 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7299 | 50 | 92 | | |
| P031913MBKA | P031913MBKA | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7299 | 50 | 96 | | |
| P031913MBKA | P031913MBKA | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7299 | 50 | 90 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P031913CCVB | P031913CCVB | TRG | 75-01-4 | Vinyl Chloride | 51 | | ug/L | 1.0 | 0.13 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 102 | | |
| P031913CCVB | P031913CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 41 | | ug/L | 1.0 | 0.18 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 82 | | |
| P031913CCVB | P031913CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 56 | | ug/L | 1.0 | 0.28 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 112 | | |
| P031913CCVB | P031913CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.20 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 110 | | |
| P031913CCVB | P031913CCVB | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 100 | | |
| P031913CCVB | P031913CCVB | TRG | 127-18-4 | Tetrachloroethene | 53 | | ug/L | 1.0 | 0.16 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 106 | | |
| P031913CCVB | P031913CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 45 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 90 | | |
| P031913CCVB | P031913CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 39 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 78 | | |
| P031913CCVB | P031913CCVB | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 98 | | |
| P031913CCVB | P031913CCVB | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P031913ALCS | P031913ALCS | TRG | 75-01-4 | Vinyl Chloride | 58 | | ug/L | 1.0 | 0.13 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7314 | 50 | 116 | | |
| P031913ALCS | P031913ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 41 | | ug/L | 1.0 | 0.18 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7314 | 50 | 82 | | |
| P031913ALCS | P031913ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 57 | | ug/L | 1.0 | 0.28 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7314 | 50 | 114 | | |
| P031913ALCS | P031913ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 56 | | ug/L | 1.0 | 0.20 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7314 | 50 | 112 | | |
| P031913ALCS | P031913ALCS | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7314 | 50 | 100 | | |
| P031913ALCS | P031913ALCS | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7314 | 50 | 108 | | |
| P031913ALCS | P031913ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 45 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7314 | 50 | 90 | | |
| P031913ALCS | P031913ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 39 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7314 | 50 | 78 | | |
| P031913ALCS | P031913ALCS | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7314 | 50 | 102 | | |
| P031913ALCS | P031913ALCS | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7314 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P031913ALCD | P031913ALCD | TRG | 75-01-4 | Vinyl Chloride | 48 | | ug/L | 1.0 | 0.13 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7318 | 50 | 96 | 19 | |
| P031913ALCD | P031913ALCD | TRG | 75-35-4 | 1,1-Dichloroethene | 38 | | ug/L | 1.0 | 0.18 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7318 | 50 | 76 | 8 | |
| P031913ALCD | P031913ALCD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.28 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7318 | 50 | 108 | 5 | |
| P031913ALCD | P031913ALCD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.20 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7318 | 50 | 110 | 2 | |
| P031913ALCD | P031913ALCD | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7318 | 50 | 100 | 0 | |
| P031913ALCD | P031913ALCD | TRG | 127-18-4 | Tetrachloroethene | 52 | | ug/L | 1.0 | 0.16 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7318 | 50 | 104 | 4 | |
| P031913ALCD | P031913ALCD | SUR | 1868-53-7 | Dibromofluoromethane | 45 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7318 | 50 | 90 | 0 | |
| P031913ALCD | P031913ALCD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 39 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7318 | 50 | 78 | 0 | |
| P031913ALCD | P031913ALCD | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7318 | 50 | 98 | 4 | |
| P031913ALCD | P031913ALCD | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7318 | 50 | 102 | 2 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-046MS | CRHE-DPT0201-038.0-20130319MS | TRG | 75-01-4 | Vinyl Chloride | 52 | | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7315 | 50 | 104 | | |
| NAL13041-046MS | CRHE-DPT0201-038.0-20130319MS | TRG | 75-35-4 | 1,1-Dichloroethene | 40 | | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7315 | 50 | 80 | | |
| NAL13041-046MS | CRHE-DPT0201-038.0-20130319MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7315 | 50 | 110 | | |
| NAL13041-046MS | CRHE-DPT0201-038.0-20130319MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7315 | 50 | 99 | | 5.6 |
| NAL13041-046MS | CRHE-DPT0201-038.0-20130319MS | TRG | 79-01-6 | Trichloroethene | 49 | | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7315 | 50 | 68 | | 15 |
| NAL13041-046MS | CRHE-DPT0201-038.0-20130319MS | TRG | 127-18-4 | Tetrachloroethene | 53 | | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7315 | 50 | 106 | | |
| NAL13041-046MS | CRHE-DPT0201-038.0-20130319MS | SUR | 1868-53-7 | Dibromofluoromethane | 44 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7315 | 50 | 88 | | |
| NAL13041-046MS | CRHE-DPT0201-038.0-20130319MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 40 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7315 | 50 | 80 | | |
| NAL13041-046MS | CRHE-DPT0201-038.0-20130319MS | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7315 | 50 | 102 | | |
| NAL13041-046MS | CRHE-DPT0201-038.0-20130319MS | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7315 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-046MSD | CRHE-DPT0201-038.0-20130319MSD | TRG | 75-01-4 | Vinyl Chloride | 52 | | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7316 | 50 | 104 | 0 | |
| NAL13041-046MSD | CRHE-DPT0201-038.0-20130319MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 39 | | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7316 | 50 | 78 | 3 | |
| NAL13041-046MSD | CRHE-DPT0201-038.0-20130319MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 56 | | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7316 | 50 | 112 | 2 | |
| NAL13041-046MSD | CRHE-DPT0201-038.0-20130319MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7316 | 50 | 97 | 2 | 5.6 |
| NAL13041-046MSD | CRHE-DPT0201-038.0-20130319MSD | TRG | 79-01-6 | Trichloroethene | 49 | | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7316 | 50 | 68 | 0 | 15 |
| NAL13041-046MSD | CRHE-DPT0201-038.0-20130319MSD | TRG | 127-18-4 | Tetrachloroethene | 53 | | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7316 | 50 | 106 | 0 | |
| NAL13041-046MSD | CRHE-DPT0201-038.0-20130319MSD | SUR | 1868-53-7 | Dibromofluoromethane | 44 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7316 | 50 | 88 | 0 | |
| NAL13041-046MSD | CRHE-DPT0201-038.0-20130319MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 40 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7316 | 50 | 80 | 0 | |
| NAL13041-046MSD | CRHE-DPT0201-038.0-20130319MSD | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7316 | 50 | 102 | 0 | |
| NAL13041-046MSD | CRHE-DPT0201-038.0-20130319MSD | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/19/2013 | 3/19/2013 | 3/19/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7316 | 50 | 100 | 0 | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-007 | CRHE-DPT0196-043.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 500 | 65 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7335 | | | | |
| NAL13041-007 | CRHE-DPT0196-043.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 500 | 90 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7335 | | | | |
| NAL13041-007 | CRHE-DPT0196-043.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 500 | 140 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7335 | | | | |
| NAL13041-007 | CRHE-DPT0196-043.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 15000 | | ug/L | 500 | 100 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7335 | | | | |
| NAL13041-007 | CRHE-DPT0196-043.0-20130318 | TRG | 79-01-6 | Trichloroethene | 14000 | | ug/L | 500 | 110 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7335 | | | | |
| NAL13041-007 | CRHE-DPT0196-043.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 500 | 80 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7335 | | | | |
| NAL13041-007 | CRHE-DPT0196-043.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7335 | 50 | 102 | | |
| NAL13041-007 | CRHE-DPT0196-043.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7335 | 50 | 86 | | |
| NAL13041-007 | CRHE-DPT0196-043.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7335 | 50 | 92 | | |
| NAL13041-007 | CRHE-DPT0196-043.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 42 | | ug/L | | | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7335 | 50 | 84 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-022 | CRHE-DPT0198-038.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | 4300 | | ug/L | 250 | 33 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7339 | | | | |
| NAL13041-022 | CRHE-DPT0198-038.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7339 | | | | |
| NAL13041-022 | CRHE-DPT0198-038.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7339 | | | | |
| NAL13041-022 | CRHE-DPT0198-038.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 7300 | | ug/L | 250 | 50 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7339 | | | | |
| NAL13041-022 | CRHE-DPT0198-038.0-20130318 | TRG | 79-01-6 | Trichloroethene | 120 | I | ug/L | 250 | 55 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7339 | | | | |
| NAL13041-022 | CRHE-DPT0198-038.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7339 | | | | |
| NAL13041-022 | CRHE-DPT0198-038.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7339 | 50 | 94 | | |
| NAL13041-022 | CRHE-DPT0198-038.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 41 | | ug/L | | | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7339 | 50 | 82 | | |
| NAL13041-022 | CRHE-DPT0198-038.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7339 | 50 | 90 | | |
| NAL13041-022 | CRHE-DPT0198-038.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 41 | | ug/L | | | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7339 | 50 | 82 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-023 | CRHE-DPT0198-043.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | 160 | I | ug/L | 250 | 33 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7340 | | | | |
| NAL13041-023 | CRHE-DPT0198-043.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7340 | | | | |
| NAL13041-023 | CRHE-DPT0198-043.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7340 | | | | |
| NAL13041-023 | CRHE-DPT0198-043.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 250 | 50 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7340 | | | | |
| NAL13041-023 | CRHE-DPT0198-043.0-20130318 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 250 | 55 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7340 | | | | |
| NAL13041-023 | CRHE-DPT0198-043.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7340 | | | | |
| NAL13041-023 | CRHE-DPT0198-043.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7340 | 50 | 104 | | |
| NAL13041-023 | CRHE-DPT0198-043.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7340 | 50 | 86 | | |
| NAL13041-023 | CRHE-DPT0198-043.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7340 | 50 | 90 | | |
| NAL13041-023 | CRHE-DPT0198-043.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 42 | | ug/L | | | 3/18/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7340 | 50 | 84 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-042 | CRHE-DPT0201-018.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 250 | 33 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7330 | | | | |
| NAL13041-042 | CRHE-DPT0201-018.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7330 | | | | |
| NAL13041-042 | CRHE-DPT0201-018.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7330 | | | | |
| NAL13041-042 | CRHE-DPT0201-018.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1900 | | ug/L | 250 | 50 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7330 | | | | |
| NAL13041-042 | CRHE-DPT0201-018.0-20130319 | TRG | 79-01-6 | Trichloroethene | 9400 | | ug/L | 250 | 55 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7330 | | | | |
| NAL13041-042 | CRHE-DPT0201-018.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7330 | | | | |
| NAL13041-042 | CRHE-DPT0201-018.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7330 | 50 | 96 | | |
| NAL13041-042 | CRHE-DPT0201-018.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 42 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7330 | 50 | 84 | | |
| NAL13041-042 | CRHE-DPT0201-018.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7330 | 50 | 92 | | |
| NAL13041-042 | CRHE-DPT0201-018.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 42 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7330 | 50 | 84 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-043 | CRHE-DPT0201-023.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 250 | 33 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7331 | | | | |
| NAL13041-043 | CRHE-DPT0201-023.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7331 | | | | |
| NAL13041-043 | CRHE-DPT0201-023.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7331 | | | | |
| NAL13041-043 | CRHE-DPT0201-023.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1300 | | ug/L | 250 | 50 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7331 | | | | |
| NAL13041-043 | CRHE-DPT0201-023.0-20130319 | TRG | 79-01-6 | Trichloroethene | 1700 | | ug/L | 250 | 55 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7331 | | | | |
| NAL13041-043 | CRHE-DPT0201-023.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7331 | | | | |
| NAL13041-043 | CRHE-DPT0201-023.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7331 | 50 | 102 | | |
| NAL13041-043 | CRHE-DPT0201-023.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7331 | 50 | 88 | | |
| NAL13041-043 | CRHE-DPT0201-023.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7331 | 50 | 92 | | |
| NAL13041-043 | CRHE-DPT0201-023.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 42 | | ug/L | | | 3/19/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7331 | 50 | 84 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-052 | CRHE-DPT0202-023.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | 1900 | | ug/L | 250 | 33 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7347 | | | | |
| NAL13041-052 | CRHE-DPT0202-023.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7347 | | | | |
| NAL13041-052 | CRHE-DPT0202-023.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 1100 | | ug/L | 250 | 70 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7347 | | | | |
| NAL13041-052 | CRHE-DPT0202-023.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 42000 | | ug/L | 250 | 50 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7347 | | | | |
| NAL13041-052 | CRHE-DPT0202-023.0-20130320 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 250 | 55 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7347 | | | | |
| NAL13041-052 | CRHE-DPT0202-023.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7347 | | | | |
| NAL13041-052 | CRHE-DPT0202-023.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7347 | 50 | 108 | | |
| NAL13041-052 | CRHE-DPT0202-023.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7347 | 50 | 104 | | |
| NAL13041-052 | CRHE-DPT0202-023.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7347 | 50 | 94 | | |
| NAL13041-052 | CRHE-DPT0202-023.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7347 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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**ATTN: Ms. Jill Johnson**

**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-055 | CRHE-DPT0202-038.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | 1500 | | ug/L | 250 | 33 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7350 | | | | |
| NAL13041-055 | CRHE-DPT0202-038.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7350 | | | | |
| NAL13041-055 | CRHE-DPT0202-038.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 500 | | ug/L | 250 | 70 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7350 | | | | |
| NAL13041-055 | CRHE-DPT0202-038.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 23000 | JL | ug/L | 250 | 50 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7350 | | | | |
| NAL13041-055 | CRHE-DPT0202-038.0-20130320 | TRG | 79-01-6 | Trichloroethene | 22000 | | ug/L | 250 | 55 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7350 | | | | |
| NAL13041-055 | CRHE-DPT0202-038.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7350 | | | | |
| NAL13041-055 | CRHE-DPT0202-038.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7350 | 50 | 106 | | |
| NAL13041-055 | CRHE-DPT0202-038.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7350 | 50 | 102 | | |
| NAL13041-055 | CRHE-DPT0202-038.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7350 | 50 | 92 | | |
| NAL13041-055 | CRHE-DPT0202-038.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7350 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-056 | CRHE-DPT0202-043.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | 270 | | ug/L | 250 | 33 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7351 | | | | |
| NAL13041-056 | CRHE-DPT0202-043.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7351 | | | | |
| NAL13041-056 | CRHE-DPT0202-043.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7351 | | | | |
| NAL13041-056 | CRHE-DPT0202-043.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 4700 | JL | ug/L | 250 | 50 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7351 | | | | |
| NAL13041-056 | CRHE-DPT0202-043.0-20130320 | TRG | 79-01-6 | Trichloroethene | 450 | | ug/L | 250 | 55 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7351 | | | | |
| NAL13041-056 | CRHE-DPT0202-043.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7351 | | | | |
| NAL13041-056 | CRHE-DPT0202-043.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7351 | 50 | 108 | | |
| NAL13041-056 | CRHE-DPT0202-043.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7351 | 50 | 104 | | |
| NAL13041-056 | CRHE-DPT0202-043.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7351 | 50 | 92 | | |
| NAL13041-056 | CRHE-DPT0202-043.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7351 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P031913CCVB | P031913CCVB | TRG | 75-01-4 | Vinyl Chloride | 51 | | ug/L | 1.0 | 0.13 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 102 | | |
| P031913CCVB | P031913CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 41 | | ug/L | 1.0 | 0.18 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 82 | | |
| P031913CCVB | P031913CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 56 | | ug/L | 1.0 | 0.28 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 112 | | |
| P031913CCVB | P031913CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.20 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 110 | | |
| P031913CCVB | P031913CCVB | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 100 | | |
| P031913CCVB | P031913CCVB | TRG | 127-18-4 | Tetrachloroethene | 53 | | ug/L | 1.0 | 0.16 | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 106 | | |
| P031913CCVB | P031913CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 45 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 90 | | |
| P031913CCVB | P031913CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 39 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 78 | | |
| P031913CCVB | P031913CCVB | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 98 | | |
| P031913CCVB | P031913CCVB | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 3/19/2013 | 3/19/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7317 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032013ICV | P032013ICV | TRG | 75-01-4 | Vinyl Chloride | 46 | | ug/L | 1.0 | 0.13 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7343 | 50 | 92 | | |
| P032013ICV | P032013ICV | TRG | 75-35-4 | 1,1-Dichloroethene | 47 | | ug/L | 1.0 | 0.18 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7343 | 50 | 94 | | |
| P032013ICV | P032013ICV | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 49 | | ug/L | 1.0 | 0.28 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7343 | 50 | 98 | | |
| P032013ICV | P032013ICV | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.20 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7343 | 50 | 102 | | |
| P032013ICV | P032013ICV | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7343 | 50 | 102 | | |
| P032013ICV | P032013ICV | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7343 | 50 | 108 | | |
| P032013ICV | P032013ICV | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7343 | 50 | 92 | | |
| P032013ICV | P032013ICV | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 42 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7343 | 50 | 84 | | |
| P032013ICV | P032013ICV | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7343 | 50 | 96 | | |
| P032013ICV | P032013ICV | SUR | 460-00-4 | Bromofluorobenzene | 53 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7343 | 50 | 106 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032013MBKA | P032013MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | | | | |
| P032013MBKA | P032013MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | | | | |
| P032013MBKA | P032013MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | | | | |
| P032013MBKA | P032013MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | | | | |
| P032013MBKA | P032013MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | | | | |
| P032013MBKA | P032013MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | | | | |
| P032013MBKA | P032013MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | 50 | 104 | | |
| P032013MBKA | P032013MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | 50 | 102 | | |
| P032013MBKA | P032013MBKA | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | 50 | 92 | | |
| P032013MBKA | P032013MBKA | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032013ALCS | P032013ALCS | TRG | 75-01-4 | Vinyl Chloride | 52 | | ug/L | 1.0 | 0.13 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7359 | 50 | 104 | | |
| P032013ALCS | P032013ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 46 | | ug/L | 1.0 | 0.18 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7359 | 50 | 92 | | |
| P032013ALCS | P032013ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.28 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7359 | 50 | 108 | | |
| P032013ALCS | P032013ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.20 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7359 | 50 | 110 | | |
| P032013ALCS | P032013ALCS | TRG | 79-01-6 | Trichloroethene | 54 | | ug/L | 1.0 | 0.22 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7359 | 50 | 108 | | |
| P032013ALCS | P032013ALCS | TRG | 127-18-4 | Tetrachloroethene | 55 | | ug/L | 1.0 | 0.16 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7359 | 50 | 110 | | |
| P032013ALCS | P032013ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7359 | 50 | 92 | | |
| P032013ALCS | P032013ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7359 | 50 | 86 | | |
| P032013ALCS | P032013ALCS | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7359 | 50 | 96 | | |
| P032013ALCS | P032013ALCS | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7359 | 50 | 102 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032013ALCD | P032013ALCD | TRG | 75-01-4 | Vinyl Chloride | 52 | | ug/L | 1.0 | 0.13 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7360 | 50 | 104 | 0 | |
| P032013ALCD | P032013ALCD | TRG | 75-35-4 | 1,1-Dichloroethene | 55 | | ug/L | 1.0 | 0.18 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7360 | 50 | 110 | 18 | |
| P032013ALCD | P032013ALCD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 58 | | ug/L | 1.0 | 0.28 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7360 | 50 | 116 | 7 | |
| P032013ALCD | P032013ALCD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 57 | | ug/L | 1.0 | 0.20 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7360 | 50 | 114 | 4 | |
| P032013ALCD | P032013ALCD | TRG | 79-01-6 | Trichloroethene | 58 | | ug/L | 1.0 | 0.22 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7360 | 50 | 116 | 7 | |
| P032013ALCD | P032013ALCD | TRG | 127-18-4 | Tetrachloroethene | 58 | | ug/L | 1.0 | 0.16 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7360 | 50 | 116 | 5 | |
| P032013ALCD | P032013ALCD | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7360 | 50 | 98 | 6 | |
| P032013ALCD | P032013ALCD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 46 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7360 | 50 | 92 | 7 | |
| P032013ALCD | P032013ALCD | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7360 | 50 | 98 | 2 | |
| P032013ALCD | P032013ALCD | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7360 | 50 | 102 | 0 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-057MS | CRHE-DPT0202-058.0-20130320MS | TRG | 75-01-4 | Vinyl Chloride | 49 | | ug/L | 1.0 | 0.13 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7361 | 50 | 98 | | |
| NAL13041-057MS | CRHE-DPT0202-058.0-20130320MS | TRG | 75-35-4 | 1,1-Dichloroethene | 50 | | ug/L | 1.0 | 0.18 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7361 | 50 | 100 | | |
| NAL13041-057MS | CRHE-DPT0202-058.0-20130320MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.28 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7361 | 50 | 104 | | |
| NAL13041-057MS | CRHE-DPT0202-058.0-20130320MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.20 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7361 | 50 | 104 | | |
| NAL13041-057MS | CRHE-DPT0202-058.0-20130320MS | TRG | 79-01-6 | Trichloroethene | 55 | | ug/L | 1.0 | 0.22 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7361 | 50 | 110 | | |
| NAL13041-057MS | CRHE-DPT0202-058.0-20130320MS | TRG | 127-18-4 | Tetrachloroethene | 52 | | ug/L | 1.0 | 0.16 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7361 | 50 | 104 | | |
| NAL13041-057MS | CRHE-DPT0202-058.0-20130320MS | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7361 | 50 | 98 | | |
| NAL13041-057MS | CRHE-DPT0202-058.0-20130320MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 46 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7361 | 50 | 92 | | |
| NAL13041-057MS | CRHE-DPT0202-058.0-20130320MS | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7361 | 50 | 98 | | |
| NAL13041-057MS | CRHE-DPT0202-058.0-20130320MS | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7361 | 50 | 102 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-057MSD | CRHE-DPT0202-058.0-20130320MSD | TRG | 75-01-4 | Vinyl Chloride | 51 | | ug/L | 1.0 | 0.13 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7362 | 50 | 102 | 4 | |
| NAL13041-057MSD | CRHE-DPT0202-058.0-20130320MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 58 | | ug/L | 1.0 | 0.18 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7362 | 50 | 116 | 15 | |
| NAL13041-057MSD | CRHE-DPT0202-058.0-20130320MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 58 | | ug/L | 1.0 | 0.28 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7362 | 50 | 116 | 11 | |
| NAL13041-057MSD | CRHE-DPT0202-058.0-20130320MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 58 | | ug/L | 1.0 | 0.20 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7362 | 50 | 116 | 11 | |
| NAL13041-057MSD | CRHE-DPT0202-058.0-20130320MSD | TRG | 79-01-6 | Trichloroethene | 59 | | ug/L | 1.0 | 0.22 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7362 | 50 | 118 | 7 | |
| NAL13041-057MSD | CRHE-DPT0202-058.0-20130320MSD | TRG | 127-18-4 | Tetrachloroethene | 56 | | ug/L | 1.0 | 0.16 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7362 | 50 | 112 | 7 | |
| NAL13041-057MSD | CRHE-DPT0202-058.0-20130320MSD | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7362 | 50 | 100 | 2 | |
| NAL13041-057MSD | CRHE-DPT0202-058.0-20130320MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7362 | 50 | 96 | 4 | |
| NAL13041-057MSD | CRHE-DPT0202-058.0-20130320MSD | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7362 | 50 | 96 | 2 | |
| NAL13041-057MSD | CRHE-DPT0202-058.0-20130320MSD | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7362 | 50 | 104 | 2 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-061 | CRHE-DPT0203-028.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 250 | 33 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7357 | | | | |
| NAL13041-061 | CRHE-DPT0203-028.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7357 | | | | |
| NAL13041-061 | CRHE-DPT0203-028.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7357 | | | | |
| NAL13041-061 | CRHE-DPT0203-028.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 490 | | ug/L | 250 | 50 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7357 | | | | |
| NAL13041-061 | CRHE-DPT0203-028.0-20130320 | TRG | 79-01-6 | Trichloroethene | 130 | I | ug/L | 250 | 55 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7357 | | | | |
| NAL13041-061 | CRHE-DPT0203-028.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7357 | | | | |
| NAL13041-061 | CRHE-DPT0203-028.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7357 | 50 | 108 | | |
| NAL13041-061 | CRHE-DPT0203-028.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7357 | 50 | 102 | | |
| NAL13041-061 | CRHE-DPT0203-028.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7357 | 50 | 92 | | |
| NAL13041-061 | CRHE-DPT0203-028.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/20/2013 | 3/20/2013 | 3/20/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7357 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-063 | CRHE-DPT0203-038.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | 5800 | | ug/L | 250 | 33 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7379 | | | | |
| NAL13041-063 | CRHE-DPT0203-038.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7379 | | | | |
| NAL13041-063 | CRHE-DPT0203-038.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 230 | I | ug/L | 250 | 70 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7379 | | | | |
| NAL13041-063 | CRHE-DPT0203-038.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 18000 | | ug/L | 250 | 50 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7379 | | | | |
| NAL13041-063 | CRHE-DPT0203-038.0-20130320 | TRG | 79-01-6 | Trichloroethene | 4000 | | ug/L | 250 | 55 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7379 | | | | |
| NAL13041-063 | CRHE-DPT0203-038.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7379 | | | | |
| NAL13041-063 | CRHE-DPT0203-038.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 37 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7379 | 50 | 74 | | |
| NAL13041-063 | CRHE-DPT0203-038.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7379 | 50 | 110 | | |
| NAL13041-063 | CRHE-DPT0203-038.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7379 | 50 | 94 | | |
| NAL13041-063 | CRHE-DPT0203-038.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7379 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-064 | CRHE-DPT0203-043.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | 1900 | | ug/L | 250 | 33 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7380 | | | | |
| NAL13041-064 | CRHE-DPT0203-043.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7380 | | | | |
| NAL13041-064 | CRHE-DPT0203-043.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7380 | | | | |
| NAL13041-064 | CRHE-DPT0203-043.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 12000 | | ug/L | 250 | 50 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7380 | | | | |
| NAL13041-064 | CRHE-DPT0203-043.0-20130320 | TRG | 79-01-6 | Trichloroethene | 2400 | | ug/L | 250 | 55 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7380 | | | | |
| NAL13041-064 | CRHE-DPT0203-043.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7380 | | | | |
| NAL13041-064 | CRHE-DPT0203-043.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7380 | 50 | 110 | | |
| NAL13041-064 | CRHE-DPT0203-043.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7380 | 50 | 112 | | |
| NAL13041-064 | CRHE-DPT0203-043.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7380 | 50 | 94 | | |
| NAL13041-064 | CRHE-DPT0203-043.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7380 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-066 | CRHE-DPT0204-010.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 250 | 33 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7387 | | | | |
| NAL13041-066 | CRHE-DPT0204-010.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7387 | | | | |
| NAL13041-066 | CRHE-DPT0204-010.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7387 | | | | |
| NAL13041-066 | CRHE-DPT0204-010.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 250 | 50 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7387 | | | | |
| NAL13041-066 | CRHE-DPT0204-010.0-20130320 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 250 | 55 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7387 | | | | |
| NAL13041-066 | CRHE-DPT0204-010.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7387 | | | | |
| NAL13041-066 | CRHE-DPT0204-010.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7387 | 50 | 102 | | |
| NAL13041-066 | CRHE-DPT0204-010.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7387 | 50 | 102 | | |
| NAL13041-066 | CRHE-DPT0204-010.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7387 | 50 | 94 | | |
| NAL13041-066 | CRHE-DPT0204-010.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7387 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-067 | CRHE-DPT0204-018.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 250 | 33 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7383 | | | | |
| NAL13041-067 | CRHE-DPT0204-018.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7383 | | | | |
| NAL13041-067 | CRHE-DPT0204-018.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7383 | | | | |
| NAL13041-067 | CRHE-DPT0204-018.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 250 | 50 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7383 | | | | |
| NAL13041-067 | CRHE-DPT0204-018.0-20130320 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 250 | 55 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7383 | | | | |
| NAL13041-067 | CRHE-DPT0204-018.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7383 | | | | |
| NAL13041-067 | CRHE-DPT0204-018.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7383 | 50 | 110 | | |
| NAL13041-067 | CRHE-DPT0204-018.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7383 | 50 | 114 | | |
| NAL13041-067 | CRHE-DPT0204-018.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7383 | 50 | 92 | | |
| NAL13041-067 | CRHE-DPT0204-018.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7383 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-068 | CRHE-DPT0204-023.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 250 | 33 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7384 | | | | |
| NAL13041-068 | CRHE-DPT0204-023.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7384 | | | | |
| NAL13041-068 | CRHE-DPT0204-023.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7384 | | | | |
| NAL13041-068 | CRHE-DPT0204-023.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 250 | 50 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7384 | | | | |
| NAL13041-068 | CRHE-DPT0204-023.0-20130320 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 250 | 55 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7384 | | | | |
| NAL13041-068 | CRHE-DPT0204-023.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7384 | | | | |
| NAL13041-068 | CRHE-DPT0204-023.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7384 | 50 | 108 | | |
| NAL13041-068 | CRHE-DPT0204-023.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7384 | 50 | 110 | | |
| NAL13041-068 | CRHE-DPT0204-023.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7384 | 50 | 94 | | |
| NAL13041-068 | CRHE-DPT0204-023.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7384 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-069 | CRHE-DPT0204-028.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 250 | 33 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7385 | | | | |
| NAL13041-069 | CRHE-DPT0204-028.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7385 | | | | |
| NAL13041-069 | CRHE-DPT0204-028.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7385 | | | | |
| NAL13041-069 | CRHE-DPT0204-028.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 250 | 50 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7385 | | | | |
| NAL13041-069 | CRHE-DPT0204-028.0-20130320 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 250 | 55 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7385 | | | | |
| NAL13041-069 | CRHE-DPT0204-028.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7385 | | | | |
| NAL13041-069 | CRHE-DPT0204-028.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7385 | 50 | 110 | | |
| NAL13041-069 | CRHE-DPT0204-028.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7385 | 50 | 108 | | |
| NAL13041-069 | CRHE-DPT0204-028.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7385 | 50 | 92 | | |
| NAL13041-069 | CRHE-DPT0204-028.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/20/2013 | 3/21/2013 | 3/21/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7385 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-070 | CRHE-DPT0204-033.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7388 | | | | |
| NAL13041-070 | CRHE-DPT0204-033.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7388 | | | | |
| NAL13041-070 | CRHE-DPT0204-033.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7388 | | | | |
| NAL13041-070 | CRHE-DPT0204-033.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7388 | | | | |
| NAL13041-070 | CRHE-DPT0204-033.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7388 | | | | |
| NAL13041-070 | CRHE-DPT0204-033.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7388 | | | | |
| NAL13041-070 | CRHE-DPT0204-033.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7388 | 50 | 100 | | |
| NAL13041-070 | CRHE-DPT0204-033.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 46 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7388 | 50 | 92 | | |
| NAL13041-070 | CRHE-DPT0204-033.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7388 | 50 | 94 | | |
| NAL13041-070 | CRHE-DPT0204-033.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7388 | 50 | 100 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-071 | CRHE-DPT0204-038.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 1.8 | | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7389 | | | | |
| NAL13041-071 | CRHE-DPT0204-038.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7389 | | | | |
| NAL13041-071 | CRHE-DPT0204-038.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7389 | | | | |
| NAL13041-071 | CRHE-DPT0204-038.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 2.3 | | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7389 | | | | |
| NAL13041-071 | CRHE-DPT0204-038.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7389 | | | | |
| NAL13041-071 | CRHE-DPT0204-038.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7389 | | | | |
| NAL13041-071 | CRHE-DPT0204-038.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7389 | 50 | 108 | | |
| NAL13041-071 | CRHE-DPT0204-038.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7389 | 50 | 104 | | |
| NAL13041-071 | CRHE-DPT0204-038.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7389 | 50 | 94 | | |
| NAL13041-071 | CRHE-DPT0204-038.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7389 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-072 | CRHE-DPT0204-043.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 1.0 | | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7390 | | | | |
| NAL13041-072 | CRHE-DPT0204-043.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7390 | | | | |
| NAL13041-072 | CRHE-DPT0204-043.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7390 | | | | |
| NAL13041-072 | CRHE-DPT0204-043.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 0.66 | I | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7390 | | | | |
| NAL13041-072 | CRHE-DPT0204-043.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7390 | | | | |
| NAL13041-072 | CRHE-DPT0204-043.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7390 | | | | |
| NAL13041-072 | CRHE-DPT0204-043.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7390 | 50 | 108 | | |
| NAL13041-072 | CRHE-DPT0204-043.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7390 | 50 | 104 | | |
| NAL13041-072 | CRHE-DPT0204-043.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7390 | 50 | 92 | | |
| NAL13041-072 | CRHE-DPT0204-043.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7390 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-073 | CRHE-DPT0204-058.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7391 | | | | |
| NAL13041-073 | CRHE-DPT0204-058.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7391 | | | | |
| NAL13041-073 | CRHE-DPT0204-058.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7391 | | | | |
| NAL13041-073 | CRHE-DPT0204-058.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7391 | | | | |
| NAL13041-073 | CRHE-DPT0204-058.0-20130321 | TRG | 79-01-6 | Trichloroethene | 0.52 | I | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7391 | | | | |
| NAL13041-073 | CRHE-DPT0204-058.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7391 | | | | |
| NAL13041-073 | CRHE-DPT0204-058.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7391 | 50 | 106 | | |
| NAL13041-073 | CRHE-DPT0204-058.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7391 | 50 | 104 | | |
| NAL13041-073 | CRHE-DPT0204-058.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7391 | 50 | 92 | | |
| NAL13041-073 | CRHE-DPT0204-058.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7391 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-074 | CRHE-DPT0205-010.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7392 | | | | |
| NAL13041-074 | CRHE-DPT0205-010.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7392 | | | | |
| NAL13041-074 | CRHE-DPT0205-010.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7392 | | | | |
| NAL13041-074 | CRHE-DPT0205-010.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7392 | | | | |
| NAL13041-074 | CRHE-DPT0205-010.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7392 | | | | |
| NAL13041-074 | CRHE-DPT0205-010.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7392 | | | | |
| NAL13041-074 | CRHE-DPT0205-010.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7392 | 50 | 106 | | |
| NAL13041-074 | CRHE-DPT0205-010.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7392 | 50 | 106 | | |
| NAL13041-074 | CRHE-DPT0205-010.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7392 | 50 | 92 | | |
| NAL13041-074 | CRHE-DPT0205-010.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7392 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-075 | CRHE-DPT0205-018.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7393 | | | | |
| NAL13041-075 | CRHE-DPT0205-018.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7393 | | | | |
| NAL13041-075 | CRHE-DPT0205-018.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7393 | | | | |
| NAL13041-075 | CRHE-DPT0205-018.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7393 | | | | |
| NAL13041-075 | CRHE-DPT0205-018.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7393 | | | | |
| NAL13041-075 | CRHE-DPT0205-018.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7393 | | | | |
| NAL13041-075 | CRHE-DPT0205-018.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7393 | 50 | 106 | | |
| NAL13041-075 | CRHE-DPT0205-018.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7393 | 50 | 104 | | |
| NAL13041-075 | CRHE-DPT0205-018.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7393 | 50 | 96 | | |
| NAL13041-075 | CRHE-DPT0205-018.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7393 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

**Geosyntec Consultants**
**316 S Baylen Str., Suite 201**
**Pensacola, FL 32502**
**ATTN: Ms. Jill Johnson**

**Project #:** **NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-076 | CRHE-DPT0205-023.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7394 | | | | |
| NAL13041-076 | CRHE-DPT0205-023.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7394 | | | | |
| NAL13041-076 | CRHE-DPT0205-023.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7394 | | | | |
| NAL13041-076 | CRHE-DPT0205-023.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7394 | | | | |
| NAL13041-076 | CRHE-DPT0205-023.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7394 | | | | |
| NAL13041-076 | CRHE-DPT0205-023.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7394 | | | | |
| NAL13041-076 | CRHE-DPT0205-023.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7394 | 50 | 108 | | |
| NAL13041-076 | CRHE-DPT0205-023.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7394 | 50 | 102 | | |
| NAL13041-076 | CRHE-DPT0205-023.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7394 | 50 | 94 | | |
| NAL13041-076 | CRHE-DPT0205-023.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7394 | 50 | 94 | | |

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032013ICV | P032013ICV | TRG | 75-01-4 | Vinyl Chloride | 46 | | ug/L | 1.0 | 0.13 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7343 | 50 | 92 | | |
| P032013ICV | P032013ICV | TRG | 75-35-4 | 1,1-Dichloroethene | 47 | | ug/L | 1.0 | 0.18 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7343 | 50 | 94 | | |
| P032013ICV | P032013ICV | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 49 | | ug/L | 1.0 | 0.28 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7343 | 50 | 98 | | |
| P032013ICV | P032013ICV | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.20 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7343 | 50 | 102 | | |
| P032013ICV | P032013ICV | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7343 | 50 | 102 | | |
| P032013ICV | P032013ICV | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7343 | 50 | 108 | | |
| P032013ICV | P032013ICV | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7343 | 50 | 92 | | |
| P032013ICV | P032013ICV | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 42 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7343 | 50 | 84 | | |
| P032013ICV | P032013ICV | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7343 | 50 | 96 | | |
| P032013ICV | P032013ICV | SUR | 460-00-4 | Bromofluorobenzene | 53 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7343 | 50 | 106 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032013MBKA | P032013MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | | | | |
| P032013MBKA | P032013MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | | | | |
| P032013MBKA | P032013MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | | | | |
| P032013MBKA | P032013MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | | | | |
| P032013MBKA | P032013MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | | | | |
| P032013MBKA | P032013MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | | | | |
| P032013MBKA | P032013MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | 50 | 104 | | |
| P032013MBKA | P032013MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | 50 | 102 | | |
| P032013MBKA | P032013MBKA | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | 50 | 92 | | |
| P032013MBKA | P032013MBKA | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 3/20/2013 | 3/20/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7344 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032013ICVB | P032013ICVB | TRG | 75-01-4 | Vinyl Chloride | 64 | | ug/L | 1.0 | 0.13 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7376 | 50 | 128 | | |
| P032013ICVB | P032013ICVB | TRG | 75-35-4 | 1,1-Dichloroethene | 50 | | ug/L | 1.0 | 0.18 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7376 | 50 | 100 | | |
| P032013ICVB | P032013ICVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.28 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7376 | 50 | 102 | | |
| P032013ICVB | P032013ICVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.20 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7376 | 50 | 106 | | |
| P032013ICVB | P032013ICVB | TRG | 79-01-6 | Trichloroethene | 54 | | ug/L | 1.0 | 0.22 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7376 | 50 | 108 | | |
| P032013ICVB | P032013ICVB | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7376 | 50 | 100 | | |
| P032013ICVB | P032013ICVB | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7376 | 50 | 100 | | |
| P032013ICVB | P032013ICVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7376 | 50 | 98 | | |
| P032013ICVB | P032013ICVB | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7376 | 50 | 100 | | |
| P032013ICVB | P032013ICVB | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | NA | NA | SW8260B | NALP7376 | 50 | 104 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032013MBKB | P032013MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7377 | | | | |
| P032013MBKB | P032013MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7377 | | | | |
| P032013MBKB | P032013MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7377 | | | | |
| P032013MBKB | P032013MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7377 | | | | |
| P032013MBKB | P032013MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7377 | | | | |
| P032013MBKB | P032013MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7377 | | | | |
| P032013MBKB | P032013MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 41 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7377 | 50 | 82 | | |
| P032013MBKB | P032013MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7377 | 50 | 108 | | |
| P032013MBKB | P032013MBKB | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7377 | 50 | 94 | | |
| P032013MBKB | P032013MBKB | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7377 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032113ALCS | P032113ALCS | TRG | 75-01-4 | Vinyl Chloride | 51 | | ug/L | 1.0 | 0.13 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7397 | 50 | 102 | | |
| P032113ALCS | P032113ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 48 | | ug/L | 1.0 | 0.18 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7397 | 50 | 96 | | |
| P032113ALCS | P032113ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.28 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7397 | 50 | 102 | | |
| P032113ALCS | P032113ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.20 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7397 | 50 | 104 | | |
| P032113ALCS | P032113ALCS | TRG | 79-01-6 | Trichloroethene | 52 | | ug/L | 1.0 | 0.22 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7397 | 50 | 104 | | |
| P032113ALCS | P032113ALCS | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7397 | 50 | 108 | | |
| P032113ALCS | P032113ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7397 | 50 | 98 | | |
| P032113ALCS | P032113ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7397 | 50 | 96 | | |
| P032113ALCS | P032113ALCS | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7397 | 50 | 100 | | |
| P032113ALCS | P032113ALCS | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7397 | 50 | 102 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-075MS | CRHE-DPT0205-018.0-20130321MS | TRG | 75-01-4 | Vinyl Chloride | 59 | | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7395 | 50 | 118 | | |
| NAL13041-075MS | CRHE-DPT0205-018.0-20130321MS | TRG | 75-35-4 | 1,1-Dichloroethene | 55 | | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7395 | 50 | 110 | | |
| NAL13041-075MS | CRHE-DPT0205-018.0-20130321MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 58 | | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7395 | 50 | 116 | | |
| NAL13041-075MS | CRHE-DPT0205-018.0-20130321MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 59 | | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7395 | 50 | 118 | | |
| NAL13041-075MS | CRHE-DPT0205-018.0-20130321MS | TRG | 79-01-6 | Trichloroethene | 58 | | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7395 | 50 | 116 | | |
| NAL13041-075MS | CRHE-DPT0205-018.0-20130321MS | TRG | 127-18-4 | Tetrachloroethene | 60 | | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7395 | 50 | 120 | | |
| NAL13041-075MS | CRHE-DPT0205-018.0-20130321MS | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7395 | 50 | 98 | | |
| NAL13041-075MS | CRHE-DPT0205-018.0-20130321MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7395 | 50 | 96 | | |
| NAL13041-075MS | CRHE-DPT0205-018.0-20130321MS | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7395 | 50 | 100 | | |
| NAL13041-075MS | CRHE-DPT0205-018.0-20130321MS | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7395 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-075MSD | CRHE-DPT0205-018.0-20130321MSD | TRG | 75-01-4 | Vinyl Chloride | 50 | | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7396 | 50 | 100 | 17 | |
| NAL13041-075MSD | CRHE-DPT0205-018.0-20130321MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 49 | | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7396 | 50 | 98 | 12 | |
| NAL13041-075MSD | CRHE-DPT0205-018.0-20130321MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 50 | | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7396 | 50 | 100 | 15 | |
| NAL13041-075MSD | CRHE-DPT0205-018.0-20130321MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 50 | | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7396 | 50 | 100 | 17 | |
| NAL13041-075MSD | CRHE-DPT0205-018.0-20130321MSD | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7396 | 50 | 100 | 15 | |
| NAL13041-075MSD | CRHE-DPT0205-018.0-20130321MSD | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7396 | 50 | 108 | 11 | |
| NAL13041-075MSD | CRHE-DPT0205-018.0-20130321MSD | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7396 | 50 | 98 | 0 | |
| NAL13041-075MSD | CRHE-DPT0205-018.0-20130321MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7396 | 50 | 94 | 2 | |
| NAL13041-075MSD | CRHE-DPT0205-018.0-20130321MSD | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7396 | 50 | 102 | 2 | |
| NAL13041-075MSD | CRHE-DPT0205-018.0-20130321MSD | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7396 | 50 | 100 | 2 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-077 | CRHE-DPT0205-028.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7402 | | | | |
| NAL13041-077 | CRHE-DPT0205-028.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7402 | | | | |
| NAL13041-077 | CRHE-DPT0205-028.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7402 | | | | |
| NAL13041-077 | CRHE-DPT0205-028.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7402 | | | | |
| NAL13041-077 | CRHE-DPT0205-028.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7402 | | | | |
| NAL13041-077 | CRHE-DPT0205-028.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7402 | | | | |
| NAL13041-077 | CRHE-DPT0205-028.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7402 | 50 | 104 | | |
| NAL13041-077 | CRHE-DPT0205-028.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7402 | 50 | 102 | | |
| NAL13041-077 | CRHE-DPT0205-028.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7402 | 50 | 94 | | |
| NAL13041-077 | CRHE-DPT0205-028.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7402 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-078 | CRHE-DPT0205-033.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7403 | | | | |
| NAL13041-078 | CRHE-DPT0205-033.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7403 | | | | |
| NAL13041-078 | CRHE-DPT0205-033.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7403 | | | | |
| NAL13041-078 | CRHE-DPT0205-033.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7403 | | | | |
| NAL13041-078 | CRHE-DPT0205-033.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7403 | | | | |
| NAL13041-078 | CRHE-DPT0205-033.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7403 | | | | |
| NAL13041-078 | CRHE-DPT0205-033.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7403 | 50 | 108 | | |
| NAL13041-078 | CRHE-DPT0205-033.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7403 | 50 | 104 | | |
| NAL13041-078 | CRHE-DPT0205-033.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7403 | 50 | 94 | | |
| NAL13041-078 | CRHE-DPT0205-033.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7403 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-080 | CRHE-DPT0205-043.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 50 | 6.5 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7405 | | | | |
| NAL13041-080 | CRHE-DPT0205-043.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7405 | | | | |
| NAL13041-080 | CRHE-DPT0205-043.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 50 | 14 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7405 | | | | |
| NAL13041-080 | CRHE-DPT0205-043.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 760 | | ug/L | 50 | 10 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7405 | | | | |
| NAL13041-080 | CRHE-DPT0205-043.0-20130321 | TRG | 79-01-6 | Trichloroethene | 370 | | ug/L | 50 | 11 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7405 | | | | |
| NAL13041-080 | CRHE-DPT0205-043.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7405 | | | | |
| NAL13041-080 | CRHE-DPT0205-043.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7405 | 50 | 106 | | |
| NAL13041-080 | CRHE-DPT0205-043.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7405 | 50 | 104 | | |
| NAL13041-080 | CRHE-DPT0205-043.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7405 | 50 | 92 | | |
| NAL13041-080 | CRHE-DPT0205-043.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7405 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-081 | CRHE-DPT0205-058.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7406 | | | | |
| NAL13041-081 | CRHE-DPT0205-058.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7406 | | | | |
| NAL13041-081 | CRHE-DPT0205-058.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7406 | | | | |
| NAL13041-081 | CRHE-DPT0205-058.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7406 | | | | |
| NAL13041-081 | CRHE-DPT0205-058.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7406 | | | | |
| NAL13041-081 | CRHE-DPT0205-058.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7406 | | | | |
| NAL13041-081 | CRHE-DPT0205-058.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7406 | 50 | 108 | | |
| NAL13041-081 | CRHE-DPT0205-058.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7406 | 50 | 106 | | |
| NAL13041-081 | CRHE-DPT0205-058.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7406 | 50 | 94 | | |
| NAL13041-081 | CRHE-DPT0205-058.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7406 | 50 | 98 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-082 | CRHE-DPT0206-010.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7407 | | | | |
| NAL13041-082 | CRHE-DPT0206-010.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7407 | | | | |
| NAL13041-082 | CRHE-DPT0206-010.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7407 | | | | |
| NAL13041-082 | CRHE-DPT0206-010.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7407 | | | | |
| NAL13041-082 | CRHE-DPT0206-010.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7407 | | | | |
| NAL13041-082 | CRHE-DPT0206-010.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7407 | | | | |
| NAL13041-082 | CRHE-DPT0206-010.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7407 | 50 | 106 | | |
| NAL13041-082 | CRHE-DPT0206-010.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7407 | 50 | 104 | | |
| NAL13041-082 | CRHE-DPT0206-010.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7407 | 50 | 92 | | |
| NAL13041-082 | CRHE-DPT0206-010.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7407 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-083 | CRHE-DPT0206-018.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7408 | | | | |
| NAL13041-083 | CRHE-DPT0206-018.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7408 | | | | |
| NAL13041-083 | CRHE-DPT0206-018.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7408 | | | | |
| NAL13041-083 | CRHE-DPT0206-018.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7408 | | | | |
| NAL13041-083 | CRHE-DPT0206-018.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7408 | | | | |
| NAL13041-083 | CRHE-DPT0206-018.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7408 | | | | |
| NAL13041-083 | CRHE-DPT0206-018.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7408 | 50 | 108 | | |
| NAL13041-083 | CRHE-DPT0206-018.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7408 | 50 | 106 | | |
| NAL13041-083 | CRHE-DPT0206-018.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7408 | 50 | 94 | | |
| NAL13041-083 | CRHE-DPT0206-018.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7408 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-084 | CRHE-DPT0206-023.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7409 | | | | |
| NAL13041-084 | CRHE-DPT0206-023.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7409 | | | | |
| NAL13041-084 | CRHE-DPT0206-023.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7409 | | | | |
| NAL13041-084 | CRHE-DPT0206-023.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7409 | | | | |
| NAL13041-084 | CRHE-DPT0206-023.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7409 | | | | |
| NAL13041-084 | CRHE-DPT0206-023.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7409 | | | | |
| NAL13041-084 | CRHE-DPT0206-023.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7409 | 50 | 106 | | |
| NAL13041-084 | CRHE-DPT0206-023.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7409 | 50 | 104 | | |
| NAL13041-084 | CRHE-DPT0206-023.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7409 | 50 | 92 | | |
| NAL13041-084 | CRHE-DPT0206-023.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7409 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-085 | CRHE-DPT0206-028.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7410 | | | | |
| NAL13041-085 | CRHE-DPT0206-028.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7410 | | | | |
| NAL13041-085 | CRHE-DPT0206-028.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7410 | | | | |
| NAL13041-085 | CRHE-DPT0206-028.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7410 | | | | |
| NAL13041-085 | CRHE-DPT0206-028.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7410 | | | | |
| NAL13041-085 | CRHE-DPT0206-028.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7410 | | | | |
| NAL13041-085 | CRHE-DPT0206-028.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7410 | 50 | 108 | | |
| NAL13041-085 | CRHE-DPT0206-028.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7410 | 50 | 106 | | |
| NAL13041-085 | CRHE-DPT0206-028.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7410 | 50 | 94 | | |
| NAL13041-085 | CRHE-DPT0206-028.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7410 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-086 | CRHE-DPT0206-033.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7411 | | | | |
| NAL13041-086 | CRHE-DPT0206-033.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7411 | | | | |
| NAL13041-086 | CRHE-DPT0206-033.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7411 | | | | |
| NAL13041-086 | CRHE-DPT0206-033.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7411 | | | | |
| NAL13041-086 | CRHE-DPT0206-033.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7411 | | | | |
| NAL13041-086 | CRHE-DPT0206-033.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7411 | | | | |
| NAL13041-086 | CRHE-DPT0206-033.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7411 | 50 | 106 | | |
| NAL13041-086 | CRHE-DPT0206-033.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7411 | 50 | 104 | | |
| NAL13041-086 | CRHE-DPT0206-033.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7411 | 50 | 92 | | |
| NAL13041-086 | CRHE-DPT0206-033.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/21/2013 | 3/21/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7411 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-089 | CRHE-DPT0206-058.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7414 | | | | |
| NAL13041-089 | CRHE-DPT0206-058.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7414 | | | | |
| NAL13041-089 | CRHE-DPT0206-058.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7414 | | | | |
| NAL13041-089 | CRHE-DPT0206-058.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7414 | | | | |
| NAL13041-089 | CRHE-DPT0206-058.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7414 | | | | |
| NAL13041-089 | CRHE-DPT0206-058.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7414 | | | | |
| NAL13041-089 | CRHE-DPT0206-058.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7414 | 50 | 106 | | |
| NAL13041-089 | CRHE-DPT0206-058.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7414 | 50 | 104 | | |
| NAL13041-089 | CRHE-DPT0206-058.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7414 | 50 | 92 | | |
| NAL13041-089 | CRHE-DPT0206-058.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7414 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-090 | CRHE-DPT0207-010.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 28 | JL | ug/L | 10.0 | 1.30 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7416 | | | | |
| NAL13041-090 | CRHE-DPT0207-010.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10.0 | 1.80 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7416 | | | | |
| NAL13041-090 | CRHE-DPT0207-010.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 10.0 | 2.80 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7416 | | | | |
| NAL13041-090 | CRHE-DPT0207-010.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 120 | JL | ug/L | 10.0 | 2.00 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7416 | | | | |
| NAL13041-090 | CRHE-DPT0207-010.0-20130321 | TRG | 79-01-6 | Trichloroethene | 79 | | ug/L | 10.0 | 2.20 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7416 | | | | |
| NAL13041-090 | CRHE-DPT0207-010.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10.0 | 1.60 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7416 | | | | |
| NAL13041-090 | CRHE-DPT0207-010.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7416 | 50 | 108 | | |
| NAL13041-090 | CRHE-DPT0207-010.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7416 | 50 | 104 | | |
| NAL13041-090 | CRHE-DPT0207-010.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7416 | 50 | 92 | | |
| NAL13041-090 | CRHE-DPT0207-010.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7416 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-092 | CRHE-DPT0207-023.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 3700 | L | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7415 | | | | |
| NAL13041-092 | CRHE-DPT0207-023.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | 40 | | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7415 | | | | |
| NAL13041-092 | CRHE-DPT0207-023.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 320 | L | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7415 | | | | |
| NAL13041-092 | CRHE-DPT0207-023.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 5900 | L | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7415 | | | | |
| NAL13041-092 | CRHE-DPT0207-023.0-20130321 | TRG | 79-01-6 | Trichloroethene | 2.5 | | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7415 | | | | |
| NAL13041-092 | CRHE-DPT0207-023.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7415 | | | | |
| NAL13041-092 | CRHE-DPT0207-023.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7415 | 50 | 100 | | |
| NAL13041-092 | CRHE-DPT0207-023.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7415 | 50 | 100 | | |
| NAL13041-092 | CRHE-DPT0207-023.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7415 | 50 | 94 | | |
| NAL13041-092 | CRHE-DPT0207-023.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7415 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-093 | CRHE-DPT0207-028.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 960 | JL | ug/L | 250 | 33 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7418 | | | | |
| NAL13041-093 | CRHE-DPT0207-028.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7418 | | | | |
| NAL13041-093 | CRHE-DPT0207-028.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7418 | | | | |
| NAL13041-093 | CRHE-DPT0207-028.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 510 | JL | ug/L | 250 | 50 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7418 | | | | |
| NAL13041-093 | CRHE-DPT0207-028.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 250 | 55 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7418 | | | | |
| NAL13041-093 | CRHE-DPT0207-028.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7418 | | | | |
| NAL13041-093 | CRHE-DPT0207-028.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 45 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7418 | 50 | 90 | | |
| NAL13041-093 | CRHE-DPT0207-028.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7418 | 50 | 106 | | |
| NAL13041-093 | CRHE-DPT0207-028.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7418 | 50 | 90 | | |
| NAL13041-093 | CRHE-DPT0207-028.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7418 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-094 | CRHE-DPT0207-033.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 5300 | JL | ug/L | 250 | 33 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7419 | | | | |
| NAL13041-094 | CRHE-DPT0207-033.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7419 | | | | |
| NAL13041-094 | CRHE-DPT0207-033.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7419 | | | | |
| NAL13041-094 | CRHE-DPT0207-033.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 4400 | JL | ug/L | 250 | 50 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7419 | | | | |
| NAL13041-094 | CRHE-DPT0207-033.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 250 | 55 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7419 | | | | |
| NAL13041-094 | CRHE-DPT0207-033.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7419 | | | | |
| NAL13041-094 | CRHE-DPT0207-033.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 39 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7419 | 50 | 78 | | |
| NAL13041-094 | CRHE-DPT0207-033.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7419 | 50 | 108 | | |
| NAL13041-094 | CRHE-DPT0207-033.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7419 | 50 | 90 | | |
| NAL13041-094 | CRHE-DPT0207-033.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7419 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-095 | CRHE-DPT0207-038.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 290 | JL | ug/L | 10 | 1.3 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7420 | | | | |
| NAL13041-095 | CRHE-DPT0207-038.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7420 | | | | |
| NAL13041-095 | CRHE-DPT0207-038.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 10 | 2.8 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7420 | | | | |
| NAL13041-095 | CRHE-DPT0207-038.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 47 | JL | ug/L | 10 | 2.0 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7420 | | | | |
| NAL13041-095 | CRHE-DPT0207-038.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 10 | 2.2 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7420 | | | | |
| NAL13041-095 | CRHE-DPT0207-038.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7420 | | | | |
| NAL13041-095 | CRHE-DPT0207-038.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7420 | 50 | 112 | | |
| NAL13041-095 | CRHE-DPT0207-038.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7420 | 50 | 112 | | |
| NAL13041-095 | CRHE-DPT0207-038.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7420 | 50 | 92 | | |
| NAL13041-095 | CRHE-DPT0207-038.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7420 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032113CCVA | P032113CCVA | TRG | 75-01-4 | Vinyl Chloride | 49 | | ug/L | 1.0 | 0.13 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7398 | 50 | 98 | | |
| P032113CCVA | P032113CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 48 | | ug/L | 1.0 | 0.18 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7398 | 50 | 96 | | |
| P032113CCVA | P032113CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 49 | | ug/L | 1.0 | 0.28 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7398 | 50 | 98 | | |
| P032113CCVA | P032113CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.20 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7398 | 50 | 104 | | |
| P032113CCVA | P032113CCVA | TRG | 79-01-6 | Trichloroethene | 52 | | ug/L | 1.0 | 0.22 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7398 | 50 | 104 | | |
| P032113CCVA | P032113CCVA | TRG | 127-18-4 | Tetrachloroethene | 52 | | ug/L | 1.0 | 0.16 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7398 | 50 | 104 | | |
| P032113CCVA | P032113CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7398 | 50 | 102 | | |
| P032113CCVA | P032113CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7398 | 50 | 100 | | |
| P032113CCVA | P032113CCVA | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7398 | 50 | 98 | | |
| P032113CCVA | P032113CCVA | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7398 | 50 | 102 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032113MBKB | P032113MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7400 | | | | |
| P032113MBKB | P032113MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7400 | | | | |
| P032113MBKB | P032113MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7400 | | | | |
| P032113MBKB | P032113MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7400 | | | | |
| P032113MBKB | P032113MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7400 | | | | |
| P032113MBKB | P032113MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7400 | | | | |
| P032113MBKB | P032113MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7400 | 50 | 106 | | |
| P032113MBKB | P032113MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7400 | 50 | 104 | | |
| P032113MBKB | P032113MBKB | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7400 | 50 | 94 | | |
| P032113MBKB | P032113MBKB | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 3/21/2013 | 3/21/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7400 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032113CCVB | P032113CCVB | TRG | 75-01-4 | Vinyl Chloride | 51 | | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 102 | | |
| P032113CCVB | P032113CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 48 | | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 96 | | |
| P032113CCVB | P032113CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 104 | | |
| P032113CCVB | P032113CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 106 | | |
| P032113CCVB | P032113CCVB | TRG | 79-01-6 | Trichloroethene | 54 | | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 108 | | |
| P032113CCVB | P032113CCVB | TRG | 127-18-4 | Tetrachloroethene | 52 | | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 104 | | |
| P032113CCVB | P032113CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 102 | | |
| P032113CCVB | P032113CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 96 | | |
| P032113CCVB | P032113CCVB | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 98 | | |
| P032113CCVB | P032113CCVB | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032113BLCS | P032113BLCS | TRG | 75-01-4 | Vinyl Chloride | 42 | | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7422 | 50 | 84 | | |
| P032113BLCS | P032113BLCS | TRG | 75-35-4 | 1,1-Dichloroethene | 42 | | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7422 | 50 | 84 | | |
| P032113BLCS | P032113BLCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 45 | | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7422 | 50 | 90 | | |
| P032113BLCS | P032113BLCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 49 | | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7422 | 50 | 98 | | |
| P032113BLCS | P032113BLCS | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7422 | 50 | 102 | | |
| P032113BLCS | P032113BLCS | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7422 | 50 | 100 | | |
| P032113BLCS | P032113BLCS | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7422 | 50 | 100 | | |
| P032113BLCS | P032113BLCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7422 | 50 | 98 | | |
| P032113BLCS | P032113BLCS | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7422 | 50 | 98 | | |
| P032113BLCS | P032113BLCS | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7422 | 50 | 104 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032113BLCD | P032113BLCD | TRG | 75-01-4 | Vinyl Chloride | 49 | | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7423 | 50 | 98 | 15 | |
| P032113BLCD | P032113BLCD | TRG | 75-35-4 | 1,1-Dichloroethene | 50 | | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7423 | 50 | 100 | 17 | |
| P032113BLCD | P032113BLCD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7423 | 50 | 104 | 14 | |
| P032113BLCD | P032113BLCD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7423 | 50 | 106 | 8 | |
| P032113BLCD | P032113BLCD | TRG | 79-01-6 | Trichloroethene | 53 | | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7423 | 50 | 106 | 4 | |
| P032113BLCD | P032113BLCD | TRG | 127-18-4 | Tetrachloroethene | 52 | | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7423 | 50 | 104 | 4 | |
| P032113BLCD | P032113BLCD | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7423 | 50 | 102 | 2 | |
| P032113BLCD | P032113BLCD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7423 | 50 | 98 | 0 | |
| P032113BLCD | P032113BLCD | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7423 | 50 | 98 | 0 | |
| P032113BLCD | P032113BLCD | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7423 | 50 | 102 | 2 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | TRG | 75-01-4 | Vinyl Chloride | 52 | | ug/L | 1.0 | 0.13 | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7424 | 50 | 100 | | 2.1 |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | TRG | 75-35-4 | 1,1-Dichloroethene | 50 | | ug/L | 1.0 | 0.18 | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7424 | 50 | 100 | | |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.28 | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7424 | 50 | 106 | | |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 70 | | ug/L | 1.0 | 0.20 | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7424 | 50 | 106 | | 17 |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | TRG | 79-01-6 | Trichloroethene | 58 | | ug/L | 1.0 | 0.22 | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7424 | 50 | 106 | | 5.0 |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7424 | 50 | 108 | | |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7424 | 50 | 102 | | |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7424 | 50 | 98 | | |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7424 | 50 | 98 | | |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7424 | 50 | 102 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | TRG | 75-01-4 | Vinyl Chloride | 61 | | ug/L | 1.0 | 0.13 | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7425 | 50 | 118 | 16 | 2.1 |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 57 | | ug/L | 1.0 | 0.18 | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7425 | 50 | 114 | 13 | |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 60 | | ug/L | 1.0 | 0.28 | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7425 | 50 | 120 | 12 | |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 80 | | ug/L | 1.0 | 0.20 | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7425 | 50 | 126 | 13 | 17 |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | TRG | 79-01-6 | Trichloroethene | 65 | | ug/L | 1.0 | 0.22 | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7425 | 50 | 120 | 11 | 5.0 |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | TRG | 127-18-4 | Tetrachloroethene | 60 | | ug/L | 1.0 | 0.16 | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7425 | 50 | 120 | 11 | |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7425 | 50 | 100 | 2 | |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7425 | 50 | 96 | 2 | |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7425 | 50 | 98 | 0 | |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 3/20/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7425 | 50 | 102 | 0 | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-096 | CRHE-DPT0207-043.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 2.9 | | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7427 | | | | |
| NAL13041-096 | CRHE-DPT0207-043.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7427 | | | | |
| NAL13041-096 | CRHE-DPT0207-043.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7427 | | | | |
| NAL13041-096 | CRHE-DPT0207-043.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 3.6 | | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7427 | | | | |
| NAL13041-096 | CRHE-DPT0207-043.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7427 | | | | |
| NAL13041-096 | CRHE-DPT0207-043.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7427 | | | | |
| NAL13041-096 | CRHE-DPT0207-043.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7427 | 50 | 110 | | |
| NAL13041-096 | CRHE-DPT0207-043.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7427 | 50 | 110 | | |
| NAL13041-096 | CRHE-DPT0207-043.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7427 | 50 | 94 | | |
| NAL13041-096 | CRHE-DPT0207-043.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7427 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-097 | CRHE-DPT0207-058.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 1.3 | | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7428 | | | | |
| NAL13041-097 | CRHE-DPT0207-058.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7428 | | | | |
| NAL13041-097 | CRHE-DPT0207-058.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7428 | | | | |
| NAL13041-097 | CRHE-DPT0207-058.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 6.4 | | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7428 | | | | |
| NAL13041-097 | CRHE-DPT0207-058.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7428 | | | | |
| NAL13041-097 | CRHE-DPT0207-058.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7428 | | | | |
| NAL13041-097 | CRHE-DPT0207-058.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7428 | 50 | 106 | | |
| NAL13041-097 | CRHE-DPT0207-058.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7428 | 50 | 106 | | |
| NAL13041-097 | CRHE-DPT0207-058.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7428 | 50 | 92 | | |
| NAL13041-097 | CRHE-DPT0207-058.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7428 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-098 | CRHE-DPT0202-068.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 0.97 | I | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7429 | | | | |
| NAL13041-098 | CRHE-DPT0202-068.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7429 | | | | |
| NAL13041-098 | CRHE-DPT0202-068.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7429 | | | | |
| NAL13041-098 | CRHE-DPT0202-068.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 21 | | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7429 | | | | |
| NAL13041-098 | CRHE-DPT0202-068.0-20130321 | TRG | 79-01-6 | Trichloroethene | 0.73 | I | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7429 | | | | |
| NAL13041-098 | CRHE-DPT0202-068.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7429 | | | | |
| NAL13041-098 | CRHE-DPT0202-068.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7429 | 50 | 96 | | |
| NAL13041-098 | CRHE-DPT0202-068.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 46 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7429 | 50 | 92 | | |
| NAL13041-098 | CRHE-DPT0202-068.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7429 | 50 | 92 | | |
| NAL13041-098 | CRHE-DPT0202-068.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7429 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-099 | CRHE-DPT0208-010.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7430 | | | | |
| NAL13041-099 | CRHE-DPT0208-010.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7430 | | | | |
| NAL13041-099 | CRHE-DPT0208-010.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7430 | | | | |
| NAL13041-099 | CRHE-DPT0208-010.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1.3 | | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7430 | | | | |
| NAL13041-099 | CRHE-DPT0208-010.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7430 | | | | |
| NAL13041-099 | CRHE-DPT0208-010.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7430 | | | | |
| NAL13041-099 | CRHE-DPT0208-010.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7430 | 50 | 100 | | |
| NAL13041-099 | CRHE-DPT0208-010.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7430 | 50 | 94 | | |
| NAL13041-099 | CRHE-DPT0208-010.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7430 | 50 | 90 | | |
| NAL13041-099 | CRHE-DPT0208-010.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7430 | 50 | 92 | | |

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# FINAL ANALYTICAL REPORT

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-100 | CRHE-DPT0208-018.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 10 | | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7431 | | | | |
| NAL13041-100 | CRHE-DPT0208-018.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7431 | | | | |
| NAL13041-100 | CRHE-DPT0208-018.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7431 | | | | |
| NAL13041-100 | CRHE-DPT0208-018.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7431 | | | | |
| NAL13041-100 | CRHE-DPT0208-018.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7431 | | | | |
| NAL13041-100 | CRHE-DPT0208-018.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7431 | | | | |
| NAL13041-100 | CRHE-DPT0208-018.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7431 | 50 | 104 | | |
| NAL13041-100 | CRHE-DPT0208-018.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7431 | 50 | 102 | | |
| NAL13041-100 | CRHE-DPT0208-018.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7431 | 50 | 90 | | |
| NAL13041-100 | CRHE-DPT0208-018.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7431 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-102 | CRHE-DPT0208-028.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 1000 | | ug/L | 5.0 | 0.65 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7434 | | | | |
| NAL13041-102 | CRHE-DPT0208-028.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 5.0 | 0.90 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7434 | | | | |
| NAL13041-102 | CRHE-DPT0208-028.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 9.6 | | ug/L | 5.0 | 1.40 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7434 | | | | |
| NAL13041-102 | CRHE-DPT0208-028.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 5.0 | 1.00 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7434 | | | | |
| NAL13041-102 | CRHE-DPT0208-028.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 5.0 | 1.10 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7434 | | | | |
| NAL13041-102 | CRHE-DPT0208-028.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 5.0 | 0.80 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7434 | | | | |
| NAL13041-102 | CRHE-DPT0208-028.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7434 | 50 | 102 | | |
| NAL13041-102 | CRHE-DPT0208-028.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7434 | 50 | 100 | | |
| NAL13041-102 | CRHE-DPT0208-028.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7434 | 50 | 90 | | |
| NAL13041-102 | CRHE-DPT0208-028.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7434 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-103 | CRHE-DPT0208-033.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 1600 | L | ug/L | 5.0 | 0.65 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7440 | | | | |
| NAL13041-103 | CRHE-DPT0208-033.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 5.0 | 0.90 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7440 | | | | |
| NAL13041-103 | CRHE-DPT0208-033.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 5.0 | 1.40 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7440 | | | | |
| NAL13041-103 | CRHE-DPT0208-033.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 5.0 | 1.00 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7440 | | | | |
| NAL13041-103 | CRHE-DPT0208-033.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 5.0 | 1.10 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7440 | | | | |
| NAL13041-103 | CRHE-DPT0208-033.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 5.0 | 0.80 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7440 | | | | |
| NAL13041-103 | CRHE-DPT0208-033.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7440 | 50 | 104 | | |
| NAL13041-103 | CRHE-DPT0208-033.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7440 | 50 | 100 | | |
| NAL13041-103 | CRHE-DPT0208-033.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7440 | 50 | 92 | | |
| NAL13041-103 | CRHE-DPT0208-033.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7440 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-104 | CRHE-IDW193858-20130321 | TRG | 75-01-4 | Vinyl Chloride | 64 | | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7436 | | | | |
| NAL13041-104 | CRHE-IDW193858-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | 1.1 | | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7436 | | | | |
| NAL13041-104 | CRHE-IDW193858-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 16 | | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7436 | | | | |
| NAL13041-104 | CRHE-IDW193858-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 940 | L | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7436 | | | | |
| NAL13041-104 | CRHE-IDW193858-20130321 | TRG | 79-01-6 | Trichloroethene | 180 | | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7436 | | | | |
| NAL13041-104 | CRHE-IDW193858-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7436 | | | | |
| NAL13041-104 | CRHE-IDW193858-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7436 | 50 | 104 | | |
| NAL13041-104 | CRHE-IDW193858-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7436 | 50 | 102 | | |
| NAL13041-104 | CRHE-IDW193858-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7436 | 50 | 92 | | |
| NAL13041-104 | CRHE-IDW193858-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7436 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-105 | CRHE-DPT0208-038.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | 7.5 | I | ug/L | 10 | 1.3 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7447 | | | | |
| NAL13041-105 | CRHE-DPT0208-038.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7447 | | | | |
| NAL13041-105 | CRHE-DPT0208-038.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 10 | 2.8 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7447 | | | | |
| NAL13041-105 | CRHE-DPT0208-038.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 21 | | ug/L | 10 | 2.0 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7447 | | | | |
| NAL13041-105 | CRHE-DPT0208-038.0-20130322 | TRG | 79-01-6 | Trichloroethene | 13 | | ug/L | 10 | 2.2 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7447 | | | | |
| NAL13041-105 | CRHE-DPT0208-038.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7447 | | | | |
| NAL13041-105 | CRHE-DPT0208-038.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7447 | 50 | 106 | | |
| NAL13041-105 | CRHE-DPT0208-038.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7447 | 50 | 106 | | |
| NAL13041-105 | CRHE-DPT0208-038.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7447 | 50 | 94 | | |
| NAL13041-105 | CRHE-DPT0208-038.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7447 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-106 | CRHE-DPT0208-043.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | 24 | | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7448 | | | | |
| NAL13041-106 | CRHE-DPT0208-043.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7448 | | | | |
| NAL13041-106 | CRHE-DPT0208-043.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7448 | | | | |
| NAL13041-106 | CRHE-DPT0208-043.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 2.8 | | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7448 | | | | |
| NAL13041-106 | CRHE-DPT0208-043.0-20130322 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7448 | | | | |
| NAL13041-106 | CRHE-DPT0208-043.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7448 | | | | |
| NAL13041-106 | CRHE-DPT0208-043.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7448 | 50 | 108 | | |
| NAL13041-106 | CRHE-DPT0208-043.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7448 | 50 | 104 | | |
| NAL13041-106 | CRHE-DPT0208-043.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7448 | 50 | 92 | | |
| NAL13041-106 | CRHE-DPT0208-043.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7448 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-107 | CRHE-DPT0208-058.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | 3.5 | | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7435 | | | | |
| NAL13041-107 | CRHE-DPT0208-058.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7435 | | | | |
| NAL13041-107 | CRHE-DPT0208-058.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7435 | | | | |
| NAL13041-107 | CRHE-DPT0208-058.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 5.0 | | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7435 | | | | |
| NAL13041-107 | CRHE-DPT0208-058.0-20130322 | TRG | 79-01-6 | Trichloroethene | 2.3 | | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7435 | | | | |
| NAL13041-107 | CRHE-DPT0208-058.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7435 | | | | |
| NAL13041-107 | CRHE-DPT0208-058.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7435 | 50 | 100 | | |
| NAL13041-107 | CRHE-DPT0208-058.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7435 | 50 | 94 | | |
| NAL13041-107 | CRHE-DPT0208-058.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7435 | 50 | 94 | | |
| NAL13041-107 | CRHE-DPT0208-058.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7435 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-108 | CRHE-DPT0209-010.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7449 | | | | |
| NAL13041-108 | CRHE-DPT0209-010.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7449 | | | | |
| NAL13041-108 | CRHE-DPT0209-010.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7449 | | | | |
| NAL13041-108 | CRHE-DPT0209-010.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7449 | | | | |
| NAL13041-108 | CRHE-DPT0209-010.0-20130322 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7449 | | | | |
| NAL13041-108 | CRHE-DPT0209-010.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7449 | | | | |
| NAL13041-108 | CRHE-DPT0209-010.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7449 | 50 | 106 | | |
| NAL13041-108 | CRHE-DPT0209-010.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7449 | 50 | 106 | | |
| NAL13041-108 | CRHE-DPT0209-010.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7449 | 50 | 92 | | |
| NAL13041-108 | CRHE-DPT0209-010.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7449 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-109 | CRHE-DPT0209-018.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7450 | | | | |
| NAL13041-109 | CRHE-DPT0209-018.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7450 | | | | |
| NAL13041-109 | CRHE-DPT0209-018.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7450 | | | | |
| NAL13041-109 | CRHE-DPT0209-018.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7450 | | | | |
| NAL13041-109 | CRHE-DPT0209-018.0-20130322 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7450 | | | | |
| NAL13041-109 | CRHE-DPT0209-018.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7450 | | | | |
| NAL13041-109 | CRHE-DPT0209-018.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7450 | 50 | 110 | | |
| NAL13041-109 | CRHE-DPT0209-018.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7450 | 50 | 108 | | |
| NAL13041-109 | CRHE-DPT0209-018.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7450 | 50 | 92 | | |
| NAL13041-109 | CRHE-DPT0209-018.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7450 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-110 | CRHE-DPT0209-023.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7441 | | | | |
| NAL13041-110 | CRHE-DPT0209-023.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7441 | | | | |
| NAL13041-110 | CRHE-DPT0209-023.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7441 | | | | |
| NAL13041-110 | CRHE-DPT0209-023.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7441 | | | | |
| NAL13041-110 | CRHE-DPT0209-023.0-20130322 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7441 | | | | |
| NAL13041-110 | CRHE-DPT0209-023.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7441 | | | | |
| NAL13041-110 | CRHE-DPT0209-023.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7441 | 50 | 92 | | |
| NAL13041-110 | CRHE-DPT0209-023.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7441 | 50 | 86 | | |
| NAL13041-110 | CRHE-DPT0209-023.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7441 | 50 | 92 | | |
| NAL13041-110 | CRHE-DPT0209-023.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7441 | 50 | 90 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-111 | CRHE-DPT0209-028.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7451 | | | | |
| NAL13041-111 | CRHE-DPT0209-028.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7451 | | | | |
| NAL13041-111 | CRHE-DPT0209-028.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7451 | | | | |
| NAL13041-111 | CRHE-DPT0209-028.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7451 | | | | |
| NAL13041-111 | CRHE-DPT0209-028.0-20130322 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7451 | | | | |
| NAL13041-111 | CRHE-DPT0209-028.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7451 | | | | |
| NAL13041-111 | CRHE-DPT0209-028.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7451 | 50 | 110 | | |
| NAL13041-111 | CRHE-DPT0209-028.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7451 | 50 | 106 | | |
| NAL13041-111 | CRHE-DPT0209-028.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7451 | 50 | 92 | | |
| NAL13041-111 | CRHE-DPT0209-028.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7451 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-112 | CRHE-DPT0209-033.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7452 | | | | |
| NAL13041-112 | CRHE-DPT0209-033.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7452 | | | | |
| NAL13041-112 | CRHE-DPT0209-033.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7452 | | | | |
| NAL13041-112 | CRHE-DPT0209-033.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7452 | | | | |
| NAL13041-112 | CRHE-DPT0209-033.0-20130322 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7452 | | | | |
| NAL13041-112 | CRHE-DPT0209-033.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7452 | | | | |
| NAL13041-112 | CRHE-DPT0209-033.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7452 | 50 | 108 | | |
| NAL13041-112 | CRHE-DPT0209-033.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7452 | 50 | 106 | | |
| NAL13041-112 | CRHE-DPT0209-033.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7452 | 50 | 92 | | |
| NAL13041-112 | CRHE-DPT0209-033.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7452 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-113 | CRHE-DPT0209-038.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | 110 | | ug/L | 100 | 13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7453 | | | | |
| NAL13041-113 | CRHE-DPT0209-038.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 100 | 18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7453 | | | | |
| NAL13041-113 | CRHE-DPT0209-038.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 100 | 28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7453 | | | | |
| NAL13041-113 | CRHE-DPT0209-038.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 100 | 20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7453 | | | | |
| NAL13041-113 | CRHE-DPT0209-038.0-20130322 | TRG | 79-01-6 | Trichloroethene | 39 | J | ug/L | 100 | 22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7453 | | | | |
| NAL13041-113 | CRHE-DPT0209-038.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 100 | 16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7453 | | | | |
| NAL13041-113 | CRHE-DPT0209-038.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7453 | 50 | 108 | | |
| NAL13041-113 | CRHE-DPT0209-038.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7453 | 50 | 104 | | |
| NAL13041-113 | CRHE-DPT0209-038.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7453 | 50 | 92 | | |
| NAL13041-113 | CRHE-DPT0209-038.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7453 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-115 | CRHE-DPT0209-058.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | 1.2 | | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7438 | | | | |
| NAL13041-115 | CRHE-DPT0209-058.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7438 | | | | |
| NAL13041-115 | CRHE-DPT0209-058.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7438 | | | | |
| NAL13041-115 | CRHE-DPT0209-058.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7438 | | | | |
| NAL13041-115 | CRHE-DPT0209-058.0-20130322 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7438 | | | | |
| NAL13041-115 | CRHE-DPT0209-058.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7438 | | | | |
| NAL13041-115 | CRHE-DPT0209-058.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7438 | 50 | 96 | | |
| NAL13041-115 | CRHE-DPT0209-058.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7438 | 50 | 90 | | |
| NAL13041-115 | CRHE-DPT0209-058.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7438 | 50 | 94 | | |
| NAL13041-115 | CRHE-DPT0209-058.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7438 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-123 | CRHE-DPT0210-058.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | 1.7 | | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7439 | | | | |
| NAL13041-123 | CRHE-DPT0210-058.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7439 | | | | |
| NAL13041-123 | CRHE-DPT0210-058.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7439 | | | | |
| NAL13041-123 | CRHE-DPT0210-058.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 26 | | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7439 | | | | |
| NAL13041-123 | CRHE-DPT0210-058.0-20130322 | TRG | 79-01-6 | Trichloroethene | 7.3 | | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7439 | | | | |
| NAL13041-123 | CRHE-DPT0210-058.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7439 | | | | |
| NAL13041-123 | CRHE-DPT0210-058.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7439 | 50 | 108 | | |
| NAL13041-123 | CRHE-DPT0210-058.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7439 | 50 | 106 | | |
| NAL13041-123 | CRHE-DPT0210-058.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7439 | 50 | 92 | | |
| NAL13041-123 | CRHE-DPT0210-058.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7439 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032113CCVB | P032113CCVB | TRG | 75-01-4 | Vinyl Chloride | 51 | | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 102 | | |
| P032113CCVB | P032113CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 48 | | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 96 | | |
| P032113CCVB | P032113CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 104 | | |
| P032113CCVB | P032113CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 106 | | |
| P032113CCVB | P032113CCVB | TRG | 79-01-6 | Trichloroethene | 54 | | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 108 | | |
| P032113CCVB | P032113CCVB | TRG | 127-18-4 | Tetrachloroethene | 52 | | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 104 | | |
| P032113CCVB | P032113CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 102 | | |
| P032113CCVB | P032113CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 96 | | |
| P032113CCVB | P032113CCVB | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 98 | | |
| P032113CCVB | P032113CCVB | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7421 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032113MBKC | P032113MBKC | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7426 | | | | |
| P032113MBKC | P032113MBKC | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7426 | | | | |
| P032113MBKC | P032113MBKC | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7426 | | | | |
| P032113MBKC | P032113MBKC | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7426 | | | | |
| P032113MBKC | P032113MBKC | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7426 | | | | |
| P032113MBKC | P032113MBKC | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7426 | | | | |
| P032113MBKC | P032113MBKC | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7426 | 50 | 110 | | |
| P032113MBKC | P032113MBKC | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7426 | 50 | 112 | | |
| P032113MBKC | P032113MBKC | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7426 | 50 | 92 | | |
| P032113MBKC | P032113MBKC | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7426 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032213CCVA | P032213CCVA | TRG | 75-01-4 | Vinyl Chloride | 49 | | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 98 | | |
| P032213CCVA | P032213CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 48 | | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 96 | | |
| P032213CCVA | P032213CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 50 | | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 100 | | |
| P032213CCVA | P032213CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 104 | | |
| P032213CCVA | P032213CCVA | TRG | 79-01-6 | Trichloroethene | 54 | | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 108 | | |
| P032213CCVA | P032213CCVA | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 108 | | |
| P032213CCVA | P032213CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 96 | | |
| P032213CCVA | P032213CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 90 | | |
| P032213CCVA | P032213CCVA | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 96 | | |
| P032213CCVA | P032213CCVA | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032213MBKA | P032213MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | | | | |
| P032213MBKA | P032213MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | | | | |
| P032213MBKA | P032213MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | | | | |
| P032213MBKA | P032213MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | | | | |
| P032213MBKA | P032213MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | | | | |
| P032213MBKA | P032213MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | | | | |
| P032213MBKA | P032213MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | 50 | 106 | | |
| P032213MBKA | P032213MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | 50 | 104 | | |
| P032213MBKA | P032213MBKA | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | 50 | 94 | | |
| P032213MBKA | P032213MBKA | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032213ALCS | P032213ALCS | TRG | 75-01-4 | Vinyl Chloride | 48 | | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7443 | 50 | 96 | | |
| P032213ALCS | P032213ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 49 | | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7443 | 50 | 98 | | |
| P032213ALCS | P032213ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 49 | | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7443 | 50 | 98 | | |
| P032213ALCS | P032213ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 50 | | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7443 | 50 | 100 | | |
| P032213ALCS | P032213ALCS | TRG | 79-01-6 | Trichloroethene | 52 | | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7443 | 50 | 104 | | |
| P032213ALCS | P032213ALCS | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7443 | 50 | 108 | | |
| P032213ALCS | P032213ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7443 | 50 | 96 | | |
| P032213ALCS | P032213ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 46 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7443 | 50 | 92 | | |
| P032213ALCS | P032213ALCS | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7443 | 50 | 98 | | |
| P032213ALCS | P032213ALCS | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7443 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-110MS | CRHE-DPT0209-023.0-20130322MS | TRG | 75-01-4 | Vinyl Chloride | 51 | | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7444 | 50 | 102 | | |
| NAL13041-110MS | CRHE-DPT0209-023.0-20130322MS | TRG | 75-35-4 | 1,1-Dichloroethene | 53 | | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7444 | 50 | 106 | | |
| NAL13041-110MS | CRHE-DPT0209-023.0-20130322MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7444 | 50 | 108 | | |
| NAL13041-110MS | CRHE-DPT0209-023.0-20130322MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 56 | | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7444 | 50 | 112 | | |
| NAL13041-110MS | CRHE-DPT0209-023.0-20130322MS | TRG | 79-01-6 | Trichloroethene | 56 | | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7444 | 50 | 112 | | |
| NAL13041-110MS | CRHE-DPT0209-023.0-20130322MS | TRG | 127-18-4 | Tetrachloroethene | 57 | | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7444 | 50 | 114 | | |
| NAL13041-110MS | CRHE-DPT0209-023.0-20130322MS | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7444 | 50 | 94 | | |
| NAL13041-110MS | CRHE-DPT0209-023.0-20130322MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7444 | 50 | 90 | | |
| NAL13041-110MS | CRHE-DPT0209-023.0-20130322MS | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7444 | 50 | 98 | | |
| NAL13041-110MS | CRHE-DPT0209-023.0-20130322MS | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7444 | 50 | 102 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-110MSD | CRHE-DPT0209-023.0-20130322MSD | TRG | 75-01-4 | Vinyl Chloride | 46 | | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7445 | 50 | 92 | 10 | |
| NAL13041-110MSD | CRHE-DPT0209-023.0-20130322MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 52 | | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7445 | 50 | 104 | 2 | |
| NAL13041-110MSD | CRHE-DPT0209-023.0-20130322MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7445 | 50 | 102 | 6 | |
| NAL13041-110MSD | CRHE-DPT0209-023.0-20130322MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7445 | 50 | 110 | 2 | |
| NAL13041-110MSD | CRHE-DPT0209-023.0-20130322MSD | TRG | 79-01-6 | Trichloroethene | 53 | | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7445 | 50 | 106 | 6 | |
| NAL13041-110MSD | CRHE-DPT0209-023.0-20130322MSD | TRG | 127-18-4 | Tetrachloroethene | 57 | | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7445 | 50 | 114 | 0 | |
| NAL13041-110MSD | CRHE-DPT0209-023.0-20130322MSD | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7445 | 50 | 92 | 2 | |
| NAL13041-110MSD | CRHE-DPT0209-023.0-20130322MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7445 | 50 | 88 | 2 | |
| NAL13041-110MSD | CRHE-DPT0209-023.0-20130322MSD | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7445 | 50 | 96 | 2 | |
| NAL13041-110MSD | CRHE-DPT0209-023.0-20130322MSD | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7445 | 50 | 104 | 2 | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-114 | CRHE-DPT0209-043.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | 460 | | ug/L | 100 | 13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7454 | | | | |
| NAL13041-114 | CRHE-DPT0209-043.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 100 | 18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7454 | | | | |
| NAL13041-114 | CRHE-DPT0209-043.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 100 | 28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7454 | | | | |
| NAL13041-114 | CRHE-DPT0209-043.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 100 | 20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7454 | | | | |
| NAL13041-114 | CRHE-DPT0209-043.0-20130322 | TRG | 79-01-6 | Trichloroethene | 36 | I | ug/L | 100 | 22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7454 | | | | |
| NAL13041-114 | CRHE-DPT0209-043.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 100 | 16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7454 | | | | |
| NAL13041-114 | CRHE-DPT0209-043.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7454 | 50 | 108 | | |
| NAL13041-114 | CRHE-DPT0209-043.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7454 | 50 | 106 | | |
| NAL13041-114 | CRHE-DPT0209-043.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7454 | 50 | 92 | | |
| NAL13041-114 | CRHE-DPT0209-043.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7454 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-116 | CRHE-DPT0210-010.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7455 | | | | |
| NAL13041-116 | CRHE-DPT0210-010.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7455 | | | | |
| NAL13041-116 | CRHE-DPT0210-010.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7455 | | | | |
| NAL13041-116 | CRHE-DPT0210-010.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7455 | | | | |
| NAL13041-116 | CRHE-DPT0210-010.0-20130322 | TRG | 79-01-6 | Trichloroethene | 0.43 | I | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7455 | | | | |
| NAL13041-116 | CRHE-DPT0210-010.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7455 | | | | |
| NAL13041-116 | CRHE-DPT0210-010.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7455 | 50 | 110 | | |
| NAL13041-116 | CRHE-DPT0210-010.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7455 | 50 | 108 | | |
| NAL13041-116 | CRHE-DPT0210-010.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7455 | 50 | 92 | | |
| NAL13041-116 | CRHE-DPT0210-010.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7455 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-117 | CRHE-DPT0210-018.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7456 | | | | |
| NAL13041-117 | CRHE-DPT0210-018.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7456 | | | | |
| NAL13041-117 | CRHE-DPT0210-018.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7456 | | | | |
| NAL13041-117 | CRHE-DPT0210-018.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7456 | | | | |
| NAL13041-117 | CRHE-DPT0210-018.0-20130322 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7456 | | | | |
| NAL13041-117 | CRHE-DPT0210-018.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7456 | | | | |
| NAL13041-117 | CRHE-DPT0210-018.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7456 | 50 | 104 | | |
| NAL13041-117 | CRHE-DPT0210-018.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7456 | 50 | 102 | | |
| NAL13041-117 | CRHE-DPT0210-018.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7456 | 50 | 92 | | |
| NAL13041-117 | CRHE-DPT0210-018.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7456 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-118 | CRHE-DPT0210-023.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | 1.0 | | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7457 | | | | |
| NAL13041-118 | CRHE-DPT0210-023.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7457 | | | | |
| NAL13041-118 | CRHE-DPT0210-023.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7457 | | | | |
| NAL13041-118 | CRHE-DPT0210-023.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 4.5 | | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7457 | | | | |
| NAL13041-118 | CRHE-DPT0210-023.0-20130322 | TRG | 79-01-6 | Trichloroethene | 0.35 | I | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7457 | | | | |
| NAL13041-118 | CRHE-DPT0210-023.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7457 | | | | |
| NAL13041-118 | CRHE-DPT0210-023.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7457 | 50 | 108 | | |
| NAL13041-118 | CRHE-DPT0210-023.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7457 | 50 | 104 | | |
| NAL13041-118 | CRHE-DPT0210-023.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7457 | 50 | 90 | | |
| NAL13041-118 | CRHE-DPT0210-023.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/22/2013 | 3/22/2013 | 3/22/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7457 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-119 | CRHE-DPT0210-028.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | 0.27 | I | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7458 | | | | |
| NAL13041-119 | CRHE-DPT0210-028.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7458 | | | | |
| NAL13041-119 | CRHE-DPT0210-028.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7458 | | | | |
| NAL13041-119 | CRHE-DPT0210-028.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1.1 | | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7458 | | | | |
| NAL13041-119 | CRHE-DPT0210-028.0-20130322 | TRG | 79-01-6 | Trichloroethene | 4.4 | | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7458 | | | | |
| NAL13041-119 | CRHE-DPT0210-028.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7458 | | | | |
| NAL13041-119 | CRHE-DPT0210-028.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7458 | 50 | 110 | | |
| NAL13041-119 | CRHE-DPT0210-028.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7458 | 50 | 110 | | |
| NAL13041-119 | CRHE-DPT0210-028.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7458 | 50 | 90 | | |
| NAL13041-119 | CRHE-DPT0210-028.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7458 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-120 | CRHE-DPT0210-033.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | 130 | | ug/L | 50 | 6.5 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7459 | | | | |
| NAL13041-120 | CRHE-DPT0210-033.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7459 | | | | |
| NAL13041-120 | CRHE-DPT0210-033.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 60 | | ug/L | 50 | 14 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7459 | | | | |
| NAL13041-120 | CRHE-DPT0210-033.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 160 | | ug/L | 50 | 10 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7459 | | | | |
| NAL13041-120 | CRHE-DPT0210-033.0-20130322 | TRG | 79-01-6 | Trichloroethene | 56 | | ug/L | 50 | 11 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7459 | | | | |
| NAL13041-120 | CRHE-DPT0210-033.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7459 | | | | |
| NAL13041-120 | CRHE-DPT0210-033.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7459 | 50 | 110 | | |
| NAL13041-120 | CRHE-DPT0210-033.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7459 | 50 | 110 | | |
| NAL13041-120 | CRHE-DPT0210-033.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7459 | 50 | 90 | | |
| NAL13041-120 | CRHE-DPT0210-033.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7459 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-121 | CRHE-DPT0210-038.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | 6200 | | ug/L | 50 | 6.5 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7460 | | | | |
| NAL13041-121 | CRHE-DPT0210-038.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7460 | | | | |
| NAL13041-121 | CRHE-DPT0210-038.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 300 | | ug/L | 50 | 14 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7460 | | | | |
| NAL13041-121 | CRHE-DPT0210-038.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 21000 | L | ug/L | 50 | 10 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7460 | | | | |
| NAL13041-121 | CRHE-DPT0210-038.0-20130322 | TRG | 79-01-6 | Trichloroethene | 3800 | | ug/L | 50 | 11 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7460 | | | | |
| NAL13041-121 | CRHE-DPT0210-038.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7460 | | | | |
| NAL13041-121 | CRHE-DPT0210-038.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7460 | 50 | 98 | | |
| NAL13041-121 | CRHE-DPT0210-038.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7460 | 50 | 106 | | |
| NAL13041-121 | CRHE-DPT0210-038.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 44 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7460 | 50 | 88 | | |
| NAL13041-121 | CRHE-DPT0210-038.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7460 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-122 | CRHE-DPT0210-043.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | 2100 | | ug/L | 50 | 6.5 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7461 | | | | |
| NAL13041-122 | CRHE-DPT0210-043.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | 58 | | ug/L | 50 | 9.0 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7461 | | | | |
| NAL13041-122 | CRHE-DPT0210-043.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 180 | | ug/L | 50 | 14 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7461 | | | | |
| NAL13041-122 | CRHE-DPT0210-043.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 11000 | L | ug/L | 50 | 10 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7461 | | | | |
| NAL13041-122 | CRHE-DPT0210-043.0-20130322 | TRG | 79-01-6 | Trichloroethene | 3900 | | ug/L | 50 | 11 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7461 | | | | |
| NAL13041-122 | CRHE-DPT0210-043.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7461 | | | | |
| NAL13041-122 | CRHE-DPT0210-043.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 41 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7461 | 50 | 82 | | |
| NAL13041-122 | CRHE-DPT0210-043.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7461 | 50 | 110 | | |
| NAL13041-122 | CRHE-DPT0210-043.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7461 | 50 | 90 | | |
| NAL13041-122 | CRHE-DPT0210-043.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7461 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-124 | CRHE-DPT0211-010.0-20130322 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7462 | | | | |
| NAL13041-124 | CRHE-DPT0211-010.0-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7462 | | | | |
| NAL13041-124 | CRHE-DPT0211-010.0-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7462 | | | | |
| NAL13041-124 | CRHE-DPT0211-010.0-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7462 | | | | |
| NAL13041-124 | CRHE-DPT0211-010.0-20130322 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7462 | | | | |
| NAL13041-124 | CRHE-DPT0211-010.0-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7462 | | | | |
| NAL13041-124 | CRHE-DPT0211-010.0-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7462 | 50 | 110 | | |
| NAL13041-124 | CRHE-DPT0211-010.0-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7462 | 50 | 110 | | |
| NAL13041-124 | CRHE-DPT0211-010.0-20130322 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7462 | 50 | 90 | | |
| NAL13041-124 | CRHE-DPT0211-010.0-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7462 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-125 | CRHE-IDW193860-20130322 | TRG | 75-01-4 | Vinyl Chloride | 55 | | ug/L | 10 | 1.3 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7463 | | | | |
| NAL13041-125 | CRHE-IDW193860-20130322 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7463 | | | | |
| NAL13041-125 | CRHE-IDW193860-20130322 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 10 | 2.8 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7463 | | | | |
| NAL13041-125 | CRHE-IDW193860-20130322 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 180 | | ug/L | 10 | 2.0 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7463 | | | | |
| NAL13041-125 | CRHE-IDW193860-20130322 | TRG | 79-01-6 | Trichloroethene | 3.9 | I | ug/L | 10 | 2.2 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7463 | | | | |
| NAL13041-125 | CRHE-IDW193860-20130322 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7463 | | | | |
| NAL13041-125 | CRHE-IDW193860-20130322 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7463 | 50 | 110 | | |
| NAL13041-125 | CRHE-IDW193860-20130322 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7463 | 50 | 112 | | |
| NAL13041-125 | CRHE-IDW193860-20130322 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7463 | 50 | 90 | | |
| NAL13041-125 | CRHE-IDW193860-20130322 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7463 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-005 | CRHE-DPT0196-033.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | 310 | | ug/L | 250 | 33 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7471 | | | | |
| NAL13041-005 | CRHE-DPT0196-033.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7471 | | | | |
| NAL13041-005 | CRHE-DPT0196-033.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7471 | | | | |
| NAL13041-005 | CRHE-DPT0196-033.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 4300 | | ug/L | 250 | 50 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7471 | | | | |
| NAL13041-005 | CRHE-DPT0196-033.0-20130318 | TRG | 79-01-6 | Trichloroethene | 2000 | | ug/L | 250 | 55 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7471 | | | | |
| NAL13041-005 | CRHE-DPT0196-033.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7471 | | | | |
| NAL13041-005 | CRHE-DPT0196-033.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7471 | 50 | 94 | | |
| NAL13041-005 | CRHE-DPT0196-033.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 46 | | ug/L | | | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7471 | 50 | 92 | | |
| NAL13041-005 | CRHE-DPT0196-033.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7471 | 50 | 92 | | |
| NAL13041-005 | CRHE-DPT0196-033.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7471 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-009 | CRHE-DPT0197-010.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7483 | | | | |
| NAL13041-009 | CRHE-DPT0197-010.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7483 | | | | |
| NAL13041-009 | CRHE-DPT0197-010.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7483 | | | | |
| NAL13041-009 | CRHE-DPT0197-010.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7483 | | | | |
| NAL13041-009 | CRHE-DPT0197-010.0-20130318 | TRG | 79-01-6 | Trichloroethene | 0.56 | I | ug/L | 1.0 | 0.22 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7483 | | | | |
| NAL13041-009 | CRHE-DPT0197-010.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7483 | | | | |
| NAL13041-009 | CRHE-DPT0197-010.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7483 | 50 | 110 | | |
| NAL13041-009 | CRHE-DPT0197-010.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7483 | 50 | 110 | | |
| NAL13041-009 | CRHE-DPT0197-010.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7483 | 50 | 90 | | |
| NAL13041-009 | CRHE-DPT0197-010.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7483 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-010 | CRHE-DPT0197-018.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | 24 | | ug/L | 1.0 | 0.13 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7472 | | | | |
| NAL13041-010 | CRHE-DPT0197-018.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7472 | | | | |
| NAL13041-010 | CRHE-DPT0197-018.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7472 | | | | |
| NAL13041-010 | CRHE-DPT0197-018.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 65 | | ug/L | 1.0 | 0.20 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7472 | | | | |
| NAL13041-010 | CRHE-DPT0197-018.0-20130318 | TRG | 79-01-6 | Trichloroethene | 20 | | ug/L | 1.0 | 0.22 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7472 | | | | |
| NAL13041-010 | CRHE-DPT0197-018.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7472 | | | | |
| NAL13041-010 | CRHE-DPT0197-018.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7472 | 50 | 102 | | |
| NAL13041-010 | CRHE-DPT0197-018.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7472 | 50 | 100 | | |
| NAL13041-010 | CRHE-DPT0197-018.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7472 | 50 | 92 | | |
| NAL13041-010 | CRHE-DPT0197-018.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/18/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7472 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-025 | CRHE-DPT0199-010.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7485 | | | | |
| NAL13041-025 | CRHE-DPT0199-010.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7485 | | | | |
| NAL13041-025 | CRHE-DPT0199-010.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7485 | | | | |
| NAL13041-025 | CRHE-DPT0199-010.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7485 | | | | |
| NAL13041-025 | CRHE-DPT0199-010.0-20130319 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7485 | | | | |
| NAL13041-025 | CRHE-DPT0199-010.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7485 | | | | |
| NAL13041-025 | CRHE-DPT0199-010.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7485 | 50 | 104 | | |
| NAL13041-025 | CRHE-DPT0199-010.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7485 | 50 | 104 | | |
| NAL13041-025 | CRHE-DPT0199-010.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7485 | 50 | 92 | | |
| NAL13041-025 | CRHE-DPT0199-010.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7485 | 50 | 92 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-044 | CRHE-DPT0201-028.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7479 | | | | |
| NAL13041-044 | CRHE-DPT0201-028.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7479 | | | | |
| NAL13041-044 | CRHE-DPT0201-028.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7479 | | | | |
| NAL13041-044 | CRHE-DPT0201-028.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7479 | | | | |
| NAL13041-044 | CRHE-DPT0201-028.0-20130319 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7479 | | | | |
| NAL13041-044 | CRHE-DPT0201-028.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7479 | | | | |
| NAL13041-044 | CRHE-DPT0201-028.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7479 | 50 | 106 | | |
| NAL13041-044 | CRHE-DPT0201-028.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7479 | 50 | 106 | | |
| NAL13041-044 | CRHE-DPT0201-028.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7479 | 50 | 92 | | |
| NAL13041-044 | CRHE-DPT0201-028.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7479 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-053 | CRHE-DPT0202-028.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | 2200 | | ug/L | 100 | 13 | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7480 | | | | |
| NAL13041-053 | CRHE-DPT0202-028.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 100 | 18 | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7480 | | | | |
| NAL13041-053 | CRHE-DPT0202-028.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 1500 | | ug/L | 100 | 28 | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7480 | | | | |
| NAL13041-053 | CRHE-DPT0202-028.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 58000 | L | ug/L | 100 | 20 | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7480 | | | | |
| NAL13041-053 | CRHE-DPT0202-028.0-20130320 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 100 | 22 | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7480 | | | | |
| NAL13041-053 | CRHE-DPT0202-028.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 100 | 16 | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7480 | | | | |
| NAL13041-053 | CRHE-DPT0202-028.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7480 | 50 | 106 | | |
| NAL13041-053 | CRHE-DPT0202-028.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7480 | 50 | 104 | | |
| NAL13041-053 | CRHE-DPT0202-028.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7480 | 50 | 92 | | |
| NAL13041-053 | CRHE-DPT0202-028.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7480 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-054 | CRHE-DPT0202-033.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | 1500 | | ug/L | 50 | 6.5 | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7481 | | | | |
| NAL13041-054 | CRHE-DPT0202-033.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7481 | | | | |
| NAL13041-054 | CRHE-DPT0202-033.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 120 | | ug/L | 50 | 14 | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7481 | | | | |
| NAL13041-054 | CRHE-DPT0202-033.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 6500 | JL | ug/L | 50 | 10 | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7481 | | | | |
| NAL13041-054 | CRHE-DPT0202-033.0-20130320 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 50 | 11 | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7481 | | | | |
| NAL13041-054 | CRHE-DPT0202-033.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7481 | | | | |
| NAL13041-054 | CRHE-DPT0202-033.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7481 | 50 | 110 | | |
| NAL13041-054 | CRHE-DPT0202-033.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7481 | 50 | 108 | | |
| NAL13041-054 | CRHE-DPT0202-033.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7481 | 50 | 92 | | |
| NAL13041-054 | CRHE-DPT0202-033.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/20/2013 | 3/23/2013 | 3/23/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7481 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**Pensacola, FL 32502**
**ATTN: Ms. Jill Johnson**

**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032213CCVA | P032213CCVA | TRG | 75-01-4 | Vinyl Chloride | 49 | | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 98 | | |
| P032213CCVA | P032213CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 48 | | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 96 | | |
| P032213CCVA | P032213CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 50 | | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 100 | | |
| P032213CCVA | P032213CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 104 | | |
| P032213CCVA | P032213CCVA | TRG | 79-01-6 | Trichloroethene | 54 | | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 108 | | |
| P032213CCVA | P032213CCVA | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 108 | | |
| P032213CCVA | P032213CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 96 | | |
| P032213CCVA | P032213CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 90 | | |
| P032213CCVA | P032213CCVA | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 96 | | |
| P032213CCVA | P032213CCVA | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7442 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032213MBKA | P032213MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | | | | |
| P032213MBKA | P032213MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | | | | |
| P032213MBKA | P032213MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | | | | |
| P032213MBKA | P032213MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | | | | |
| P032213MBKA | P032213MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | | | | |
| P032213MBKA | P032213MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | | | | |
| P032213MBKA | P032213MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | 50 | 106 | | |
| P032213MBKA | P032213MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | 50 | 104 | | |
| P032213MBKA | P032213MBKA | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | 50 | 94 | | |
| P032213MBKA | P032213MBKA | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | NA | 3/22/2013 | 3/22/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7446 | 50 | 92 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032213CCVB | P032213CCVB | TRG | 75-01-4 | Vinyl Chloride | 44 | | ug/L | 1.0 | 0.13 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7464 | 50 | 88 | | |
| P032213CCVB | P032213CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 44 | | ug/L | 1.0 | 0.18 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7464 | 50 | 88 | | |
| P032213CCVB | P032213CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 45 | | ug/L | 1.0 | 0.28 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7464 | 50 | 90 | | |
| P032213CCVB | P032213CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.20 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7464 | 50 | 102 | | |
| P032213CCVB | P032213CCVB | TRG | 79-01-6 | Trichloroethene | 57 | | ug/L | 1.0 | 0.22 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7464 | 50 | 114 | | |
| P032213CCVB | P032213CCVB | TRG | 127-18-4 | Tetrachloroethene | 53 | | ug/L | 1.0 | 0.16 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7464 | 50 | 106 | | |
| P032213CCVB | P032213CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7464 | 50 | 98 | | |
| P032213CCVB | P032213CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7464 | 50 | 94 | | |
| P032213CCVB | P032213CCVB | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7464 | 50 | 96 | | |
| P032213CCVB | P032213CCVB | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7464 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032213MBKB | P032213MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7469 | | | | |
| P032213MBKB | P032213MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7469 | | | | |
| P032213MBKB | P032213MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7469 | | | | |
| P032213MBKB | P032213MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7469 | | | | |
| P032213MBKB | P032213MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7469 | | | | |
| P032213MBKB | P032213MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7469 | | | | |
| P032213MBKB | P032213MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7469 | 50 | 112 | | |
| P032213MBKB | P032213MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7469 | 50 | 114 | | |
| P032213MBKB | P032213MBKB | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7469 | 50 | 92 | | |
| P032213MBKB | P032213MBKB | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7469 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032213BLCS | P032213BLCS | TRG | 75-01-4 | Vinyl Chloride | 51 | | ug/L | 1.0 | 0.13 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7465 | 50 | 102 | | |
| P032213BLCS | P032213BLCS | TRG | 75-35-4 | 1,1-Dichloroethene | 54 | | ug/L | 1.0 | 0.18 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7465 | 50 | 108 | | |
| P032213BLCS | P032213BLCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.28 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7465 | 50 | 108 | | |
| P032213BLCS | P032213BLCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.20 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7465 | 50 | 110 | | |
| P032213BLCS | P032213BLCS | TRG | 79-01-6 | Trichloroethene | 56 | | ug/L | 1.0 | 0.22 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7465 | 50 | 112 | | |
| P032213BLCS | P032213BLCS | TRG | 127-18-4 | Tetrachloroethene | 55 | | ug/L | 1.0 | 0.16 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7465 | 50 | 110 | | |
| P032213BLCS | P032213BLCS | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7465 | 50 | 100 | | |
| P032213BLCS | P032213BLCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7465 | 50 | 96 | | |
| P032213BLCS | P032213BLCS | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7465 | 50 | 98 | | |
| P032213BLCS | P032213BLCS | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7465 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032213BLCD | P032213BLCD | TRG | 75-01-4 | Vinyl Chloride | 49 | | ug/L | 1.0 | 0.13 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7466 | 50 | 98 | 4 | |
| P032213BLCD | P032213BLCD | TRG | 75-35-4 | 1,1-Dichloroethene | 54 | | ug/L | 1.0 | 0.18 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7466 | 50 | 108 | 0 | |
| P032213BLCD | P032213BLCD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 56 | | ug/L | 1.0 | 0.28 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7466 | 50 | 112 | 4 | |
| P032213BLCD | P032213BLCD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 57 | | ug/L | 1.0 | 0.20 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7466 | 50 | 114 | 4 | |
| P032213BLCD | P032213BLCD | TRG | 79-01-6 | Trichloroethene | 59 | | ug/L | 1.0 | 0.22 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7466 | 50 | 118 | 5 | |
| P032213BLCD | P032213BLCD | TRG | 127-18-4 | Tetrachloroethene | 57 | | ug/L | 1.0 | 0.16 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7466 | 50 | 114 | 4 | |
| P032213BLCD | P032213BLCD | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7466 | 50 | 100 | 0 | |
| P032213BLCD | P032213BLCD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7466 | 50 | 98 | 2 | |
| P032213BLCD | P032213BLCD | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7466 | 50 | 98 | 0 | |
| P032213BLCD | P032213BLCD | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7466 | 50 | 100 | 0 | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-124MS | CRHE-DPT0211-010.0-20130322MS | TRG | 75-01-4 | Vinyl Chloride | 51 | | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7467 | 50 | 102 | | |
| NAL13041-124MS | CRHE-DPT0211-010.0-20130322MS | TRG | 75-35-4 | 1,1-Dichloroethene | 52 | | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7467 | 50 | 104 | | |
| NAL13041-124MS | CRHE-DPT0211-010.0-20130322MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7467 | 50 | 106 | | |
| NAL13041-124MS | CRHE-DPT0211-010.0-20130322MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7467 | 50 | 108 | | |
| NAL13041-124MS | CRHE-DPT0211-010.0-20130322MS | TRG | 79-01-6 | Trichloroethene | 54 | | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7467 | 50 | 108 | | |
| NAL13041-124MS | CRHE-DPT0211-010.0-20130322MS | TRG | 127-18-4 | Tetrachloroethene | 55 | | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7467 | 50 | 110 | | |
| NAL13041-124MS | CRHE-DPT0211-010.0-20130322MS | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7467 | 50 | 102 | | |
| NAL13041-124MS | CRHE-DPT0211-010.0-20130322MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7467 | 50 | 98 | | |
| NAL13041-124MS | CRHE-DPT0211-010.0-20130322MS | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7467 | 50 | 100 | | |
| NAL13041-124MS | CRHE-DPT0211-010.0-20130322MS | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7467 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-124MSD | CRHE-DPT0211-010.0-20130322MSD | TRG | 75-01-4 | Vinyl Chloride | 48 | | ug/L | 1.0 | 0.13 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7468 | 50 | 96 | 6 | |
| NAL13041-124MSD | CRHE-DPT0211-010.0-20130322MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 52 | | ug/L | 1.0 | 0.18 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7468 | 50 | 104 | 0 | |
| NAL13041-124MSD | CRHE-DPT0211-010.0-20130322MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.28 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7468 | 50 | 102 | 4 | |
| NAL13041-124MSD | CRHE-DPT0211-010.0-20130322MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.20 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7468 | 50 | 104 | 4 | |
| NAL13041-124MSD | CRHE-DPT0211-010.0-20130322MSD | TRG | 79-01-6 | Trichloroethene | 52 | | ug/L | 1.0 | 0.22 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7468 | 50 | 104 | 4 | |
| NAL13041-124MSD | CRHE-DPT0211-010.0-20130322MSD | TRG | 127-18-4 | Tetrachloroethene | 53 | | ug/L | 1.0 | 0.16 | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7468 | 50 | 106 | 4 | |
| NAL13041-124MSD | CRHE-DPT0211-010.0-20130322MSD | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7468 | 50 | 102 | 0 | |
| NAL13041-124MSD | CRHE-DPT0211-010.0-20130322MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7468 | 50 | 94 | 4 | |
| NAL13041-124MSD | CRHE-DPT0211-010.0-20130322MSD | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7468 | 50 | 98 | 2 | |
| NAL13041-124MSD | CRHE-DPT0211-010.0-20130322MSD | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 3/22/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7468 | 50 | 102 | 2 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-014 | CRHE-DPT0197-038.0-20130318 | TRG | 75-01-4 | Vinyl Chloride | 1.1 | | ug/L | 1.0 | 0.13 | 3/18/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7504 | | | | |
| NAL13041-014 | CRHE-DPT0197-038.0-20130318 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/18/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7504 | | | | |
| NAL13041-014 | CRHE-DPT0197-038.0-20130318 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/18/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7504 | | | | |
| NAL13041-014 | CRHE-DPT0197-038.0-20130318 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 0.74 | I | ug/L | 1.0 | 0.20 | 3/18/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7504 | | | | |
| NAL13041-014 | CRHE-DPT0197-038.0-20130318 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/18/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7504 | | | | |
| NAL13041-014 | CRHE-DPT0197-038.0-20130318 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/18/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7504 | | | | |
| NAL13041-014 | CRHE-DPT0197-038.0-20130318 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/18/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7504 | 50 | 108 | | |
| NAL13041-014 | CRHE-DPT0197-038.0-20130318 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/18/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7504 | 50 | 110 | | |
| NAL13041-014 | CRHE-DPT0197-038.0-20130318 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/18/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7504 | 50 | 90 | | |
| NAL13041-014 | CRHE-DPT0197-038.0-20130318 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/18/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7504 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-026 | CRHE-DPT0199-018.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7488 | | | | |
| NAL13041-026 | CRHE-DPT0199-018.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7488 | | | | |
| NAL13041-026 | CRHE-DPT0199-018.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7488 | | | | |
| NAL13041-026 | CRHE-DPT0199-018.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7488 | | | | |
| NAL13041-026 | CRHE-DPT0199-018.0-20130319 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7488 | | | | |
| NAL13041-026 | CRHE-DPT0199-018.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7488 | | | | |
| NAL13041-026 | CRHE-DPT0199-018.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7488 | 50 | 110 | | |
| NAL13041-026 | CRHE-DPT0199-018.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7488 | 50 | 112 | | |
| NAL13041-026 | CRHE-DPT0199-018.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7488 | 50 | 90 | | |
| NAL13041-026 | CRHE-DPT0199-018.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7488 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-027 | CRHE-DPT0199-023.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7489 | | | | |
| NAL13041-027 | CRHE-DPT0199-023.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7489 | | | | |
| NAL13041-027 | CRHE-DPT0199-023.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7489 | | | | |
| NAL13041-027 | CRHE-DPT0199-023.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7489 | | | | |
| NAL13041-027 | CRHE-DPT0199-023.0-20130319 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7489 | | | | |
| NAL13041-027 | CRHE-DPT0199-023.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7489 | | | | |
| NAL13041-027 | CRHE-DPT0199-023.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7489 | 50 | 104 | | |
| NAL13041-027 | CRHE-DPT0199-023.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7489 | 50 | 114 | | |
| NAL13041-027 | CRHE-DPT0199-023.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7489 | 50 | 90 | | |
| NAL13041-027 | CRHE-DPT0199-023.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7489 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-033 | CRHE-DPT0200-010.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | 0.56 | I | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7490 | | | | |
| NAL13041-033 | CRHE-DPT0200-010.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7490 | | | | |
| NAL13041-033 | CRHE-DPT0200-010.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7490 | | | | |
| NAL13041-033 | CRHE-DPT0200-010.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 0.97 | I | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7490 | | | | |
| NAL13041-033 | CRHE-DPT0200-010.0-20130319 | TRG | 79-01-6 | Trichloroethene | 0.40 | I | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7490 | | | | |
| NAL13041-033 | CRHE-DPT0200-010.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7490 | | | | |
| NAL13041-033 | CRHE-DPT0200-010.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7490 | 50 | 92 | | |
| NAL13041-033 | CRHE-DPT0200-010.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7490 | 50 | 114 | | |
| NAL13041-033 | CRHE-DPT0200-010.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7490 | 50 | 90 | | |
| NAL13041-033 | CRHE-DPT0200-010.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7490 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-034 | CRHE-DPT0200-018.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | 4.6 | I | ug/L | 10 | 1.3 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7491 | | | | |
| NAL13041-034 | CRHE-DPT0200-018.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7491 | | | | |
| NAL13041-034 | CRHE-DPT0200-018.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 4.1 | I | ug/L | 10 | 2.8 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7491 | | | | |
| NAL13041-034 | CRHE-DPT0200-018.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 10 | 2.0 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7491 | | | | |
| NAL13041-034 | CRHE-DPT0200-018.0-20130319 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 10 | 2.2 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7491 | | | | |
| NAL13041-034 | CRHE-DPT0200-018.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7491 | | | | |
| NAL13041-034 | CRHE-DPT0200-018.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7491 | 50 | 114 | | |
| NAL13041-034 | CRHE-DPT0200-018.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7491 | 50 | 118 | | |
| NAL13041-034 | CRHE-DPT0200-018.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7491 | 50 | 92 | | |
| NAL13041-034 | CRHE-DPT0200-018.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7491 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-041 | CRHE-DPT0201-010.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7492 | | | | |
| NAL13041-041 | CRHE-DPT0201-010.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7492 | | | | |
| NAL13041-041 | CRHE-DPT0201-010.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7492 | | | | |
| NAL13041-041 | CRHE-DPT0201-010.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7492 | | | | |
| NAL13041-041 | CRHE-DPT0201-010.0-20130319 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7492 | | | | |
| NAL13041-041 | CRHE-DPT0201-010.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7492 | | | | |
| NAL13041-041 | CRHE-DPT0201-010.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7492 | 50 | 112 | | |
| NAL13041-041 | CRHE-DPT0201-010.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7492 | 50 | 112 | | |
| NAL13041-041 | CRHE-DPT0201-010.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7492 | 50 | 90 | | |
| NAL13041-041 | CRHE-DPT0201-010.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/19/2013 | 3/23/2013 | 3/23/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7492 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-045 | CRHE-DPT0201-033.0-20130319 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/19/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7503 | | | | |
| NAL13041-045 | CRHE-DPT0201-033.0-20130319 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/19/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7503 | | | | |
| NAL13041-045 | CRHE-DPT0201-033.0-20130319 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/19/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7503 | | | | |
| NAL13041-045 | CRHE-DPT0201-033.0-20130319 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 0.64 | I | ug/L | 1.0 | 0.20 | 3/19/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7503 | | | | |
| NAL13041-045 | CRHE-DPT0201-033.0-20130319 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/19/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7503 | | | | |
| NAL13041-045 | CRHE-DPT0201-033.0-20130319 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/19/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7503 | | | | |
| NAL13041-045 | CRHE-DPT0201-033.0-20130319 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/19/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7503 | 50 | 104 | | |
| NAL13041-045 | CRHE-DPT0201-033.0-20130319 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/19/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7503 | 50 | 104 | | |
| NAL13041-045 | CRHE-DPT0201-033.0-20130319 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/19/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7503 | 50 | 92 | | |
| NAL13041-045 | CRHE-DPT0201-033.0-20130319 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/19/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7503 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-050 | CRHE-DPT0202-010.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7493 | | | | |
| NAL13041-050 | CRHE-DPT0202-010.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7493 | | | | |
| NAL13041-050 | CRHE-DPT0202-010.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7493 | | | | |
| NAL13041-050 | CRHE-DPT0202-010.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7493 | | | | |
| NAL13041-050 | CRHE-DPT0202-010.0-20130320 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7493 | | | | |
| NAL13041-050 | CRHE-DPT0202-010.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7493 | | | | |
| NAL13041-050 | CRHE-DPT0202-010.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7493 | 50 | 110 | | |
| NAL13041-050 | CRHE-DPT0202-010.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7493 | 50 | 112 | | |
| NAL13041-050 | CRHE-DPT0202-010.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7493 | 50 | 90 | | |
| NAL13041-050 | CRHE-DPT0202-010.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7493 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-051 | CRHE-DPT0202-018.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 50 | 6.5 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7494 | | | | |
| NAL13041-051 | CRHE-DPT0202-018.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7494 | | | | |
| NAL13041-051 | CRHE-DPT0202-018.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 50 | 14 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7494 | | | | |
| NAL13041-051 | CRHE-DPT0202-018.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 50 | 10 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7494 | | | | |
| NAL13041-051 | CRHE-DPT0202-018.0-20130320 | TRG | 79-01-6 | Trichloroethene | 37 | I | ug/L | 50 | 11 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7494 | | | | |
| NAL13041-051 | CRHE-DPT0202-018.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7494 | | | | |
| NAL13041-051 | CRHE-DPT0202-018.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7494 | 50 | 110 | | |
| NAL13041-051 | CRHE-DPT0202-018.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7494 | 50 | 112 | | |
| NAL13041-051 | CRHE-DPT0202-018.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7494 | 50 | 90 | | |
| NAL13041-051 | CRHE-DPT0202-018.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7494 | 50 | 96 | | |

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**Project #: NAL13-041**
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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-057 | CRHE-DPT0202-058.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | 14 | | ug/L | 1.0 | 0.13 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7495 | | | | |
| NAL13041-057 | CRHE-DPT0202-058.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7495 | | | | |
| NAL13041-057 | CRHE-DPT0202-058.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 7.2 | | ug/L | 1.0 | 0.28 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7495 | | | | |
| NAL13041-057 | CRHE-DPT0202-058.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 330 | L | ug/L | 1.0 | 0.20 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7495 | | | | |
| NAL13041-057 | CRHE-DPT0202-058.0-20130320 | TRG | 79-01-6 | Trichloroethene | 10 | | ug/L | 1.0 | 0.22 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7495 | | | | |
| NAL13041-057 | CRHE-DPT0202-058.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7495 | | | | |
| NAL13041-057 | CRHE-DPT0202-058.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7495 | 50 | 114 | | |
| NAL13041-057 | CRHE-DPT0202-058.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7495 | 50 | 114 | | |
| NAL13041-057 | CRHE-DPT0202-058.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7495 | 50 | 92 | | |
| NAL13041-057 | CRHE-DPT0202-058.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7495 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-058 | CRHE-DPT0203-010.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7496 | | | | |
| NAL13041-058 | CRHE-DPT0203-010.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7496 | | | | |
| NAL13041-058 | CRHE-DPT0203-010.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7496 | | | | |
| NAL13041-058 | CRHE-DPT0203-010.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7496 | | | | |
| NAL13041-058 | CRHE-DPT0203-010.0-20130320 | TRG | 79-01-6 | Trichloroethene | 0.81 | I | ug/L | 1.0 | 0.22 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7496 | | | | |
| NAL13041-058 | CRHE-DPT0203-010.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7496 | | | | |
| NAL13041-058 | CRHE-DPT0203-010.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7496 | 50 | 110 | | |
| NAL13041-058 | CRHE-DPT0203-010.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7496 | 50 | 110 | | |
| NAL13041-058 | CRHE-DPT0203-010.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7496 | 50 | 92 | | |
| NAL13041-058 | CRHE-DPT0203-010.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7496 | 50 | 104 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-059 | CRHE-DPT0203-018.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7497 | | | | |
| NAL13041-059 | CRHE-DPT0203-018.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7497 | | | | |
| NAL13041-059 | CRHE-DPT0203-018.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7497 | | | | |
| NAL13041-059 | CRHE-DPT0203-018.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7497 | | | | |
| NAL13041-059 | CRHE-DPT0203-018.0-20130320 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7497 | | | | |
| NAL13041-059 | CRHE-DPT0203-018.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7497 | | | | |
| NAL13041-059 | CRHE-DPT0203-018.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7497 | 50 | 110 | | |
| NAL13041-059 | CRHE-DPT0203-018.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7497 | 50 | 112 | | |
| NAL13041-059 | CRHE-DPT0203-018.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7497 | 50 | 92 | | |
| NAL13041-059 | CRHE-DPT0203-018.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7497 | 50 | 100 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-060 | CRHE-DPT0203-023.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7498 | | | | |
| NAL13041-060 | CRHE-DPT0203-023.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7498 | | | | |
| NAL13041-060 | CRHE-DPT0203-023.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7498 | | | | |
| NAL13041-060 | CRHE-DPT0203-023.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 2.1 | | ug/L | 1.0 | 0.20 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7498 | | | | |
| NAL13041-060 | CRHE-DPT0203-023.0-20130320 | TRG | 79-01-6 | Trichloroethene | 0.68 | I | ug/L | 1.0 | 0.22 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7498 | | | | |
| NAL13041-060 | CRHE-DPT0203-023.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7498 | | | | |
| NAL13041-060 | CRHE-DPT0203-023.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7498 | 50 | 116 | | |
| NAL13041-060 | CRHE-DPT0203-023.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7498 | 50 | 120 | | |
| NAL13041-060 | CRHE-DPT0203-023.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7498 | 50 | 90 | | |
| NAL13041-060 | CRHE-DPT0203-023.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7498 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-062 | CRHE-DPT0203-033.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7505 | | | | |
| NAL13041-062 | CRHE-DPT0203-033.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7505 | | | | |
| NAL13041-062 | CRHE-DPT0203-033.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7505 | | | | |
| NAL13041-062 | CRHE-DPT0203-033.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1.3 | | ug/L | 1.0 | 0.20 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7505 | | | | |
| NAL13041-062 | CRHE-DPT0203-033.0-20130320 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7505 | | | | |
| NAL13041-062 | CRHE-DPT0203-033.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7505 | | | | |
| NAL13041-062 | CRHE-DPT0203-033.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7505 | 50 | 108 | | |
| NAL13041-062 | CRHE-DPT0203-033.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7505 | 50 | 110 | | |
| NAL13041-062 | CRHE-DPT0203-033.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7505 | 50 | 92 | | |
| NAL13041-062 | CRHE-DPT0203-033.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7505 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-065 | CRHE-DPT0203-058.0-20130320 | TRG | 75-01-4 | Vinyl Chloride | 2.7 | | ug/L | 1.0 | 0.13 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7506 | | | | |
| NAL13041-065 | CRHE-DPT0203-058.0-20130320 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7506 | | | | |
| NAL13041-065 | CRHE-DPT0203-058.0-20130320 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7506 | | | | |
| NAL13041-065 | CRHE-DPT0203-058.0-20130320 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 21 | | ug/L | 1.0 | 0.20 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7506 | | | | |
| NAL13041-065 | CRHE-DPT0203-058.0-20130320 | TRG | 79-01-6 | Trichloroethene | 5.5 | | ug/L | 1.0 | 0.22 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7506 | | | | |
| NAL13041-065 | CRHE-DPT0203-058.0-20130320 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7506 | | | | |
| NAL13041-065 | CRHE-DPT0203-058.0-20130320 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7506 | 50 | 110 | | |
| NAL13041-065 | CRHE-DPT0203-058.0-20130320 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7506 | 50 | 112 | | |
| NAL13041-065 | CRHE-DPT0203-058.0-20130320 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7506 | 50 | 90 | | |
| NAL13041-065 | CRHE-DPT0203-058.0-20130320 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7506 | 50 | 98 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-079 | CRHE-DPT0205-038.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 0.55 | I | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7508 | | | | |
| NAL13041-079 | CRHE-DPT0205-038.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7508 | | | | |
| NAL13041-079 | CRHE-DPT0205-038.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7508 | | | | |
| NAL13041-079 | CRHE-DPT0205-038.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7508 | | | | |
| NAL13041-079 | CRHE-DPT0205-038.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7508 | | | | |
| NAL13041-079 | CRHE-DPT0205-038.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7508 | | | | |
| NAL13041-079 | CRHE-DPT0205-038.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7508 | 50 | 102 | | |
| NAL13041-079 | CRHE-DPT0205-038.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7508 | 50 | 102 | | |
| NAL13041-079 | CRHE-DPT0205-038.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7508 | 50 | 92 | | |
| NAL13041-079 | CRHE-DPT0205-038.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7508 | 50 | 100 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-087 | CRHE-DPT0206-038.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7509 | | | | |
| NAL13041-087 | CRHE-DPT0206-038.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7509 | | | | |
| NAL13041-087 | CRHE-DPT0206-038.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7509 | | | | |
| NAL13041-087 | CRHE-DPT0206-038.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7509 | | | | |
| NAL13041-087 | CRHE-DPT0206-038.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7509 | | | | |
| NAL13041-087 | CRHE-DPT0206-038.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7509 | | | | |
| NAL13041-087 | CRHE-DPT0206-038.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7509 | 50 | 110 | | |
| NAL13041-087 | CRHE-DPT0206-038.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7509 | 50 | 110 | | |
| NAL13041-087 | CRHE-DPT0206-038.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7509 | 50 | 92 | | |
| NAL13041-087 | CRHE-DPT0206-038.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7509 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-088 | CRHE-DPT0206-043.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7510 | | | | |
| NAL13041-088 | CRHE-DPT0206-043.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7510 | | | | |
| NAL13041-088 | CRHE-DPT0206-043.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7510 | | | | |
| NAL13041-088 | CRHE-DPT0206-043.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7510 | | | | |
| NAL13041-088 | CRHE-DPT0206-043.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7510 | | | | |
| NAL13041-088 | CRHE-DPT0206-043.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7510 | | | | |
| NAL13041-088 | CRHE-DPT0206-043.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7510 | 50 | 112 | | |
| NAL13041-088 | CRHE-DPT0206-043.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7510 | 50 | 116 | | |
| NAL13041-088 | CRHE-DPT0206-043.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7510 | 50 | 90 | | |
| NAL13041-088 | CRHE-DPT0206-043.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7510 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-091 | CRHE-DPT0207-018.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 1100 | | ug/L | 250 | 33 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7507 | | | | |
| NAL13041-091 | CRHE-DPT0207-018.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7507 | | | | |
| NAL13041-091 | CRHE-DPT0207-018.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7507 | | | | |
| NAL13041-091 | CRHE-DPT0207-018.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 10000 | | ug/L | 250 | 50 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7507 | | | | |
| NAL13041-091 | CRHE-DPT0207-018.0-20130321 | TRG | 79-01-6 | Trichloroethene | 760 | | ug/L | 250 | 55 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7507 | | | | |
| NAL13041-091 | CRHE-DPT0207-018.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7507 | | | | |
| NAL13041-091 | CRHE-DPT0207-018.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7507 | 50 | 102 | | |
| NAL13041-091 | CRHE-DPT0207-018.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7507 | 50 | 104 | | |
| NAL13041-091 | CRHE-DPT0207-018.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7507 | 50 | 90 | | |
| NAL13041-091 | CRHE-DPT0207-018.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7507 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-101 | CRHE-DPT0208-023.0-20130321 | TRG | 75-01-4 | Vinyl Chloride | 2400 | | ug/L | 50 | 6.5 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7511 | | | | |
| NAL13041-101 | CRHE-DPT0208-023.0-20130321 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7511 | | | | |
| NAL13041-101 | CRHE-DPT0208-023.0-20130321 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 50 | 14 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7511 | | | | |
| NAL13041-101 | CRHE-DPT0208-023.0-20130321 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 50 | 10 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7511 | | | | |
| NAL13041-101 | CRHE-DPT0208-023.0-20130321 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 50 | 11 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7511 | | | | |
| NAL13041-101 | CRHE-DPT0208-023.0-20130321 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7511 | | | | |
| NAL13041-101 | CRHE-DPT0208-023.0-20130321 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7511 | 50 | 114 | | |
| NAL13041-101 | CRHE-DPT0208-023.0-20130321 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7511 | 50 | 116 | | |
| NAL13041-101 | CRHE-DPT0208-023.0-20130321 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7511 | 50 | 92 | | |
| NAL13041-101 | CRHE-DPT0208-023.0-20130321 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/21/2013 | 3/24/2013 | 3/24/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7511 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**Pensacola, FL 32502**
**ATTN: Ms. Jill Johnson**

**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032313CCVA | P032313CCVA | TRG | 75-01-4 | Vinyl Chloride | 46 | | ug/L | 1.0 | 0.13 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7475 | 50 | 92 | | |
| P032313CCVA | P032313CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 53 | | ug/L | 1.0 | 0.18 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7475 | 50 | 106 | | |
| P032313CCVA | P032313CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.28 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7475 | 50 | 106 | | |
| P032313CCVA | P032313CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.20 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7475 | 50 | 108 | | |
| P032313CCVA | P032313CCVA | TRG | 79-01-6 | Trichloroethene | 55 | | ug/L | 1.0 | 0.22 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7475 | 50 | 110 | | |
| P032313CCVA | P032313CCVA | TRG | 127-18-4 | Tetrachloroethene | 56 | | ug/L | 1.0 | 0.16 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7475 | 50 | 112 | | |
| P032313CCVA | P032313CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7475 | 50 | 96 | | |
| P032313CCVA | P032313CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 46 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7475 | 50 | 92 | | |
| P032313CCVA | P032313CCVA | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7475 | 50 | 98 | | |
| P032313CCVA | P032313CCVA | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7475 | 50 | 100 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032313MBKA | P032313MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7477 | | | | |
| P032313MBKA | P032313MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7477 | | | | |
| P032313MBKA | P032313MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7477 | | | | |
| P032313MBKA | P032313MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7477 | | | | |
| P032313MBKA | P032313MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7477 | | | | |
| P032313MBKA | P032313MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7477 | | | | |
| P032313MBKA | P032313MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7477 | 50 | 106 | | |
| P032313MBKA | P032313MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7477 | 50 | 106 | | |
| P032313MBKA | P032313MBKA | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7477 | 50 | 92 | | |
| P032313MBKA | P032313MBKA | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 3/23/2013 | 3/23/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7477 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032413CCVA | P032413CCVA | TRG | 75-01-4 | Vinyl Chloride | 47 | | ug/L | 1.0 | 0.13 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7501 | 50 | 94 | | |
| P032413CCVA | P032413CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 54 | | ug/L | 1.0 | 0.18 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7501 | 50 | 108 | | |
| P032413CCVA | P032413CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.28 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7501 | 50 | 108 | | |
| P032413CCVA | P032413CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.20 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7501 | 50 | 108 | | |
| P032413CCVA | P032413CCVA | TRG | 79-01-6 | Trichloroethene | 53 | | ug/L | 1.0 | 0.22 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7501 | 50 | 106 | | |
| P032413CCVA | P032413CCVA | TRG | 127-18-4 | Tetrachloroethene | 53 | | ug/L | 1.0 | 0.16 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7501 | 50 | 106 | | |
| P032413CCVA | P032413CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7501 | 50 | 98 | | |
| P032413CCVA | P032413CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7501 | 50 | 100 | | |
| P032413CCVA | P032413CCVA | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7501 | 50 | 96 | | |
| P032413CCVA | P032413CCVA | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | NA | 5.0 | NA | SW8260B | NALP7501 | 50 | 104 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032413MBKA | P032413MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7502 | | | | |
| P032413MBKA | P032413MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7502 | | | | |
| P032413MBKA | P032413MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7502 | | | | |
| P032413MBKA | P032413MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7502 | | | | |
| P032413MBKA | P032413MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7502 | | | | |
| P032413MBKA | P032413MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7502 | | | | |
| P032413MBKA | P032413MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7502 | 50 | 106 | | |
| P032413MBKA | P032413MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7502 | 50 | 110 | | |
| P032413MBKA | P032413MBKA | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7502 | 50 | 92 | | |
| P032413MBKA | P032413MBKA | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7502 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032313ALCS | P032313ALCS | TRG | 75-01-4 | Vinyl Chloride | 56 | | ug/L | 1.0 | 0.13 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7515 | 50 | 112 | | |
| P032313ALCS | P032313ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 73 | | ug/L | 1.0 | 0.18 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7515 | 50 | 146 | | |
| P032313ALCS | P032313ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 65 | | ug/L | 1.0 | 0.28 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7515 | 50 | 130 | | |
| P032313ALCS | P032313ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 64 | | ug/L | 1.0 | 0.20 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7515 | 50 | 128 | | |
| P032313ALCS | P032313ALCS | TRG | 79-01-6 | Trichloroethene | 65 | | ug/L | 1.0 | 0.22 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7515 | 50 | 130 | | |
| P032313ALCS | P032313ALCS | TRG | 127-18-4 | Tetrachloroethene | 60 | | ug/L | 1.0 | 0.16 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7515 | 50 | 120 | | |
| P032313ALCS | P032313ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7515 | 50 | 104 | | |
| P032313ALCS | P032313ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7515 | 50 | 108 | | |
| P032313ALCS | P032313ALCS | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7515 | 50 | 98 | | |
| P032313ALCS | P032313ALCS | SUR | 460-00-4 | Bromofluorobenzene | 54 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7515 | 50 | 108 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032313ALCD | P032313ALCD | TRG | 75-01-4 | Vinyl Chloride | 51 | | ug/L | 1.0 | 0.13 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7516 | 50 | 102 | 9 | |
| P032313ALCD | P032313ALCD | TRG | 75-35-4 | 1,1-Dichloroethene | 66 | | ug/L | 1.0 | 0.18 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7516 | 50 | 132 | 10 | |
| P032313ALCD | P032313ALCD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 58 | | ug/L | 1.0 | 0.28 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7516 | 50 | 116 | 11 | |
| P032313ALCD | P032313ALCD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 58 | | ug/L | 1.0 | 0.20 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7516 | 50 | 116 | 10 | |
| P032313ALCD | P032313ALCD | TRG | 79-01-6 | Trichloroethene | 62 | | ug/L | 1.0 | 0.22 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7516 | 50 | 124 | 5 | |
| P032313ALCD | P032313ALCD | TRG | 127-18-4 | Tetrachloroethene | 57 | | ug/L | 1.0 | 0.16 | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7516 | 50 | 114 | 5 | |
| P032313ALCD | P032313ALCD | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7516 | 50 | 102 | 2 | |
| P032313ALCD | P032313ALCD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7516 | 50 | 102 | 6 | |
| P032313ALCD | P032313ALCD | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7516 | 50 | 98 | 0 | |
| P032313ALCD | P032313ALCD | SUR | 460-00-4 | Bromofluorobenzene | 55 | | ug/L | | | NA | 3/24/2013 | 3/24/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7516 | 50 | 110 | 2 | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | TRG | 75-01-4 | Vinyl Chloride | 43 | | ug/L | 1.0 | 0.13 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7513 | 50 | 81 | | 2.7 |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | TRG | 75-35-4 | 1,1-Dichloroethene | 56 | | ug/L | 1.0 | 0.18 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7513 | 50 | 112 | | |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.28 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7513 | 50 | 106 | | |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 83 | | ug/L | 1.0 | 0.20 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7513 | 50 | 124 | | 21 |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | TRG | 79-01-6 | Trichloroethene | 61 | | ug/L | 1.0 | 0.22 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7513 | 50 | 111 | | 5.5 |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | TRG | 127-18-4 | Tetrachloroethene | 46 | | ug/L | 1.0 | 0.16 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7513 | 50 | 92 | | |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7513 | 50 | 116 | | |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 68 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7513 | 50 | 136 | | |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7513 | 50 | 90 | | |
| NAL13041-065MS | CRHE-DPT0203-058.0-20130320MS | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7513 | 50 | 102 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | TRG | 75-01-4 | Vinyl Chloride | 52 | | ug/L | 1.0 | 0.13 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7514 | 50 | 99 | 19 | 2.7 |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 63 | | ug/L | 1.0 | 0.18 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7514 | 50 | 126 | 12 | |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 56 | | ug/L | 1.0 | 0.28 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7514 | 50 | 112 | 6 | |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 74 | | ug/L | 1.0 | 0.20 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7514 | 50 | 106 | 11 | 21 |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | TRG | 79-01-6 | Trichloroethene | 61 | | ug/L | 1.0 | 0.22 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7514 | 50 | 111 | 0 | 5.5 |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7514 | 50 | 108 | 16 | |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7514 | 50 | 102 | 13 | |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7514 | 50 | 104 | 27 | |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7514 | 50 | 98 | 9 | |
| NAL13041-065MSD | CRHE-DPT0203-058.0-20130320MSD | SUR | 460-00-4 | Bromofluorobenzene | 53 | | ug/L | | | 3/20/2013 | 3/24/2013 | 3/24/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7514 | 50 | 106 | 4 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-126 | CRHE-DPT0211-018.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7529 | | | | |
| NAL13041-126 | CRHE-DPT0211-018.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7529 | | | | |
| NAL13041-126 | CRHE-DPT0211-018.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7529 | | | | |
| NAL13041-126 | CRHE-DPT0211-018.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7529 | | | | |
| NAL13041-126 | CRHE-DPT0211-018.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7529 | | | | |
| NAL13041-126 | CRHE-DPT0211-018.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7529 | | | | |
| NAL13041-126 | CRHE-DPT0211-018.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7529 | 50 | 106 | | |
| NAL13041-126 | CRHE-DPT0211-018.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7529 | 50 | 110 | | |
| NAL13041-126 | CRHE-DPT0211-018.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7529 | 50 | 100 | | |
| NAL13041-126 | CRHE-DPT0211-018.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7529 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-127 | CRHE-DPT0211-023.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7528 | | | | |
| NAL13041-127 | CRHE-DPT0211-023.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7528 | | | | |
| NAL13041-127 | CRHE-DPT0211-023.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7528 | | | | |
| NAL13041-127 | CRHE-DPT0211-023.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7528 | | | | |
| NAL13041-127 | CRHE-DPT0211-023.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7528 | | | | |
| NAL13041-127 | CRHE-DPT0211-023.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7528 | | | | |
| NAL13041-127 | CRHE-DPT0211-023.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7528 | 50 | 114 | | |
| NAL13041-127 | CRHE-DPT0211-023.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7528 | 50 | 112 | | |
| NAL13041-127 | CRHE-DPT0211-023.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7528 | 50 | 94 | | |
| NAL13041-127 | CRHE-DPT0211-023.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7528 | 50 | 92 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-128 | CRHE-DPT0211-028.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7527 | | | | |
| NAL13041-128 | CRHE-DPT0211-028.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7527 | | | | |
| NAL13041-128 | CRHE-DPT0211-028.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7527 | | | | |
| NAL13041-128 | CRHE-DPT0211-028.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7527 | | | | |
| NAL13041-128 | CRHE-DPT0211-028.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7527 | | | | |
| NAL13041-128 | CRHE-DPT0211-028.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7527 | | | | |
| NAL13041-128 | CRHE-DPT0211-028.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7527 | 50 | 108 | | |
| NAL13041-128 | CRHE-DPT0211-028.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7527 | 50 | 108 | | |
| NAL13041-128 | CRHE-DPT0211-028.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7527 | 50 | 94 | | |
| NAL13041-128 | CRHE-DPT0211-028.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7527 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-129 | CRHE-DPT0211-033.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7530 | | | | |
| NAL13041-129 | CRHE-DPT0211-033.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7530 | | | | |
| NAL13041-129 | CRHE-DPT0211-033.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7530 | | | | |
| NAL13041-129 | CRHE-DPT0211-033.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7530 | | | | |
| NAL13041-129 | CRHE-DPT0211-033.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7530 | | | | |
| NAL13041-129 | CRHE-DPT0211-033.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7530 | | | | |
| NAL13041-129 | CRHE-DPT0211-033.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7530 | 50 | 102 | | |
| NAL13041-129 | CRHE-DPT0211-033.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7530 | 50 | 98 | | |
| NAL13041-129 | CRHE-DPT0211-033.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7530 | 50 | 96 | | |
| NAL13041-129 | CRHE-DPT0211-033.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7530 | 50 | 92 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-130 | CRHE-DPT0211-038.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 2000 | | ug/L | 500 | 65 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7525 | | | | |
| NAL13041-130 | CRHE-DPT0211-038.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 500 | 90 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7525 | | | | |
| NAL13041-130 | CRHE-DPT0211-038.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 500 | 140 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7525 | | | | |
| NAL13041-130 | CRHE-DPT0211-038.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 3800 | | ug/L | 500 | 100 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7525 | | | | |
| NAL13041-130 | CRHE-DPT0211-038.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 500 | 110 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7525 | | | | |
| NAL13041-130 | CRHE-DPT0211-038.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 500 | 80 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7525 | | | | |
| NAL13041-130 | CRHE-DPT0211-038.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7525 | 50 | 108 | | |
| NAL13041-130 | CRHE-DPT0211-038.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7525 | 50 | 108 | | |
| NAL13041-130 | CRHE-DPT0211-038.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7525 | 50 | 92 | | |
| NAL13041-130 | CRHE-DPT0211-038.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 500 | 5.0 | 5.0 | NA | SW8260B | NALP7525 | 50 | 100 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-131 | CRHE-DPT0211-043.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 2200 | | ug/L | 250 | 33 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7524 | | | | |
| NAL13041-131 | CRHE-DPT0211-043.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7524 | | | | |
| NAL13041-131 | CRHE-DPT0211-043.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7524 | | | | |
| NAL13041-131 | CRHE-DPT0211-043.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 6900 | | ug/L | 250 | 50 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7524 | | | | |
| NAL13041-131 | CRHE-DPT0211-043.0-20130325 | TRG | 79-01-6 | Trichloroethene | 1100 | | ug/L | 250 | 55 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7524 | | | | |
| NAL13041-131 | CRHE-DPT0211-043.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7524 | | | | |
| NAL13041-131 | CRHE-DPT0211-043.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7524 | 50 | 110 | | |
| NAL13041-131 | CRHE-DPT0211-043.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7524 | 50 | 110 | | |
| NAL13041-131 | CRHE-DPT0211-043.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7524 | 50 | 92 | | |
| NAL13041-131 | CRHE-DPT0211-043.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7524 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-132 | CRHE-DPT0211-058.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 6.4 | | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7523 | | | | |
| NAL13041-132 | CRHE-DPT0211-058.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7523 | | | | |
| NAL13041-132 | CRHE-DPT0211-058.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7523 | | | | |
| NAL13041-132 | CRHE-DPT0211-058.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 38 | | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7523 | | | | |
| NAL13041-132 | CRHE-DPT0211-058.0-20130325 | TRG | 79-01-6 | Trichloroethene | 5.5 | | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7523 | | | | |
| NAL13041-132 | CRHE-DPT0211-058.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7523 | | | | |
| NAL13041-132 | CRHE-DPT0211-058.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7523 | 50 | 104 | | |
| NAL13041-132 | CRHE-DPT0211-058.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7523 | 50 | 104 | | |
| NAL13041-132 | CRHE-DPT0211-058.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7523 | 50 | 92 | | |
| NAL13041-132 | CRHE-DPT0211-058.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7523 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-133 | CRHE-DPT0212-010.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7533 | | | | |
| NAL13041-133 | CRHE-DPT0212-010.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7533 | | | | |
| NAL13041-133 | CRHE-DPT0212-010.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7533 | | | | |
| NAL13041-133 | CRHE-DPT0212-010.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7533 | | | | |
| NAL13041-133 | CRHE-DPT0212-010.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7533 | | | | |
| NAL13041-133 | CRHE-DPT0212-010.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7533 | | | | |
| NAL13041-133 | CRHE-DPT0212-010.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7533 | 50 | 98 | | |
| NAL13041-133 | CRHE-DPT0212-010.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7533 | 50 | 90 | | |
| NAL13041-133 | CRHE-DPT0212-010.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7533 | 50 | 96 | | |
| NAL13041-133 | CRHE-DPT0212-010.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7533 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-134 | CRHE-DPT0212-018.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7534 | | | | |
| NAL13041-134 | CRHE-DPT0212-018.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7534 | | | | |
| NAL13041-134 | CRHE-DPT0212-018.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7534 | | | | |
| NAL13041-134 | CRHE-DPT0212-018.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7534 | | | | |
| NAL13041-134 | CRHE-DPT0212-018.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7534 | | | | |
| NAL13041-134 | CRHE-DPT0212-018.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7534 | | | | |
| NAL13041-134 | CRHE-DPT0212-018.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7534 | 50 | 108 | | |
| NAL13041-134 | CRHE-DPT0212-018.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7534 | 50 | 110 | | |
| NAL13041-134 | CRHE-DPT0212-018.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7534 | 50 | 94 | | |
| NAL13041-134 | CRHE-DPT0212-018.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7534 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-135 | CRHE-DPT0212-023.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7535 | | | | |
| NAL13041-135 | CRHE-DPT0212-023.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7535 | | | | |
| NAL13041-135 | CRHE-DPT0212-023.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7535 | | | | |
| NAL13041-135 | CRHE-DPT0212-023.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7535 | | | | |
| NAL13041-135 | CRHE-DPT0212-023.0-20130325 | TRG | 79-01-6 | Trichloroethene | 0.91 | I | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7535 | | | | |
| NAL13041-135 | CRHE-DPT0212-023.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7535 | | | | |
| NAL13041-135 | CRHE-DPT0212-023.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7535 | 50 | 110 | | |
| NAL13041-135 | CRHE-DPT0212-023.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7535 | 50 | 108 | | |
| NAL13041-135 | CRHE-DPT0212-023.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7535 | 50 | 96 | | |
| NAL13041-135 | CRHE-DPT0212-023.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7535 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-136 | CRHE-DPT0212-028.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | | | | |
| NAL13041-136 | CRHE-DPT0212-028.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | | | | |
| NAL13041-136 | CRHE-DPT0212-028.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | | | | |
| NAL13041-136 | CRHE-DPT0212-028.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | | | | |
| NAL13041-136 | CRHE-DPT0212-028.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | | | | |
| NAL13041-136 | CRHE-DPT0212-028.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | | | | |
| NAL13041-136 | CRHE-DPT0212-028.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | 50 | 106 | | |
| NAL13041-136 | CRHE-DPT0212-028.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | 50 | 116 | | |
| NAL13041-136 | CRHE-DPT0212-028.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | 50 | 92 | | |
| NAL13041-136 | CRHE-DPT0212-028.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-137 | CRHE-DPT0212-033.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7556 | | | | |
| NAL13041-137 | CRHE-DPT0212-033.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7556 | | | | |
| NAL13041-137 | CRHE-DPT0212-033.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7556 | | | | |
| NAL13041-137 | CRHE-DPT0212-033.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7556 | | | | |
| NAL13041-137 | CRHE-DPT0212-033.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7556 | | | | |
| NAL13041-137 | CRHE-DPT0212-033.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7556 | | | | |
| NAL13041-137 | CRHE-DPT0212-033.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7556 | 50 | 96 | | |
| NAL13041-137 | CRHE-DPT0212-033.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7556 | 50 | 116 | | |
| NAL13041-137 | CRHE-DPT0212-033.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7556 | 50 | 92 | | |
| NAL13041-137 | CRHE-DPT0212-033.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7556 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-140 | CRHE-DPT0212-058.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 0.84 | I | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7531 | | | | |
| NAL13041-140 | CRHE-DPT0212-058.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7531 | | | | |
| NAL13041-140 | CRHE-DPT0212-058.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7531 | | | | |
| NAL13041-140 | CRHE-DPT0212-058.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 6.9 | | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7531 | | | | |
| NAL13041-140 | CRHE-DPT0212-058.0-20130325 | TRG | 79-01-6 | Trichloroethene | 2.8 | | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7531 | | | | |
| NAL13041-140 | CRHE-DPT0212-058.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7531 | | | | |
| NAL13041-140 | CRHE-DPT0212-058.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7531 | 50 | 96 | | |
| NAL13041-140 | CRHE-DPT0212-058.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7531 | 50 | 96 | | |
| NAL13041-140 | CRHE-DPT0212-058.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7531 | 50 | 94 | | |
| NAL13041-140 | CRHE-DPT0212-058.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7531 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-141 | CRHE-DPT0213-010.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7559 | | | | |
| NAL13041-141 | CRHE-DPT0213-010.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7559 | | | | |
| NAL13041-141 | CRHE-DPT0213-010.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7559 | | | | |
| NAL13041-141 | CRHE-DPT0213-010.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7559 | | | | |
| NAL13041-141 | CRHE-DPT0213-010.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7559 | | | | |
| NAL13041-141 | CRHE-DPT0213-010.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7559 | | | | |
| NAL13041-141 | CRHE-DPT0213-010.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7559 | 50 | 118 | | |
| NAL13041-141 | CRHE-DPT0213-010.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7559 | 50 | 120 | | |
| NAL13041-141 | CRHE-DPT0213-010.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7559 | 50 | 94 | | |
| NAL13041-141 | CRHE-DPT0213-010.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7559 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-142 | CRHE-DPT0213-018.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7560 | | | | |
| NAL13041-142 | CRHE-DPT0213-018.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7560 | | | | |
| NAL13041-142 | CRHE-DPT0213-018.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7560 | | | | |
| NAL13041-142 | CRHE-DPT0213-018.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7560 | | | | |
| NAL13041-142 | CRHE-DPT0213-018.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7560 | | | | |
| NAL13041-142 | CRHE-DPT0213-018.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7560 | | | | |
| NAL13041-142 | CRHE-DPT0213-018.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7560 | 50 | 116 | | |
| NAL13041-142 | CRHE-DPT0213-018.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7560 | 50 | 116 | | |
| NAL13041-142 | CRHE-DPT0213-018.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7560 | 50 | 94 | | |
| NAL13041-142 | CRHE-DPT0213-018.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7560 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-143 | CRHE-DPT0213-023.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7561 | | | | |
| NAL13041-143 | CRHE-DPT0213-023.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7561 | | | | |
| NAL13041-143 | CRHE-DPT0213-023.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7561 | | | | |
| NAL13041-143 | CRHE-DPT0213-023.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 0.78 | I | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7561 | | | | |
| NAL13041-143 | CRHE-DPT0213-023.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7561 | | | | |
| NAL13041-143 | CRHE-DPT0213-023.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7561 | | | | |
| NAL13041-143 | CRHE-DPT0213-023.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7561 | 50 | 116 | | |
| NAL13041-143 | CRHE-DPT0213-023.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7561 | 50 | 120 | | |
| NAL13041-143 | CRHE-DPT0213-023.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7561 | 50 | 92 | | |
| NAL13041-143 | CRHE-DPT0213-023.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7561 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-148 | CRHE-DPT0213-058.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 20 | | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7532 | | | | |
| NAL13041-148 | CRHE-DPT0213-058.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7532 | | | | |
| NAL13041-148 | CRHE-DPT0213-058.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 2.2 | | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7532 | | | | |
| NAL13041-148 | CRHE-DPT0213-058.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 150 | | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7532 | | | | |
| NAL13041-148 | CRHE-DPT0213-058.0-20130325 | TRG | 79-01-6 | Trichloroethene | 27 | | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7532 | | | | |
| NAL13041-148 | CRHE-DPT0213-058.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7532 | | | | |
| NAL13041-148 | CRHE-DPT0213-058.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7532 | 50 | 108 | | |
| NAL13041-148 | CRHE-DPT0213-058.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7532 | 50 | 108 | | |
| NAL13041-148 | CRHE-DPT0213-058.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7532 | 50 | 96 | | |
| NAL13041-148 | CRHE-DPT0213-058.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7532 | 50 | 90 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-156 | CRHE-DPT0214-058.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 9.2 | | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7536 | | | | |
| NAL13041-156 | CRHE-DPT0214-058.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7536 | | | | |
| NAL13041-156 | CRHE-DPT0214-058.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7536 | | | | |
| NAL13041-156 | CRHE-DPT0214-058.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 70 | | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7536 | | | | |
| NAL13041-156 | CRHE-DPT0214-058.0-20130326 | TRG | 79-01-6 | Trichloroethene | 10 | | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7536 | | | | |
| NAL13041-156 | CRHE-DPT0214-058.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7536 | | | | |
| NAL13041-156 | CRHE-DPT0214-058.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7536 | 50 | 112 | | |
| NAL13041-156 | CRHE-DPT0214-058.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7536 | 50 | 112 | | |
| NAL13041-156 | CRHE-DPT0214-058.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7536 | 50 | 94 | | |
| NAL13041-156 | CRHE-DPT0214-058.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/25/2013 | 3/25/2013 | 3/25/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7536 | 50 | 92 | | |

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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032513CCVB | P032513CCVB | TRG | 75-01-4 | Vinyl Chloride | 59 | | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7520 | 50 | 118 | | |
| P032513CCVB | P032513CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 49 | | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7520 | 50 | 98 | | |
| P032513CCVB | P032513CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7520 | 50 | 110 | | |
| P032513CCVB | P032513CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7520 | 50 | 110 | | |
| P032513CCVB | P032513CCVB | TRG | 79-01-6 | Trichloroethene | 54 | | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7520 | 50 | 108 | | |
| P032513CCVB | P032513CCVB | TRG | 127-18-4 | Tetrachloroethene | 56 | | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7520 | 50 | 112 | | |
| P032513CCVB | P032513CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7520 | 50 | 98 | | |
| P032513CCVB | P032513CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7520 | 50 | 98 | | |
| P032513CCVB | P032513CCVB | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7520 | 50 | 102 | | |
| P032513CCVB | P032513CCVB | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7520 | 50 | 102 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032513MBKA | P032513MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7522 | | | | |
| P032513MBKA | P032513MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7522 | | | | |
| P032513MBKA | P032513MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7522 | | | | |
| P032513MBKA | P032513MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7522 | | | | |
| P032513MBKA | P032513MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7522 | | | | |
| P032513MBKA | P032513MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7522 | | | | |
| P032513MBKA | P032513MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7522 | 50 | 108 | | |
| P032513MBKA | P032513MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7522 | 50 | 108 | | |
| P032513MBKA | P032513MBKA | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7522 | 50 | 94 | | |
| P032513MBKA | P032513MBKA | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | NA | 3/22/2013 | 3/25/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7522 | 50 | 92 | | |

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160 Veterans Blvd. • South Haven, Michigan 49090
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# FINAL ANALYTICAL REPORT

**Geosyntec Consultants**
**316 S Baylen Str., Suite 201**
**Pensacola, FL 32502**
**ATTN: Ms. Jill Johnson**

**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

Analytical results meet the requirements of NELAC Standards. The results reported apply solely to the sample analyzed and all results are reported on a dry weight basis unless stated otherwise. Any questions concerning this report should be directed to Scott D. Wall, President.
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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032513CCVA | P032513CCVA | TRG | 75-01-4 | Vinyl Chloride | 47 | | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7549 | 50 | 94 | | |
| P032513CCVA | P032513CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 51 | | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7549 | 50 | 102 | | |
| P032513CCVA | P032513CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7549 | 50 | 106 | | |
| P032513CCVA | P032513CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7549 | 50 | 106 | | |
| P032513CCVA | P032513CCVA | TRG | 79-01-6 | Trichloroethene | 52 | | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7549 | 50 | 104 | | |
| P032513CCVA | P032513CCVA | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7549 | 50 | 102 | | |
| P032513CCVA | P032513CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7549 | 50 | 104 | | |
| P032513CCVA | P032513CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7549 | 50 | 98 | | |
| P032513CCVA | P032513CCVA | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7549 | 50 | 102 | | |
| P032513CCVA | P032513CCVA | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7549 | 50 | 104 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032513MBKC | P032513MBKC | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | | | | |
| P032513MBKC | P032513MBKC | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | | | | |
| P032513MBKC | P032513MBKC | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | | | | |
| P032513MBKC | P032513MBKC | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | | | | |
| P032513MBKC | P032513MBKC | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | | | | |
| P032513MBKC | P032513MBKC | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | | | | |
| P032513MBKC | P032513MBKC | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | 50 | 116 | | |
| P032513MBKC | P032513MBKC | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 61 | | ug/L | | | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | 50 | 122 | | |
| P032513MBKC | P032513MBKC | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | 50 | 94 | | |
| P032513MBKC | P032513MBKC | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032513ALCS | P032513ALCS | TRG | 75-01-4 | Vinyl Chloride | 47 | | ug/L | 1.0 | 0.13 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7550 | 50 | 94 | | |
| P032513ALCS | P032513ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 48 | | ug/L | 1.0 | 0.18 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7550 | 50 | 96 | | |
| P032513ALCS | P032513ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 50 | | ug/L | 1.0 | 0.28 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7550 | 50 | 100 | | |
| P032513ALCS | P032513ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.20 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7550 | 50 | 104 | | |
| P032513ALCS | P032513ALCS | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7550 | 50 | 102 | | |
| P032513ALCS | P032513ALCS | TRG | 127-18-4 | Tetrachloroethene | 48 | | ug/L | 1.0 | 0.16 | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7550 | 50 | 96 | | |
| P032513ALCS | P032513ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7550 | 50 | 102 | | |
| P032513ALCS | P032513ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7550 | 50 | 104 | | |
| P032513ALCS | P032513ALCS | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7550 | 50 | 102 | | |
| P032513ALCS | P032513ALCS | SUR | 460-00-4 | Bromofluorobenzene | 53 | | ug/L | | | NA | 3/22/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7550 | 50 | 106 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-126MS | CRHE-DPT0211-018.0-20130325MS | TRG | 75-01-4 | Vinyl Chloride | 45 | | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7551 | 50 | 90 | | |
| NAL13041-126MS | CRHE-DPT0211-018.0-20130325MS | TRG | 75-35-4 | 1,1-Dichloroethene | 42 | | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7551 | 50 | 84 | | |
| NAL13041-126MS | CRHE-DPT0211-018.0-20130325MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 43 | | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7551 | 50 | 86 | | |
| NAL13041-126MS | CRHE-DPT0211-018.0-20130325MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 44 | | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7551 | 50 | 88 | | |
| NAL13041-126MS | CRHE-DPT0211-018.0-20130325MS | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7551 | 50 | 100 | | |
| NAL13041-126MS | CRHE-DPT0211-018.0-20130325MS | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7551 | 50 | 102 | | |
| NAL13041-126MS | CRHE-DPT0211-018.0-20130325MS | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7551 | 50 | 94 | | |
| NAL13041-126MS | CRHE-DPT0211-018.0-20130325MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7551 | 50 | 90 | | |
| NAL13041-126MS | CRHE-DPT0211-018.0-20130325MS | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7551 | 50 | 102 | | |
| NAL13041-126MS | CRHE-DPT0211-018.0-20130325MS | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7551 | 50 | 104 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-126MSD | CRHE-DPT0211-018.0-20130325MSD | TRG | 75-01-4 | Vinyl Chloride | 51 | | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7552 | 50 | 102 | 13 | |
| NAL13041-126MSD | CRHE-DPT0211-018.0-20130325MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 50 | | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7552 | 50 | 100 | 17 | |
| NAL13041-126MSD | CRHE-DPT0211-018.0-20130325MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7552 | 50 | 104 | 19 | |
| NAL13041-126MSD | CRHE-DPT0211-018.0-20130325MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7552 | 50 | 108 | 20 | |
| NAL13041-126MSD | CRHE-DPT0211-018.0-20130325MSD | TRG | 79-01-6 | Trichloroethene | 47 | | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7552 | 50 | 94 | 6 | |
| NAL13041-126MSD | CRHE-DPT0211-018.0-20130325MSD | TRG | 127-18-4 | Tetrachloroethene | 47 | | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7552 | 50 | 94 | 8 | |
| NAL13041-126MSD | CRHE-DPT0211-018.0-20130325MSD | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7552 | 50 | 94 | 0 | |
| NAL13041-126MSD | CRHE-DPT0211-018.0-20130325MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7552 | 50 | 90 | 0 | |
| NAL13041-126MSD | CRHE-DPT0211-018.0-20130325MSD | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7552 | 50 | 102 | 0 | |
| NAL13041-126MSD | CRHE-DPT0211-018.0-20130325MSD | SUR | 460-00-4 | Bromofluorobenzene | 53 | | ug/L | | | 3/25/2013 | 3/22/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7552 | 50 | 106 | 2 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-138RR | CRHE-DPT0212-038.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 58 | | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7566 | | | | |
| NAL13041-138RR | CRHE-DPT0212-038.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7566 | | | | |
| NAL13041-138RR | CRHE-DPT0212-038.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 0.90 | I | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7566 | | | | |
| NAL13041-138RR | CRHE-DPT0212-038.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7566 | | | | |
| NAL13041-138RR | CRHE-DPT0212-038.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7566 | | | | |
| NAL13041-138RR | CRHE-DPT0212-038.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7566 | | | | |
| NAL13041-138RR | CRHE-DPT0212-038.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7566 | 50 | 108 | | |
| NAL13041-138RR | CRHE-DPT0212-038.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7566 | 50 | 104 | | |
| NAL13041-138RR | CRHE-DPT0212-038.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7566 | 50 | 94 | | |
| NAL13041-138RR | CRHE-DPT0212-038.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7566 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-139RR | CRHE-DPT0212-043.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 8.9 | | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7567 | | | | |
| NAL13041-139RR | CRHE-DPT0212-043.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7567 | | | | |
| NAL13041-139RR | CRHE-DPT0212-043.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7567 | | | | |
| NAL13041-139RR | CRHE-DPT0212-043.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7567 | | | | |
| NAL13041-139RR | CRHE-DPT0212-043.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7567 | | | | |
| NAL13041-139RR | CRHE-DPT0212-043.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7567 | | | | |
| NAL13041-139RR | CRHE-DPT0212-043.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7567 | 50 | 108 | | |
| NAL13041-139RR | CRHE-DPT0212-043.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7567 | 50 | 110 | | |
| NAL13041-139RR | CRHE-DPT0212-043.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7567 | 50 | 92 | | |
| NAL13041-139RR | CRHE-DPT0212-043.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7567 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-144 | CRHE-DPT0213-028.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7562 | | | | |
| NAL13041-144 | CRHE-DPT0213-028.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7562 | | | | |
| NAL13041-144 | CRHE-DPT0213-028.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7562 | | | | |
| NAL13041-144 | CRHE-DPT0213-028.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1.0 | | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7562 | | | | |
| NAL13041-144 | CRHE-DPT0213-028.0-20130325 | TRG | 79-01-6 | Trichloroethene | 0.85 | I | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7562 | | | | |
| NAL13041-144 | CRHE-DPT0213-028.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7562 | | | | |
| NAL13041-144 | CRHE-DPT0213-028.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7562 | 50 | 114 | | |
| NAL13041-144 | CRHE-DPT0213-028.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7562 | 50 | 118 | | |
| NAL13041-144 | CRHE-DPT0213-028.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7562 | 50 | 94 | | |
| NAL13041-144 | CRHE-DPT0213-028.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7562 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-145 | CRHE-DPT0213-033.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 210 | | ug/L | 5.0 | 0.65 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7563 | | | | |
| NAL13041-145 | CRHE-DPT0213-033.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 5.0 | 0.90 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7563 | | | | |
| NAL13041-145 | CRHE-DPT0213-033.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 140 | | ug/L | 5.0 | 1.4 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7563 | | | | |
| NAL13041-145 | CRHE-DPT0213-033.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 340 | | ug/L | 5.0 | 1.0 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7563 | | | | |
| NAL13041-145 | CRHE-DPT0213-033.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 5.0 | 1.1 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7563 | | | | |
| NAL13041-145 | CRHE-DPT0213-033.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 5.0 | 0.80 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7563 | | | | |
| NAL13041-145 | CRHE-DPT0213-033.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7563 | 50 | 114 | | |
| NAL13041-145 | CRHE-DPT0213-033.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7563 | 50 | 112 | | |
| NAL13041-145 | CRHE-DPT0213-033.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7563 | 50 | 94 | | |
| NAL13041-145 | CRHE-DPT0213-033.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 5 | 5.0 | 5.0 | NA | SW8260B | NALP7563 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-146 | CRHE-DPT0213-038.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 9900 | | ug/L | 1000 | 130 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7564 | | | | |
| NAL13041-146 | CRHE-DPT0213-038.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1000 | 180 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7564 | | | | |
| NAL13041-146 | CRHE-DPT0213-038.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1000 | 280 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7564 | | | | |
| NAL13041-146 | CRHE-DPT0213-038.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 30000 | | ug/L | 1000 | 200 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7564 | | | | |
| NAL13041-146 | CRHE-DPT0213-038.0-20130325 | TRG | 79-01-6 | Trichloroethene | 9700 | | ug/L | 1000 | 220 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7564 | | | | |
| NAL13041-146 | CRHE-DPT0213-038.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1000 | 160 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7564 | | | | |
| NAL13041-146 | CRHE-DPT0213-038.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7564 | 50 | 112 | | |
| NAL13041-146 | CRHE-DPT0213-038.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7564 | 50 | 118 | | |
| NAL13041-146 | CRHE-DPT0213-038.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7564 | 50 | 94 | | |
| NAL13041-146 | CRHE-DPT0213-038.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7564 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-147 | CRHE-DPT0213-043.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 2500 | | ug/L | 250 | 33 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7565 | | | | |
| NAL13041-147 | CRHE-DPT0213-043.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7565 | | | | |
| NAL13041-147 | CRHE-DPT0213-043.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7565 | | | | |
| NAL13041-147 | CRHE-DPT0213-043.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 7300 | | ug/L | 250 | 50 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7565 | | | | |
| NAL13041-147 | CRHE-DPT0213-043.0-20130325 | TRG | 79-01-6 | Trichloroethene | 330 | | ug/L | 250 | 55 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7565 | | | | |
| NAL13041-147 | CRHE-DPT0213-043.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7565 | | | | |
| NAL13041-147 | CRHE-DPT0213-043.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7565 | 50 | 114 | | |
| NAL13041-147 | CRHE-DPT0213-043.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7565 | 50 | 120 | | |
| NAL13041-147 | CRHE-DPT0213-043.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7565 | 50 | 96 | | |
| NAL13041-147 | CRHE-DPT0213-043.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7565 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-149 | CRHE-DPT0214-010.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7568 | | | | |
| NAL13041-149 | CRHE-DPT0214-010.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7568 | | | | |
| NAL13041-149 | CRHE-DPT0214-010.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7568 | | | | |
| NAL13041-149 | CRHE-DPT0214-010.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7568 | | | | |
| NAL13041-149 | CRHE-DPT0214-010.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7568 | | | | |
| NAL13041-149 | CRHE-DPT0214-010.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7568 | | | | |
| NAL13041-149 | CRHE-DPT0214-010.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7568 | 50 | 116 | | |
| NAL13041-149 | CRHE-DPT0214-010.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7568 | 50 | 112 | | |
| NAL13041-149 | CRHE-DPT0214-010.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7568 | 50 | 96 | | |
| NAL13041-149 | CRHE-DPT0214-010.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7568 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-150 | CRHE-DPT0214-018.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 36 | | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7569 | | | | |
| NAL13041-150 | CRHE-DPT0214-018.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7569 | | | | |
| NAL13041-150 | CRHE-DPT0214-018.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7569 | | | | |
| NAL13041-150 | CRHE-DPT0214-018.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7569 | | | | |
| NAL13041-150 | CRHE-DPT0214-018.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7569 | | | | |
| NAL13041-150 | CRHE-DPT0214-018.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7569 | | | | |
| NAL13041-150 | CRHE-DPT0214-018.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7569 | 50 | 110 | | |
| NAL13041-150 | CRHE-DPT0214-018.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7569 | 50 | 114 | | |
| NAL13041-150 | CRHE-DPT0214-018.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7569 | 50 | 94 | | |
| NAL13041-150 | CRHE-DPT0214-018.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7569 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-151 | CRHE-DPT0214-023.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 6400 | | ug/L | 50 | 6.5 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7570 | | | | |
| NAL13041-151 | CRHE-DPT0214-023.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7570 | | | | |
| NAL13041-151 | CRHE-DPT0214-023.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 50 | 14 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7570 | | | | |
| NAL13041-151 | CRHE-DPT0214-023.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 4500 | | ug/L | 50 | 10 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7570 | | | | |
| NAL13041-151 | CRHE-DPT0214-023.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 50 | 11 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7570 | | | | |
| NAL13041-151 | CRHE-DPT0214-023.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7570 | | | | |
| NAL13041-151 | CRHE-DPT0214-023.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7570 | 50 | 106 | | |
| NAL13041-151 | CRHE-DPT0214-023.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7570 | 50 | 108 | | |
| NAL13041-151 | CRHE-DPT0214-023.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7570 | 50 | 96 | | |
| NAL13041-151 | CRHE-DPT0214-023.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7570 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-152 | CRHE-DPT0214-028.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 1900 | | ug/L | 50 | 6.5 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7579 | | | | |
| NAL13041-152 | CRHE-DPT0214-028.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7579 | | | | |
| NAL13041-152 | CRHE-DPT0214-028.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 50 | 14 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7579 | | | | |
| NAL13041-152 | CRHE-DPT0214-028.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 230 | | ug/L | 50 | 10 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7579 | | | | |
| NAL13041-152 | CRHE-DPT0214-028.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 50 | 11 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7579 | | | | |
| NAL13041-152 | CRHE-DPT0214-028.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7579 | | | | |
| NAL13041-152 | CRHE-DPT0214-028.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7579 | 50 | 104 | | |
| NAL13041-152 | CRHE-DPT0214-028.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7579 | 50 | 106 | | |
| NAL13041-152 | CRHE-DPT0214-028.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7579 | 50 | 94 | | |
| NAL13041-152 | CRHE-DPT0214-028.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7579 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-153 | CRHE-DPT0214-033.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 3.8 | | ug/L | 2.0 | 0.26 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7574 | | | | |
| NAL13041-153 | CRHE-DPT0214-033.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7574 | | | | |
| NAL13041-153 | CRHE-DPT0214-033.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.56 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7574 | | | | |
| NAL13041-153 | CRHE-DPT0214-033.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 2.8 | | ug/L | 2.0 | 0.40 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7574 | | | | |
| NAL13041-153 | CRHE-DPT0214-033.0-20130325 | TRG | 79-01-6 | Trichloroethene | 1.9 | I | ug/L | 2.0 | 0.44 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7574 | | | | |
| NAL13041-153 | CRHE-DPT0214-033.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7574 | | | | |
| NAL13041-153 | CRHE-DPT0214-033.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7574 | 50 | 104 | | |
| NAL13041-153 | CRHE-DPT0214-033.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7574 | 50 | 102 | | |
| NAL13041-153 | CRHE-DPT0214-033.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7574 | 50 | 96 | | |
| NAL13041-153 | CRHE-DPT0214-033.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7574 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-154 | CRHE-DPT0214-038.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 6.7 | | ug/L | 2.0 | 0.26 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7575 | | | | |
| NAL13041-154 | CRHE-DPT0214-038.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7575 | | | | |
| NAL13041-154 | CRHE-DPT0214-038.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 2.0 | 0.56 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7575 | | | | |
| NAL13041-154 | CRHE-DPT0214-038.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 6.5 | | ug/L | 2.0 | 0.40 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7575 | | | | |
| NAL13041-154 | CRHE-DPT0214-038.0-20130325 | TRG | 79-01-6 | Trichloroethene | 3.0 | | ug/L | 2.0 | 0.44 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7575 | | | | |
| NAL13041-154 | CRHE-DPT0214-038.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | 1.8 | I | ug/L | 2.0 | 0.32 | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7575 | | | | |
| NAL13041-154 | CRHE-DPT0214-038.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7575 | 50 | 114 | | |
| NAL13041-154 | CRHE-DPT0214-038.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7575 | 50 | 114 | | |
| NAL13041-154 | CRHE-DPT0214-038.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7575 | 50 | 96 | | |
| NAL13041-154 | CRHE-DPT0214-038.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/25/2013 | 3/26/2013 | 3/26/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7575 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-158 | CRHE-DPT0215-010.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7582 | | | | |
| NAL13041-158 | CRHE-DPT0215-010.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7582 | | | | |
| NAL13041-158 | CRHE-DPT0215-010.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7582 | | | | |
| NAL13041-158 | CRHE-DPT0215-010.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7582 | | | | |
| NAL13041-158 | CRHE-DPT0215-010.0-20130326 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7582 | | | | |
| NAL13041-158 | CRHE-DPT0215-010.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7582 | | | | |
| NAL13041-158 | CRHE-DPT0215-010.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7582 | 50 | 102 | | |
| NAL13041-158 | CRHE-DPT0215-010.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7582 | 50 | 100 | | |
| NAL13041-158 | CRHE-DPT0215-010.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7582 | 50 | 94 | | |
| NAL13041-158 | CRHE-DPT0215-010.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7582 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-159 | CRHE-DPT0215-018.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7583 | | | | |
| NAL13041-159 | CRHE-DPT0215-018.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7583 | | | | |
| NAL13041-159 | CRHE-DPT0215-018.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7583 | | | | |
| NAL13041-159 | CRHE-DPT0215-018.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7583 | | | | |
| NAL13041-159 | CRHE-DPT0215-018.0-20130326 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7583 | | | | |
| NAL13041-159 | CRHE-DPT0215-018.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7583 | | | | |
| NAL13041-159 | CRHE-DPT0215-018.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7583 | 50 | 110 | | |
| NAL13041-159 | CRHE-DPT0215-018.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7583 | 50 | 116 | | |
| NAL13041-159 | CRHE-DPT0215-018.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7583 | 50 | 94 | | |
| NAL13041-159 | CRHE-DPT0215-018.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7583 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-160 | CRHE-DPT0215-023.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7584 | | | | |
| NAL13041-160 | CRHE-DPT0215-023.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7584 | | | | |
| NAL13041-160 | CRHE-DPT0215-023.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7584 | | | | |
| NAL13041-160 | CRHE-DPT0215-023.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7584 | | | | |
| NAL13041-160 | CRHE-DPT0215-023.0-20130326 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7584 | | | | |
| NAL13041-160 | CRHE-DPT0215-023.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7584 | | | | |
| NAL13041-160 | CRHE-DPT0215-023.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7584 | 50 | 112 | | |
| NAL13041-160 | CRHE-DPT0215-023.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7584 | 50 | 114 | | |
| NAL13041-160 | CRHE-DPT0215-023.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7584 | 50 | 94 | | |
| NAL13041-160 | CRHE-DPT0215-023.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7584 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-161 | CRHE-DPT0215-028.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7585 | | | | |
| NAL13041-161 | CRHE-DPT0215-028.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7585 | | | | |
| NAL13041-161 | CRHE-DPT0215-028.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7585 | | | | |
| NAL13041-161 | CRHE-DPT0215-028.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7585 | | | | |
| NAL13041-161 | CRHE-DPT0215-028.0-20130326 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7585 | | | | |
| NAL13041-161 | CRHE-DPT0215-028.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7585 | | | | |
| NAL13041-161 | CRHE-DPT0215-028.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7585 | 50 | 112 | | |
| NAL13041-161 | CRHE-DPT0215-028.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7585 | 50 | 116 | | |
| NAL13041-161 | CRHE-DPT0215-028.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7585 | 50 | 94 | | |
| NAL13041-161 | CRHE-DPT0215-028.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7585 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-162 | CRHE-DPT0215-033.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7586 | | | | |
| NAL13041-162 | CRHE-DPT0215-033.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7586 | | | | |
| NAL13041-162 | CRHE-DPT0215-033.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7586 | | | | |
| NAL13041-162 | CRHE-DPT0215-033.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7586 | | | | |
| NAL13041-162 | CRHE-DPT0215-033.0-20130326 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7586 | | | | |
| NAL13041-162 | CRHE-DPT0215-033.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7586 | | | | |
| NAL13041-162 | CRHE-DPT0215-033.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7586 | 50 | 108 | | |
| NAL13041-162 | CRHE-DPT0215-033.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7586 | 50 | 110 | | |
| NAL13041-162 | CRHE-DPT0215-033.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7586 | 50 | 94 | | |
| NAL13041-162 | CRHE-DPT0215-033.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7586 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-163 | CRHE-DPT0215-038.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7587 | | | | |
| NAL13041-163 | CRHE-DPT0215-038.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7587 | | | | |
| NAL13041-163 | CRHE-DPT0215-038.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7587 | | | | |
| NAL13041-163 | CRHE-DPT0215-038.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7587 | | | | |
| NAL13041-163 | CRHE-DPT0215-038.0-20130326 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7587 | | | | |
| NAL13041-163 | CRHE-DPT0215-038.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7587 | | | | |
| NAL13041-163 | CRHE-DPT0215-038.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7587 | 50 | 108 | | |
| NAL13041-163 | CRHE-DPT0215-038.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7587 | 50 | 110 | | |
| NAL13041-163 | CRHE-DPT0215-038.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7587 | 50 | 94 | | |
| NAL13041-163 | CRHE-DPT0215-038.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7587 | 50 | 92 | | |

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# FINAL ANALYTICAL REPORT

**Geosyntec Consultants**
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**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032613CCVA | P032613CCVA | TRG | 75-01-4 | Vinyl Chloride | 45 | | ug/L | 1.0 | 0.13 | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7573 | 50 | 90 | | |
| P032613CCVA | P032613CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 44 | | ug/L | 1.0 | 0.18 | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7573 | 50 | 88 | | |
| P032613CCVA | P032613CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 42 | | ug/L | 1.0 | 0.28 | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7573 | 50 | 84 | | |
| P032613CCVA | P032613CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 45 | | ug/L | 1.0 | 0.20 | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7573 | 50 | 90 | | |
| P032613CCVA | P032613CCVA | TRG | 79-01-6 | Trichloroethene | 47 | | ug/L | 1.0 | 0.22 | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7573 | 50 | 94 | | |
| P032613CCVA | P032613CCVA | TRG | 127-18-4 | Tetrachloroethene | 47 | | ug/L | 1.0 | 0.16 | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7573 | 50 | 94 | | |
| P032613CCVA | P032613CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7573 | 50 | 94 | | |
| P032613CCVA | P032613CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 46 | | ug/L | | | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7573 | 50 | 92 | | |
| P032613CCVA | P032613CCVA | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7573 | 50 | 100 | | |
| P032613CCVA | P032613CCVA | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7573 | 50 | 102 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032613MBKA | P032613MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7572 | | | | |
| P032613MBKA | P032613MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7572 | | | | |
| P032613MBKA | P032613MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7572 | | | | |
| P032613MBKA | P032613MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7572 | | | | |
| P032613MBKA | P032613MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7572 | | | | |
| P032613MBKA | P032613MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7572 | | | | |
| P032613MBKA | P032613MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7572 | 50 | 114 | | |
| P032613MBKA | P032613MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7572 | 50 | 118 | | |
| P032613MBKA | P032613MBKA | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7572 | 50 | 92 | | |
| P032613MBKA | P032613MBKA | SUR | 460-00-4 | Bromofluorobenzene | 44 | | ug/L | | | NA | 3/26/2013 | 3/26/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7572 | 50 | 88 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032613CCVC | P032613CCVC | TRG | 75-01-4 | Vinyl Chloride | 47 | | ug/L | 1.0 | 0.13 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7596 | 50 | 94 | | |
| P032613CCVC | P032613CCVC | TRG | 75-35-4 | 1,1-Dichloroethene | 50 | | ug/L | 1.0 | 0.18 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7596 | 50 | 100 | | |
| P032613CCVC | P032613CCVC | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.28 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7596 | 50 | 102 | | |
| P032613CCVC | P032613CCVC | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.20 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7596 | 50 | 102 | | |
| P032613CCVC | P032613CCVC | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7596 | 50 | 102 | | |
| P032613CCVC | P032613CCVC | TRG | 127-18-4 | Tetrachloroethene | 47 | | ug/L | 1.0 | 0.16 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7596 | 50 | 94 | | |
| P032613CCVC | P032613CCVC | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7596 | 50 | 106 | | |
| P032613CCVC | P032613CCVC | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7596 | 50 | 108 | | |
| P032613CCVC | P032613CCVC | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7596 | 50 | 102 | | |
| P032613CCVC | P032613CCVC | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7596 | 50 | 102 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032613MBKB | P032613MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | | | | |
| P032613MBKB | P032613MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | | | | |
| P032613MBKB | P032613MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | | | | |
| P032613MBKB | P032613MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | | | | |
| P032613MBKB | P032613MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | | | | |
| P032613MBKB | P032613MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | | | | |
| P032613MBKB | P032613MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 45 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | 50 | 90 | | |
| P032613MBKB | P032613MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | 50 | 112 | | |
| P032613MBKB | P032613MBKB | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | 50 | 94 | | |
| P032613MBKB | P032613MBKB | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032613ALCS | P032613ALCS | TRG | 75-01-4 | Vinyl Chloride | 45 | | ug/L | 1.0 | 0.13 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7597 | 50 | 90 | | |
| P032613ALCS | P032613ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 52 | | ug/L | 1.0 | 0.18 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7597 | 50 | 104 | | |
| P032613ALCS | P032613ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.28 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7597 | 50 | 102 | | |
| P032613ALCS | P032613ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.20 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7597 | 50 | 102 | | |
| P032613ALCS | P032613ALCS | TRG | 79-01-6 | Trichloroethene | 53 | | ug/L | 1.0 | 0.22 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7597 | 50 | 106 | | |
| P032613ALCS | P032613ALCS | TRG | 127-18-4 | Tetrachloroethene | 48 | | ug/L | 1.0 | 0.16 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7597 | 50 | 96 | | |
| P032613ALCS | P032613ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7597 | 50 | 106 | | |
| P032613ALCS | P032613ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7597 | 50 | 106 | | |
| P032613ALCS | P032613ALCS | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7597 | 50 | 100 | | |
| P032613ALCS | P032613ALCS | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7597 | 50 | 104 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-144MS | CRHE-DPT0213-028.0-20130325MS | TRG | 75-01-4 | Vinyl Chloride | 46 | | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7594 | 50 | 92 | | |
| NAL13041-144MS | CRHE-DPT0213-028.0-20130325MS | TRG | 75-35-4 | 1,1-Dichloroethene | 43 | | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7594 | 50 | 86 | | |
| NAL13041-144MS | CRHE-DPT0213-028.0-20130325MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 44 | | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7594 | 50 | 88 | | |
| NAL13041-144MS | CRHE-DPT0213-028.0-20130325MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 46 | | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7594 | 50 | 92 | | 1.0 |
| NAL13041-144MS | CRHE-DPT0213-028.0-20130325MS | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7594 | 50 | 100 | | 0.85 |
| NAL13041-144MS | CRHE-DPT0213-028.0-20130325MS | TRG | 127-18-4 | Tetrachloroethene | 46 | | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7594 | 50 | 92 | | |
| NAL13041-144MS | CRHE-DPT0213-028.0-20130325MS | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7594 | 50 | 98 | | |
| NAL13041-144MS | CRHE-DPT0213-028.0-20130325MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7594 | 50 | 98 | | |
| NAL13041-144MS | CRHE-DPT0213-028.0-20130325MS | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7594 | 50 | 98 | | |
| NAL13041-144MS | CRHE-DPT0213-028.0-20130325MS | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7594 | 50 | 102 | | |

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# FINAL ANALYTICAL REPORT

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**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-144MSD | CRHE-DPT0213-028.0-20130325MSD | TRG | 75-01-4 | Vinyl Chloride | 49 | | ug/L | 1.0 | 0.13 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7595 | 50 | 98 | 6 | |
| NAL13041-144MSD | CRHE-DPT0213-028.0-20130325MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 52 | | ug/L | 1.0 | 0.18 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7595 | 50 | 104 | 19 | |
| NAL13041-144MSD | CRHE-DPT0213-028.0-20130325MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.28 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7595 | 50 | 106 | 19 | |
| NAL13041-144MSD | CRHE-DPT0213-028.0-20130325MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.20 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7595 | 50 | 110 | 18 | 1.0 |
| NAL13041-144MSD | CRHE-DPT0213-028.0-20130325MSD | TRG | 79-01-6 | Trichloroethene | 55 | | ug/L | 1.0 | 0.22 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7595 | 50 | 110 | 10 | 0.85 |
| NAL13041-144MSD | CRHE-DPT0213-028.0-20130325MSD | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7595 | 50 | 100 | 8 | |
| NAL13041-144MSD | CRHE-DPT0213-028.0-20130325MSD | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7595 | 50 | 106 | 8 | |
| NAL13041-144MSD | CRHE-DPT0213-028.0-20130325MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7595 | 50 | 108 | 10 | |
| NAL13041-144MSD | CRHE-DPT0213-028.0-20130325MSD | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7595 | 50 | 98 | 0 | |
| NAL13041-144MSD | CRHE-DPT0213-028.0-20130325MSD | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7595 | 50 | 104 | 2 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-165 | CRHE-DPT0215-058.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7589 | | | | |
| NAL13041-165 | CRHE-DPT0215-058.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7589 | | | | |
| NAL13041-165 | CRHE-DPT0215-058.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7589 | | | | |
| NAL13041-165 | CRHE-DPT0215-058.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7589 | | | | |
| NAL13041-165 | CRHE-DPT0215-058.0-20130326 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7589 | | | | |
| NAL13041-165 | CRHE-DPT0215-058.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7589 | | | | |
| NAL13041-165 | CRHE-DPT0215-058.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7589 | 50 | 120 | | |
| NAL13041-165 | CRHE-DPT0215-058.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 61 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7589 | 50 | 122 | | |
| NAL13041-165 | CRHE-DPT0215-058.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7589 | 50 | 94 | | |
| NAL13041-165 | CRHE-DPT0215-058.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7589 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-166 | CRHE-DPT0216-010.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7590 | | | | |
| NAL13041-166 | CRHE-DPT0216-010.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7590 | | | | |
| NAL13041-166 | CRHE-DPT0216-010.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7590 | | | | |
| NAL13041-166 | CRHE-DPT0216-010.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7590 | | | | |
| NAL13041-166 | CRHE-DPT0216-010.0-20130326 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7590 | | | | |
| NAL13041-166 | CRHE-DPT0216-010.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7590 | | | | |
| NAL13041-166 | CRHE-DPT0216-010.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7590 | 50 | 114 | | |
| NAL13041-166 | CRHE-DPT0216-010.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7590 | 50 | 118 | | |
| NAL13041-166 | CRHE-DPT0216-010.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7590 | 50 | 94 | | |
| NAL13041-166 | CRHE-DPT0216-010.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/26/2013 | 3/26/2013 | 3/26/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7590 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-170 | CRHE-DPT0216-033.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 120 | I | ug/L | 250 | 33 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7601 | | | | |
| NAL13041-170 | CRHE-DPT0216-033.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7601 | | | | |
| NAL13041-170 | CRHE-DPT0216-033.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7601 | | | | |
| NAL13041-170 | CRHE-DPT0216-033.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 640 | | ug/L | 250 | 50 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7601 | | | | |
| NAL13041-170 | CRHE-DPT0216-033.0-20130326 | TRG | 79-01-6 | Trichloroethene | 130 | I | ug/L | 250 | 55 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7601 | | | | |
| NAL13041-170 | CRHE-DPT0216-033.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7601 | | | | |
| NAL13041-170 | CRHE-DPT0216-033.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7601 | 50 | 114 | | |
| NAL13041-170 | CRHE-DPT0216-033.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7601 | 50 | 116 | | |
| NAL13041-170 | CRHE-DPT0216-033.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7601 | 50 | 92 | | |
| NAL13041-170 | CRHE-DPT0216-033.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7601 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-171 | CRHE-DPT0216-038.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 7200 | | ug/L | 1000 | 130 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7602 | | | | |
| NAL13041-171 | CRHE-DPT0216-038.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1000 | 180 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7602 | | | | |
| NAL13041-171 | CRHE-DPT0216-038.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1000 | 280 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7602 | | | | |
| NAL13041-171 | CRHE-DPT0216-038.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 34000 | | ug/L | 1000 | 200 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7602 | | | | |
| NAL13041-171 | CRHE-DPT0216-038.0-20130326 | TRG | 79-01-6 | Trichloroethene | 26000 | | ug/L | 1000 | 220 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7602 | | | | |
| NAL13041-171 | CRHE-DPT0216-038.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1000 | 160 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7602 | | | | |
| NAL13041-171 | CRHE-DPT0216-038.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7602 | 50 | 108 | | |
| NAL13041-171 | CRHE-DPT0216-038.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7602 | 50 | 106 | | |
| NAL13041-171 | CRHE-DPT0216-038.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7602 | 50 | 92 | | |
| NAL13041-171 | CRHE-DPT0216-038.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7602 | 50 | 92 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-174 | CRHE-DPT0217-010.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 5.9 | | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7623 | | | | |
| NAL13041-174 | CRHE-DPT0217-010.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7623 | | | | |
| NAL13041-174 | CRHE-DPT0217-010.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7623 | | | | |
| NAL13041-174 | CRHE-DPT0217-010.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1.4 | | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7623 | | | | |
| NAL13041-174 | CRHE-DPT0217-010.0-20130326 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7623 | | | | |
| NAL13041-174 | CRHE-DPT0217-010.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7623 | | | | |
| NAL13041-174 | CRHE-DPT0217-010.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7623 | 50 | 106 | | |
| NAL13041-174 | CRHE-DPT0217-010.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7623 | 50 | 100 | | |
| NAL13041-174 | CRHE-DPT0217-010.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7623 | 50 | 98 | | |
| NAL13041-174 | CRHE-DPT0217-010.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7623 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-175 | CRHE-DPT0217-018.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 440 | | ug/L | 50 | 6.5 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7624 | | | | |
| NAL13041-175 | CRHE-DPT0217-018.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7624 | | | | |
| NAL13041-175 | CRHE-DPT0217-018.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 170 | | ug/L | 50 | 14 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7624 | | | | |
| NAL13041-175 | CRHE-DPT0217-018.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 5800 | | ug/L | 50 | 10 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7624 | | | | |
| NAL13041-175 | CRHE-DPT0217-018.0-20130326 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 50 | 11 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7624 | | | | |
| NAL13041-175 | CRHE-DPT0217-018.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7624 | | | | |
| NAL13041-175 | CRHE-DPT0217-018.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7624 | 50 | 116 | | |
| NAL13041-175 | CRHE-DPT0217-018.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7624 | 50 | 118 | | |
| NAL13041-175 | CRHE-DPT0217-018.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7624 | 50 | 96 | | |
| NAL13041-175 | CRHE-DPT0217-018.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7624 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-177 | CRHE-DPT0217-028.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 2200 | | ug/L | 250 | 33 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7622 | | | | |
| NAL13041-177 | CRHE-DPT0217-028.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7622 | | | | |
| NAL13041-177 | CRHE-DPT0217-028.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 1400 | | ug/L | 250 | 70 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7622 | | | | |
| NAL13041-177 | CRHE-DPT0217-028.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 4900 | | ug/L | 250 | 50 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7622 | | | | |
| NAL13041-177 | CRHE-DPT0217-028.0-20130326 | TRG | 79-01-6 | Trichloroethene | 2100 | | ug/L | 250 | 55 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7622 | | | | |
| NAL13041-177 | CRHE-DPT0217-028.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7622 | | | | |
| NAL13041-177 | CRHE-DPT0217-028.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7622 | 50 | 120 | | |
| NAL13041-177 | CRHE-DPT0217-028.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7622 | 50 | 118 | | |
| NAL13041-177 | CRHE-DPT0217-028.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7622 | 50 | 98 | | |
| NAL13041-177 | CRHE-DPT0217-028.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7622 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-178 | CRHE-DPT0217-033.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 8200 | | ug/L | 250 | 33 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7621 | | | | |
| NAL13041-178 | CRHE-DPT0217-033.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | 6800 | | ug/L | 250 | 45 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7621 | | | | |
| NAL13041-178 | CRHE-DPT0217-033.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 740 | | ug/L | 250 | 70 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7621 | | | | |
| NAL13041-178 | CRHE-DPT0217-033.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 4500 | | ug/L | 250 | 50 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7621 | | | | |
| NAL13041-178 | CRHE-DPT0217-033.0-20130326 | TRG | 79-01-6 | Trichloroethene | 2100 | | ug/L | 250 | 55 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7621 | | | | |
| NAL13041-178 | CRHE-DPT0217-033.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7621 | | | | |
| NAL13041-178 | CRHE-DPT0217-033.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7621 | 50 | 110 | | |
| NAL13041-178 | CRHE-DPT0217-033.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7621 | 50 | 112 | | |
| NAL13041-178 | CRHE-DPT0217-033.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7621 | 50 | 98 | | |
| NAL13041-178 | CRHE-DPT0217-033.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7621 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-182 | CRHE-DPT0214-068.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 1.3 | | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7614 | | | | |
| NAL13041-182 | CRHE-DPT0214-068.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7614 | | | | |
| NAL13041-182 | CRHE-DPT0214-068.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7614 | | | | |
| NAL13041-182 | CRHE-DPT0214-068.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 7.4 | | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7614 | | | | |
| NAL13041-182 | CRHE-DPT0214-068.0-20130326 | TRG | 79-01-6 | Trichloroethene | 1.7 | | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7614 | | | | |
| NAL13041-182 | CRHE-DPT0214-068.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7614 | | | | |
| NAL13041-182 | CRHE-DPT0214-068.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7614 | 50 | 120 | | |
| NAL13041-182 | CRHE-DPT0214-068.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 61 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7614 | 50 | 122 | | |
| NAL13041-182 | CRHE-DPT0214-068.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7614 | 50 | 98 | | |
| NAL13041-182 | CRHE-DPT0214-068.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7614 | 50 | 104 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-155RR | CRHE-DPT0214-043.0-20130325 | TRG | 75-01-4 | Vinyl Chloride | 470 | | ug/L | 100 | 13 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7625 | | | | |
| NAL13041-155RR | CRHE-DPT0214-043.0-20130325 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 100 | 18 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7625 | | | | |
| NAL13041-155RR | CRHE-DPT0214-043.0-20130325 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 5600 | | ug/L | 100 | 28 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7625 | | | | |
| NAL13041-155RR | CRHE-DPT0214-043.0-20130325 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1700 | | ug/L | 100 | 20 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7625 | | | | |
| NAL13041-155RR | CRHE-DPT0214-043.0-20130325 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 100 | 22 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7625 | | | | |
| NAL13041-155RR | CRHE-DPT0214-043.0-20130325 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 100 | 16 | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7625 | | | | |
| NAL13041-155RR | CRHE-DPT0214-043.0-20130325 | SUR | 1868-53-7 | Dibromofluoromethane | 40 | | ug/L | | | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7625 | 50 | 80 | | |
| NAL13041-155RR | CRHE-DPT0214-043.0-20130325 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 37 | | ug/L | | | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7625 | 50 | 74 | | |
| NAL13041-155RR | CRHE-DPT0214-043.0-20130325 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7625 | 50 | 96 | | |
| NAL13041-155RR | CRHE-DPT0214-043.0-20130325 | SUR | 460-00-4 | Bromofluorobenzene | 44 | | ug/L | | | 3/25/2013 | 3/27/2013 | 3/27/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7625 | 50 | 88 | | |

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# FINAL ANALYTICAL REPORT

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**Project Site: NASA, Kennedy Space Center**

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032613CCVC | P032613CCVC | TRG | 75-01-4 | Vinyl Chloride | 47 | | ug/L | 1.0 | 0.13 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7596 | 50 | 94 | | |
| P032613CCVC | P032613CCVC | TRG | 75-35-4 | 1,1-Dichloroethene | 50 | | ug/L | 1.0 | 0.18 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7596 | 50 | 100 | | |
| P032613CCVC | P032613CCVC | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.28 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7596 | 50 | 102 | | |
| P032613CCVC | P032613CCVC | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.20 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7596 | 50 | 102 | | |
| P032613CCVC | P032613CCVC | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7596 | 50 | 102 | | |
| P032613CCVC | P032613CCVC | TRG | 127-18-4 | Tetrachloroethene | 47 | | ug/L | 1.0 | 0.16 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7596 | 50 | 94 | | |
| P032613CCVC | P032613CCVC | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7596 | 50 | 106 | | |
| P032613CCVC | P032613CCVC | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7596 | 50 | 108 | | |
| P032613CCVC | P032613CCVC | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7596 | 50 | 102 | | |
| P032613CCVC | P032613CCVC | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7596 | 50 | 102 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032613MBKB | P032613MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | | | | |
| P032613MBKB | P032613MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | | | | |
| P032613MBKB | P032613MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | | | | |
| P032613MBKB | P032613MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | | | | |
| P032613MBKB | P032613MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | | | | |
| P032613MBKB | P032613MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | | | | |
| P032613MBKB | P032613MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 44 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | 50 | 88 | | |
| P032613MBKB | P032613MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | 50 | 112 | | |
| P032613MBKB | P032613MBKB | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | 50 | 94 | | |
| P032613MBKB | P032613MBKB | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7598 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032713CCVC | P032713CCVC | TRG | 75-01-4 | Vinyl Chloride | 60 | | ug/L | 1.0 | 0.13 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7612 | 50 | 120 | | |
| P032713CCVC | P032713CCVC | TRG | 75-35-4 | 1,1-Dichloroethene | 45 | | ug/L | 1.0 | 0.18 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7612 | 50 | 90 | | |
| P032713CCVC | P032713CCVC | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 43 | | ug/L | 1.0 | 0.28 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7612 | 50 | 86 | | |
| P032713CCVC | P032713CCVC | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 57 | | ug/L | 1.0 | 0.20 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7612 | 50 | 114 | | |
| P032713CCVC | P032713CCVC | TRG | 79-01-6 | Trichloroethene | 56 | | ug/L | 1.0 | 0.22 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7612 | 50 | 112 | | |
| P032713CCVC | P032713CCVC | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7612 | 50 | 102 | | |
| P032713CCVC | P032713CCVC | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7612 | 50 | 96 | | |
| P032713CCVC | P032713CCVC | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7612 | 50 | 116 | | |
| P032713CCVC | P032713CCVC | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7612 | 50 | 102 | | |
| P032713CCVC | P032713CCVC | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7612 | 50 | 104 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032713MBKA | P032713MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7613 | | | | |
| P032713MBKA | P032713MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7613 | | | | |
| P032713MBKA | P032713MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7613 | | | | |
| P032713MBKA | P032713MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7613 | | | | |
| P032713MBKA | P032713MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7613 | | | | |
| P032713MBKA | P032713MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7613 | | | | |
| P032713MBKA | P032713MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7613 | 50 | 106 | | |
| P032713MBKA | P032713MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7613 | 50 | 110 | | |
| P032713MBKA | P032713MBKA | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7613 | 50 | 98 | | |
| P032713MBKA | P032713MBKA | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7613 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032713ALCS | P032713ALCS | TRG | 75-01-4 | Vinyl Chloride | 58 | | ug/L | 1.0 | 0.13 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7626 | 50 | 116 | | |
| P032713ALCS | P032713ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 44 | | ug/L | 1.0 | 0.18 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7626 | 50 | 88 | | |
| P032713ALCS | P032713ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 45 | | ug/L | 1.0 | 0.28 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7626 | 50 | 90 | | |
| P032713ALCS | P032713ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.20 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7626 | 50 | 102 | | |
| P032713ALCS | P032713ALCS | TRG | 79-01-6 | Trichloroethene | 48 | | ug/L | 1.0 | 0.22 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7626 | 50 | 96 | | |
| P032713ALCS | P032713ALCS | TRG | 127-18-4 | Tetrachloroethene | 47 | | ug/L | 1.0 | 0.16 | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7626 | 50 | 94 | | |
| P032713ALCS | P032713ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7626 | 50 | 104 | | |
| P032713ALCS | P032713ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7626 | 50 | 100 | | |
| P032713ALCS | P032713ALCS | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7626 | 50 | 100 | | |
| P032713ALCS | P032713ALCS | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | NA | 3/27/2013 | 3/27/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7626 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-182MS | CRHE-DPT0214-068.0-20130326MS | TRG | 75-01-4 | Vinyl Chloride | 62 | | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7628 | 50 | 121 | | 1.3 |
| NAL13041-182MS | CRHE-DPT0214-068.0-20130326MS | TRG | 75-35-4 | 1,1-Dichloroethene | 46 | | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7628 | 50 | 92 | | |
| NAL13041-182MS | CRHE-DPT0214-068.0-20130326MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 47 | | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7628 | 50 | 94 | | |
| NAL13041-182MS | CRHE-DPT0214-068.0-20130326MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7628 | 50 | 108 | | 7.4 |
| NAL13041-182MS | CRHE-DPT0214-068.0-20130326MS | TRG | 79-01-6 | Trichloroethene | 53 | | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7628 | 50 | 106 | | 1.7 |
| NAL13041-182MS | CRHE-DPT0214-068.0-20130326MS | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7628 | 50 | 102 | | |
| NAL13041-182MS | CRHE-DPT0214-068.0-20130326MS | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7628 | 50 | 106 | | |
| NAL13041-182MS | CRHE-DPT0214-068.0-20130326MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7628 | 50 | 102 | | |
| NAL13041-182MS | CRHE-DPT0214-068.0-20130326MS | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7628 | 50 | 102 | | |
| NAL13041-182MS | CRHE-DPT0214-068.0-20130326MS | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7628 | 50 | 100 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-182MSD | CRHE-DPT0214-068.0-20130326MSD | TRG | 75-01-4 | Vinyl Chloride | 53 | | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7629 | 50 | 103 | 16 | 1.3 |
| NAL13041-182MSD | CRHE-DPT0214-068.0-20130326MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 42 | | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7629 | 50 | 84 | 9 | |
| NAL13041-182MSD | CRHE-DPT0214-068.0-20130326MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 42 | | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7629 | 50 | 84 | 11 | |
| NAL13041-182MSD | CRHE-DPT0214-068.0-20130326MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 43 | | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7629 | 50 | 86 | 23 | 7.4 |
| NAL13041-182MSD | CRHE-DPT0214-068.0-20130326MSD | TRG | 79-01-6 | Trichloroethene | 47 | | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7629 | 50 | 94 | 12 | 1.7 |
| NAL13041-182MSD | CRHE-DPT0214-068.0-20130326MSD | TRG | 127-18-4 | Tetrachloroethene | 48 | | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7629 | 50 | 96 | 6 | |
| NAL13041-182MSD | CRHE-DPT0214-068.0-20130326MSD | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7629 | 50 | 102 | 4 | |
| NAL13041-182MSD | CRHE-DPT0214-068.0-20130326MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7629 | 50 | 100 | 2 | |
| NAL13041-182MSD | CRHE-DPT0214-068.0-20130326MSD | SUR | 2037-26-5 | Toluene d8 | 52 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7629 | 50 | 104 | 2 | |
| NAL13041-182MSD | CRHE-DPT0214-068.0-20130326MSD | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 3/26/2013 | 3/27/2013 | 3/27/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7629 | 50 | 102 | 2 | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-183 | CRHE-DPT0218-010.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7650 | | | | |
| NAL13041-183 | CRHE-DPT0218-010.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7650 | | | | |
| NAL13041-183 | CRHE-DPT0218-010.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7650 | | | | |
| NAL13041-183 | CRHE-DPT0218-010.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1.1 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7650 | | | | |
| NAL13041-183 | CRHE-DPT0218-010.0-20130327 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7650 | | | | |
| NAL13041-183 | CRHE-DPT0218-010.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7650 | | | | |
| NAL13041-183 | CRHE-DPT0218-010.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 61 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7650 | 50 | 122 | | |
| NAL13041-183 | CRHE-DPT0218-010.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 63 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7650 | 50 | 126 | | |
| NAL13041-183 | CRHE-DPT0218-010.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7650 | 50 | 94 | | |
| NAL13041-183 | CRHE-DPT0218-010.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7650 | 50 | 100 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-184 | CRHE-DPT0218-018.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | 1.1 | | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7651 | | | | |
| NAL13041-184 | CRHE-DPT0218-018.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7651 | | | | |
| NAL13041-184 | CRHE-DPT0218-018.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7651 | | | | |
| NAL13041-184 | CRHE-DPT0218-018.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7651 | | | | |
| NAL13041-184 | CRHE-DPT0218-018.0-20130327 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7651 | | | | |
| NAL13041-184 | CRHE-DPT0218-018.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7651 | | | | |
| NAL13041-184 | CRHE-DPT0218-018.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7651 | 50 | 120 | | |
| NAL13041-184 | CRHE-DPT0218-018.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 63 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7651 | 50 | 126 | | |
| NAL13041-184 | CRHE-DPT0218-018.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7651 | 50 | 96 | | |
| NAL13041-184 | CRHE-DPT0218-018.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7651 | 50 | 100 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-185 | CRHE-DPT0218-023.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | 18 | | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7652 | | | | |
| NAL13041-185 | CRHE-DPT0218-023.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7652 | | | | |
| NAL13041-185 | CRHE-DPT0218-023.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 1.9 | | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7652 | | | | |
| NAL13041-185 | CRHE-DPT0218-023.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 13 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7652 | | | | |
| NAL13041-185 | CRHE-DPT0218-023.0-20130327 | TRG | 79-01-6 | Trichloroethene | 2.0 | | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7652 | | | | |
| NAL13041-185 | CRHE-DPT0218-023.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7652 | | | | |
| NAL13041-185 | CRHE-DPT0218-023.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7652 | 50 | 120 | | |
| NAL13041-185 | CRHE-DPT0218-023.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7652 | 50 | 120 | | |
| NAL13041-185 | CRHE-DPT0218-023.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7652 | 50 | 96 | | |
| NAL13041-185 | CRHE-DPT0218-023.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7652 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-186 | CRHE-DPT0218-028.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | 1500 | | ug/L | 50 | 6.5 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7653 | | | | |
| NAL13041-186 | CRHE-DPT0218-028.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7653 | | | | |
| NAL13041-186 | CRHE-DPT0218-028.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 50 | 14 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7653 | | | | |
| NAL13041-186 | CRHE-DPT0218-028.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 50 | 10 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7653 | | | | |
| NAL13041-186 | CRHE-DPT0218-028.0-20130327 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 50 | 11 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7653 | | | | |
| NAL13041-186 | CRHE-DPT0218-028.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7653 | | | | |
| NAL13041-186 | CRHE-DPT0218-028.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7653 | 50 | 116 | | |
| NAL13041-186 | CRHE-DPT0218-028.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 62 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7653 | 50 | 124 | | |
| NAL13041-186 | CRHE-DPT0218-028.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7653 | 50 | 96 | | |
| NAL13041-186 | CRHE-DPT0218-028.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7653 | 50 | 102 | | |

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# FINAL ANALYTICAL REPORT

**Geosyntec Consultants**
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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-187 | CRHE-DPT0218-033.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 50 | 6.5 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7654 | | | | |
| NAL13041-187 | CRHE-DPT0218-033.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7654 | | | | |
| NAL13041-187 | CRHE-DPT0218-033.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 50 | 14 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7654 | | | | |
| NAL13041-187 | CRHE-DPT0218-033.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 120 | | ug/L | 50 | 10 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7654 | | | | |
| NAL13041-187 | CRHE-DPT0218-033.0-20130327 | TRG | 79-01-6 | Trichloroethene | 23 | I | ug/L | 50 | 11 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7654 | | | | |
| NAL13041-187 | CRHE-DPT0218-033.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7654 | | | | |
| NAL13041-187 | CRHE-DPT0218-033.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7654 | 50 | 116 | | |
| NAL13041-187 | CRHE-DPT0218-033.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 61 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7654 | 50 | 122 | | |
| NAL13041-187 | CRHE-DPT0218-033.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7654 | 50 | 94 | | |
| NAL13041-187 | CRHE-DPT0218-033.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7654 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-188 | CRHE-DPT0218-038.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | 110 | | ug/L | 50 | 6.5 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7655 | | | | |
| NAL13041-188 | CRHE-DPT0218-038.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7655 | | | | |
| NAL13041-188 | CRHE-DPT0218-038.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 50 | 14 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7655 | | | | |
| NAL13041-188 | CRHE-DPT0218-038.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 330 | | ug/L | 50 | 10 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7655 | | | | |
| NAL13041-188 | CRHE-DPT0218-038.0-20130327 | TRG | 79-01-6 | Trichloroethene | 290 | | ug/L | 50 | 11 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7655 | | | | |
| NAL13041-188 | CRHE-DPT0218-038.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7655 | | | | |
| NAL13041-188 | CRHE-DPT0218-038.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7655 | 50 | 104 | | |
| NAL13041-188 | CRHE-DPT0218-038.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7655 | 50 | 108 | | |
| NAL13041-188 | CRHE-DPT0218-038.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7655 | 50 | 96 | | |
| NAL13041-188 | CRHE-DPT0218-038.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7655 | 50 | 100 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-189 | CRHE-DPT0218-043.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | 12 | | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7656 | | | | |
| NAL13041-189 | CRHE-DPT0218-043.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7656 | | | | |
| NAL13041-189 | CRHE-DPT0218-043.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 2.3 | | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7656 | | | | |
| NAL13041-189 | CRHE-DPT0218-043.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 88 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7656 | | | | |
| NAL13041-189 | CRHE-DPT0218-043.0-20130327 | TRG | 79-01-6 | Trichloroethene | 61 | | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7656 | | | | |
| NAL13041-189 | CRHE-DPT0218-043.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7656 | | | | |
| NAL13041-189 | CRHE-DPT0218-043.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7656 | 50 | 114 | | |
| NAL13041-189 | CRHE-DPT0218-043.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7656 | 50 | 116 | | |
| NAL13041-189 | CRHE-DPT0218-043.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7656 | 50 | 96 | | |
| NAL13041-189 | CRHE-DPT0218-043.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 53 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7656 | 50 | 106 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-190 | CRHE-DPT0218-058.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7648 | | | | |
| NAL13041-190 | CRHE-DPT0218-058.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7648 | | | | |
| NAL13041-190 | CRHE-DPT0218-058.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7648 | | | | |
| NAL13041-190 | CRHE-DPT0218-058.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7648 | | | | |
| NAL13041-190 | CRHE-DPT0218-058.0-20130327 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7648 | | | | |
| NAL13041-190 | CRHE-DPT0218-058.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7648 | | | | |
| NAL13041-190 | CRHE-DPT0218-058.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 61 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7648 | 50 | 122 | | |
| NAL13041-190 | CRHE-DPT0218-058.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 63 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7648 | 50 | 126 | | |
| NAL13041-190 | CRHE-DPT0218-058.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7648 | 50 | 96 | | |
| NAL13041-190 | CRHE-DPT0218-058.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7648 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-191 | CRHE-DPT0219-010.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | 1.2 | | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7657 | | | | |
| NAL13041-191 | CRHE-DPT0219-010.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7657 | | | | |
| NAL13041-191 | CRHE-DPT0219-010.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7657 | | | | |
| NAL13041-191 | CRHE-DPT0219-010.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 5.4 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7657 | | | | |
| NAL13041-191 | CRHE-DPT0219-010.0-20130327 | TRG | 79-01-6 | Trichloroethene | 3.1 | | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7657 | | | | |
| NAL13041-191 | CRHE-DPT0219-010.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7657 | | | | |
| NAL13041-191 | CRHE-DPT0219-010.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7657 | 50 | 120 | | |
| NAL13041-191 | CRHE-DPT0219-010.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7657 | 50 | 118 | | |
| NAL13041-191 | CRHE-DPT0219-010.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7657 | 50 | 96 | | |
| NAL13041-191 | CRHE-DPT0219-010.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7657 | 50 | 104 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-192 | CRHE-DPT0219-018.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7658 | | | | |
| NAL13041-192 | CRHE-DPT0219-018.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7658 | | | | |
| NAL13041-192 | CRHE-DPT0219-018.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7658 | | | | |
| NAL13041-192 | CRHE-DPT0219-018.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7658 | | | | |
| NAL13041-192 | CRHE-DPT0219-018.0-20130327 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7658 | | | | |
| NAL13041-192 | CRHE-DPT0219-018.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7658 | | | | |
| NAL13041-192 | CRHE-DPT0219-018.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7658 | 50 | 110 | | |
| NAL13041-192 | CRHE-DPT0219-018.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7658 | 50 | 116 | | |
| NAL13041-192 | CRHE-DPT0219-018.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7658 | 50 | 96 | | |
| NAL13041-192 | CRHE-DPT0219-018.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7658 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-193 | CRHE-DPT0219-023.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | 57 | | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7659 | | | | |
| NAL13041-193 | CRHE-DPT0219-023.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7659 | | | | |
| NAL13041-193 | CRHE-DPT0219-023.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7659 | | | | |
| NAL13041-193 | CRHE-DPT0219-023.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 270 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7659 | | | | |
| NAL13041-193 | CRHE-DPT0219-023.0-20130327 | TRG | 79-01-6 | Trichloroethene | 150 | | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7659 | | | | |
| NAL13041-193 | CRHE-DPT0219-023.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7659 | | | | |
| NAL13041-193 | CRHE-DPT0219-023.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7659 | 50 | 112 | | |
| NAL13041-193 | CRHE-DPT0219-023.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7659 | 50 | 114 | | |
| NAL13041-193 | CRHE-DPT0219-023.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7659 | 50 | 98 | | |
| NAL13041-193 | CRHE-DPT0219-023.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7659 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-194 | CRHE-DPT0219-028.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 50 | 6.5 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7660 | | | | |
| NAL13041-194 | CRHE-DPT0219-028.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7660 | | | | |
| NAL13041-194 | CRHE-DPT0219-028.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 50 | 14 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7660 | | | | |
| NAL13041-194 | CRHE-DPT0219-028.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 35 | I | ug/L | 50 | 10 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7660 | | | | |
| NAL13041-194 | CRHE-DPT0219-028.0-20130327 | TRG | 79-01-6 | Trichloroethene | 27 | I | ug/L | 50 | 11 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7660 | | | | |
| NAL13041-194 | CRHE-DPT0219-028.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7660 | | | | |
| NAL13041-194 | CRHE-DPT0219-028.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7660 | 50 | 116 | | |
| NAL13041-194 | CRHE-DPT0219-028.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7660 | 50 | 120 | | |
| NAL13041-194 | CRHE-DPT0219-028.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7660 | 50 | 94 | | |
| NAL13041-194 | CRHE-DPT0219-028.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7660 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-196 | CRHE-DPT0219-038.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7662 | | | | |
| NAL13041-196 | CRHE-DPT0219-038.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7662 | | | | |
| NAL13041-196 | CRHE-DPT0219-038.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7662 | | | | |
| NAL13041-196 | CRHE-DPT0219-038.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7662 | | | | |
| NAL13041-196 | CRHE-DPT0219-038.0-20130327 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7662 | | | | |
| NAL13041-196 | CRHE-DPT0219-038.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7662 | | | | |
| NAL13041-196 | CRHE-DPT0219-038.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7662 | 50 | 118 | | |
| NAL13041-196 | CRHE-DPT0219-038.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 62 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7662 | 50 | 124 | | |
| NAL13041-196 | CRHE-DPT0219-038.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7662 | 50 | 94 | | |
| NAL13041-196 | CRHE-DPT0219-038.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7662 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-197 | CRHE-DPT0219-043.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7663 | | | | |
| NAL13041-197 | CRHE-DPT0219-043.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7663 | | | | |
| NAL13041-197 | CRHE-DPT0219-043.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7663 | | | | |
| NAL13041-197 | CRHE-DPT0219-043.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7663 | | | | |
| NAL13041-197 | CRHE-DPT0219-043.0-20130327 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7663 | | | | |
| NAL13041-197 | CRHE-DPT0219-043.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7663 | | | | |
| NAL13041-197 | CRHE-DPT0219-043.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7663 | 50 | 110 | | |
| NAL13041-197 | CRHE-DPT0219-043.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7663 | 50 | 116 | | |
| NAL13041-197 | CRHE-DPT0219-043.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7663 | 50 | 96 | | |
| NAL13041-197 | CRHE-DPT0219-043.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7663 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-198 | CRHE-DPT0219-058.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7647 | | | | |
| NAL13041-198 | CRHE-DPT0219-058.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7647 | | | | |
| NAL13041-198 | CRHE-DPT0219-058.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7647 | | | | |
| NAL13041-198 | CRHE-DPT0219-058.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7647 | | | | |
| NAL13041-198 | CRHE-DPT0219-058.0-20130327 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7647 | | | | |
| NAL13041-198 | CRHE-DPT0219-058.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7647 | | | | |
| NAL13041-198 | CRHE-DPT0219-058.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7647 | 50 | 120 | | |
| NAL13041-198 | CRHE-DPT0219-058.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 64 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7647 | 50 | 128 | | |
| NAL13041-198 | CRHE-DPT0219-058.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7647 | 50 | 94 | | |
| NAL13041-198 | CRHE-DPT0219-058.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7647 | 50 | 98 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-206 | CRHE-IDW193861-20130327 | TRG | 75-01-4 | Vinyl Chloride | 56 | | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7649 | | | | |
| NAL13041-206 | CRHE-IDW193861-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7649 | | | | |
| NAL13041-206 | CRHE-IDW193861-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 21 | | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7649 | | | | |
| NAL13041-206 | CRHE-IDW193861-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 600 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7649 | | | | |
| NAL13041-206 | CRHE-IDW193861-20130327 | TRG | 79-01-6 | Trichloroethene | 140 | | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7649 | | | | |
| NAL13041-206 | CRHE-IDW193861-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7649 | | | | |
| NAL13041-206 | CRHE-IDW193861-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7649 | 50 | 118 | | |
| NAL13041-206 | CRHE-IDW193861-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 61 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7649 | 50 | 122 | | |
| NAL13041-206 | CRHE-IDW193861-20130327 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7649 | 50 | 96 | | |
| NAL13041-206 | CRHE-IDW193861-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7649 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-208 | CRHE-DPT0220-068.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | 1.1 | | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7646 | | | | |
| NAL13041-208 | CRHE-DPT0220-068.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7646 | | | | |
| NAL13041-208 | CRHE-DPT0220-068.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 1.5 | | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7646 | | | | |
| NAL13041-208 | CRHE-DPT0220-068.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 14 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7646 | | | | |
| NAL13041-208 | CRHE-DPT0220-068.0-20130327 | TRG | 79-01-6 | Trichloroethene | 6.5 | | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7646 | | | | |
| NAL13041-208 | CRHE-DPT0220-068.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7646 | | | | |
| NAL13041-208 | CRHE-DPT0220-068.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 61 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7646 | 50 | 122 | | |
| NAL13041-208 | CRHE-DPT0220-068.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 63 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7646 | 50 | 126 | | |
| NAL13041-208 | CRHE-DPT0220-068.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7646 | 50 | 94 | | |
| NAL13041-208 | CRHE-DPT0220-068.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7646 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-209 | CRHE-DPT0216-068.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | 1.5 | | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7645 | | | | |
| NAL13041-209 | CRHE-DPT0216-068.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7645 | | | | |
| NAL13041-209 | CRHE-DPT0216-068.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 1.7 | | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7645 | | | | |
| NAL13041-209 | CRHE-DPT0216-068.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 22 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7645 | | | | |
| NAL13041-209 | CRHE-DPT0216-068.0-20130327 | TRG | 79-01-6 | Trichloroethene | 19 | | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7645 | | | | |
| NAL13041-209 | CRHE-DPT0216-068.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7645 | | | | |
| NAL13041-209 | CRHE-DPT0216-068.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7645 | 50 | 104 | | |
| NAL13041-209 | CRHE-DPT0216-068.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7645 | 50 | 120 | | |
| NAL13041-209 | CRHE-DPT0216-068.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7645 | 50 | 94 | | |
| NAL13041-209 | CRHE-DPT0216-068.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7645 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-210 | CRHE-DPT0217-068.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7644 | | | | |
| NAL13041-210 | CRHE-DPT0217-068.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7644 | | | | |
| NAL13041-210 | CRHE-DPT0217-068.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7644 | | | | |
| NAL13041-210 | CRHE-DPT0217-068.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 5.9 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7644 | | | | |
| NAL13041-210 | CRHE-DPT0217-068.0-20130327 | TRG | 79-01-6 | Trichloroethene | 8.5 | | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7644 | | | | |
| NAL13041-210 | CRHE-DPT0217-068.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7644 | | | | |
| NAL13041-210 | CRHE-DPT0217-068.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 37 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7644 | 50 | 74 | | |
| NAL13041-210 | CRHE-DPT0217-068.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 38 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7644 | 50 | 76 | | |
| NAL13041-210 | CRHE-DPT0217-068.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7644 | 50 | 94 | | |
| NAL13041-210 | CRHE-DPT0217-068.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7644 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032713CCVE | P032713CCVE | TRG | 75-01-4 | Vinyl Chloride | 59 | | ug/L | 1.0 | 0.13 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7641 | 50 | 118 | | |
| P032713CCVE | P032713CCVE | TRG | 75-35-4 | 1,1-Dichloroethene | 47 | | ug/L | 1.0 | 0.18 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7641 | 50 | 94 | | |
| P032713CCVE | P032713CCVE | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 49 | | ug/L | 1.0 | 0.28 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7641 | 50 | 98 | | |
| P032713CCVE | P032713CCVE | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 50 | | ug/L | 1.0 | 0.20 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7641 | 50 | 100 | | |
| P032713CCVE | P032713CCVE | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7641 | 50 | 102 | | |
| P032713CCVE | P032713CCVE | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7641 | 50 | 102 | | |
| P032713CCVE | P032713CCVE | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7641 | 50 | 106 | | |
| P032713CCVE | P032713CCVE | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7641 | 50 | 104 | | |
| P032713CCVE | P032713CCVE | SUR | 2037-26-5 | Toluene d8 | 52 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7641 | 50 | 104 | | |
| P032713CCVE | P032713CCVE | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7641 | 50 | 102 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032713MBKC | P032713MBKC | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7643 | | | | |
| P032713MBKC | P032713MBKC | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7643 | | | | |
| P032713MBKC | P032713MBKC | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7643 | | | | |
| P032713MBKC | P032713MBKC | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7643 | | | | |
| P032713MBKC | P032713MBKC | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7643 | | | | |
| P032713MBKC | P032713MBKC | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7643 | | | | |
| P032713MBKC | P032713MBKC | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7643 | 50 | 120 | | |
| P032713MBKC | P032713MBKC | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 61 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7643 | 50 | 122 | | |
| P032713MBKC | P032713MBKC | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7643 | 50 | 96 | | |
| P032713MBKC | P032713MBKC | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7643 | 50 | 98 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032813CCVA | P032813CCVA | TRG | 75-01-4 | Vinyl Chloride | 53 | | ug/L | 1.0 | 0.13 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 106 | | |
| P032813CCVA | P032813CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 48 | | ug/L | 1.0 | 0.18 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 96 | | |
| P032813CCVA | P032813CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 46 | | ug/L | 1.0 | 0.28 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 92 | | |
| P032813CCVA | P032813CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 46 | | ug/L | 1.0 | 0.20 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 92 | | |
| P032813CCVA | P032813CCVA | TRG | 79-01-6 | Trichloroethene | 53 | | ug/L | 1.0 | 0.22 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 106 | | |
| P032813CCVA | P032813CCVA | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 108 | | |
| P032813CCVA | P032813CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 102 | | |
| P032813CCVA | P032813CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 104 | | |
| P032813CCVA | P032813CCVA | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 102 | | |
| P032813CCVA | P032813CCVA | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 102 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032813MBKB | P032813MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | | | | |
| P032813MBKB | P032813MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | | | | |
| P032813MBKB | P032813MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | | | | |
| P032813MBKB | P032813MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | | | | |
| P032813MBKB | P032813MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | | | | |
| P032813MBKB | P032813MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | | | | |
| P032813MBKB | P032813MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | 50 | 112 | | |
| P032813MBKB | P032813MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | 50 | 118 | | |
| P032813MBKB | P032813MBKB | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | 50 | 94 | | |
| P032813MBKB | P032813MBKB | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032813ALCS | P032813ALCS | TRG | 75-01-4 | Vinyl Chloride | 44 | | ug/L | 1.0 | 0.13 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7665 | 50 | 88 | | |
| P032813ALCS | P032813ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 39 | | ug/L | 1.0 | 0.18 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7665 | 50 | 78 | | |
| P032813ALCS | P032813ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 38 | | ug/L | 1.0 | 0.28 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7665 | 50 | 76 | | |
| P032813ALCS | P032813ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 39 | | ug/L | 1.0 | 0.20 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7665 | 50 | 78 | | |
| P032813ALCS | P032813ALCS | TRG | 79-01-6 | Trichloroethene | 48 | | ug/L | 1.0 | 0.22 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7665 | 50 | 96 | | |
| P032813ALCS | P032813ALCS | TRG | 127-18-4 | Tetrachloroethene | 47 | | ug/L | 1.0 | 0.16 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7665 | 50 | 94 | | |
| P032813ALCS | P032813ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7665 | 50 | 98 | | |
| P032813ALCS | P032813ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7665 | 50 | 96 | | |
| P032813ALCS | P032813ALCS | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7665 | 50 | 98 | | |
| P032813ALCS | P032813ALCS | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7665 | 50 | 102 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-197MS | CRHE-DPT0219-043.0-20130327MS | TRG | 75-01-4 | Vinyl Chloride | 51 | | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7666 | 50 | 102 | | |
| NAL13041-197MS | CRHE-DPT0219-043.0-20130327MS | TRG | 75-35-4 | 1,1-Dichloroethene | 47 | | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7666 | 50 | 94 | | |
| NAL13041-197MS | CRHE-DPT0219-043.0-20130327MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 46 | | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7666 | 50 | 92 | | |
| NAL13041-197MS | CRHE-DPT0219-043.0-20130327MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 46 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7666 | 50 | 92 | | |
| NAL13041-197MS | CRHE-DPT0219-043.0-20130327MS | TRG | 79-01-6 | Trichloroethene | 52 | | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7666 | 50 | 104 | | |
| NAL13041-197MS | CRHE-DPT0219-043.0-20130327MS | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7666 | 50 | 102 | | |
| NAL13041-197MS | CRHE-DPT0219-043.0-20130327MS | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7666 | 50 | 104 | | |
| NAL13041-197MS | CRHE-DPT0219-043.0-20130327MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7666 | 50 | 104 | | |
| NAL13041-197MS | CRHE-DPT0219-043.0-20130327MS | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7666 | 50 | 102 | | |
| NAL13041-197MS | CRHE-DPT0219-043.0-20130327MS | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7666 | 50 | 104 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-197MSD | CRHE-DPT0219-043.0-20130327MSD | TRG | 75-01-4 | Vinyl Chloride | 47 | | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7667 | 50 | 94 | 8 | |
| NAL13041-197MSD | CRHE-DPT0219-043.0-20130327MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 40 | | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7667 | 50 | 80 | 16 | |
| NAL13041-197MSD | CRHE-DPT0219-043.0-20130327MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 40 | | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7667 | 50 | 80 | 14 | |
| NAL13041-197MSD | CRHE-DPT0219-043.0-20130327MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 42 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7667 | 50 | 84 | 9 | |
| NAL13041-197MSD | CRHE-DPT0219-043.0-20130327MSD | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7667 | 50 | 100 | 4 | |
| NAL13041-197MSD | CRHE-DPT0219-043.0-20130327MSD | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7667 | 50 | 100 | 2 | |
| NAL13041-197MSD | CRHE-DPT0219-043.0-20130327MSD | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7667 | 50 | 94 | 10 | |
| NAL13041-197MSD | CRHE-DPT0219-043.0-20130327MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7667 | 50 | 94 | 10 | |
| NAL13041-197MSD | CRHE-DPT0219-043.0-20130327MSD | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7667 | 50 | 100 | 2 | |
| NAL13041-197MSD | CRHE-DPT0219-043.0-20130327MSD | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7667 | 50 | 102 | 2 | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-199 | CRHE-DPT0220-010.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7669 | | | | |
| NAL13041-199 | CRHE-DPT0220-010.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7669 | | | | |
| NAL13041-199 | CRHE-DPT0220-010.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7669 | | | | |
| NAL13041-199 | CRHE-DPT0220-010.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7669 | | | | |
| NAL13041-199 | CRHE-DPT0220-010.0-20130327 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7669 | | | | |
| NAL13041-199 | CRHE-DPT0220-010.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7669 | | | | |
| NAL13041-199 | CRHE-DPT0220-010.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7669 | 50 | 98 | | |
| NAL13041-199 | CRHE-DPT0220-010.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7669 | 50 | 96 | | |
| NAL13041-199 | CRHE-DPT0220-010.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7669 | 50 | 96 | | |
| NAL13041-199 | CRHE-DPT0220-010.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7669 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-200 | CRHE-DPT0220-018.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7670 | | | | |
| NAL13041-200 | CRHE-DPT0220-018.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7670 | | | | |
| NAL13041-200 | CRHE-DPT0220-018.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 1.5 | | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7670 | | | | |
| NAL13041-200 | CRHE-DPT0220-018.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7670 | | | | |
| NAL13041-200 | CRHE-DPT0220-018.0-20130327 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7670 | | | | |
| NAL13041-200 | CRHE-DPT0220-018.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7670 | | | | |
| NAL13041-200 | CRHE-DPT0220-018.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7670 | 50 | 116 | | |
| NAL13041-200 | CRHE-DPT0220-018.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 61 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7670 | 50 | 122 | | |
| NAL13041-200 | CRHE-DPT0220-018.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7670 | 50 | 94 | | |
| NAL13041-200 | CRHE-DPT0220-018.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7670 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-202 | CRHE-DPT0220-028.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | 83 | | ug/L | 50 | 6.5 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7672 | | | | |
| NAL13041-202 | CRHE-DPT0220-028.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | 150 | | ug/L | 50 | 9.0 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7672 | | | | |
| NAL13041-202 | CRHE-DPT0220-028.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 76 | | ug/L | 50 | 14 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7672 | | | | |
| NAL13041-202 | CRHE-DPT0220-028.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 590 | | ug/L | 50 | 10 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7672 | | | | |
| NAL13041-202 | CRHE-DPT0220-028.0-20130327 | TRG | 79-01-6 | Trichloroethene | 680 | | ug/L | 50 | 11 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7672 | | | | |
| NAL13041-202 | CRHE-DPT0220-028.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7672 | | | | |
| NAL13041-202 | CRHE-DPT0220-028.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7672 | 50 | 110 | | |
| NAL13041-202 | CRHE-DPT0220-028.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7672 | 50 | 114 | | |
| NAL13041-202 | CRHE-DPT0220-028.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7672 | 50 | 96 | | |
| NAL13041-202 | CRHE-DPT0220-028.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7672 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-204 | CRHE-DPT0220-038.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7674 | | | | |
| NAL13041-204 | CRHE-DPT0220-038.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7674 | | | | |
| NAL13041-204 | CRHE-DPT0220-038.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7674 | | | | |
| NAL13041-204 | CRHE-DPT0220-038.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7674 | | | | |
| NAL13041-204 | CRHE-DPT0220-038.0-20130327 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7674 | | | | |
| NAL13041-204 | CRHE-DPT0220-038.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7674 | | | | |
| NAL13041-204 | CRHE-DPT0220-038.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7674 | 50 | 118 | | |
| NAL13041-204 | CRHE-DPT0220-038.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 62 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7674 | 50 | 124 | | |
| NAL13041-204 | CRHE-DPT0220-038.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7674 | 50 | 94 | | |
| NAL13041-204 | CRHE-DPT0220-038.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/27/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7674 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-211 | CRHE-DPT0221-010.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7677 | | | | |
| NAL13041-211 | CRHE-DPT0221-010.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7677 | | | | |
| NAL13041-211 | CRHE-DPT0221-010.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7677 | | | | |
| NAL13041-211 | CRHE-DPT0221-010.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7677 | | | | |
| NAL13041-211 | CRHE-DPT0221-010.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7677 | | | | |
| NAL13041-211 | CRHE-DPT0221-010.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7677 | | | | |
| NAL13041-211 | CRHE-DPT0221-010.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7677 | 50 | 120 | | |
| NAL13041-211 | CRHE-DPT0221-010.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 63 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7677 | 50 | 126 | | |
| NAL13041-211 | CRHE-DPT0221-010.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7677 | 50 | 96 | | |
| NAL13041-211 | CRHE-DPT0221-010.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7677 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-218 | CRHE-DPT0221-058.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | 1.4 | | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7678 | | | | |
| NAL13041-218 | CRHE-DPT0221-058.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7678 | | | | |
| NAL13041-218 | CRHE-DPT0221-058.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7678 | | | | |
| NAL13041-218 | CRHE-DPT0221-058.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 4.5 | | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7678 | | | | |
| NAL13041-218 | CRHE-DPT0221-058.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7678 | | | | |
| NAL13041-218 | CRHE-DPT0221-058.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7678 | | | | |
| NAL13041-218 | CRHE-DPT0221-058.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7678 | 50 | 118 | | |
| NAL13041-218 | CRHE-DPT0221-058.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 63 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7678 | 50 | 126 | | |
| NAL13041-218 | CRHE-DPT0221-058.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7678 | 50 | 96 | | |
| NAL13041-218 | CRHE-DPT0221-058.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7678 | 50 | 100 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-219 | CRHE-DPT0222-010.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7679 | | | | |
| NAL13041-219 | CRHE-DPT0222-010.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7679 | | | | |
| NAL13041-219 | CRHE-DPT0222-010.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7679 | | | | |
| NAL13041-219 | CRHE-DPT0222-010.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7679 | | | | |
| NAL13041-219 | CRHE-DPT0222-010.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7679 | | | | |
| NAL13041-219 | CRHE-DPT0222-010.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7679 | | | | |
| NAL13041-219 | CRHE-DPT0222-010.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 61 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7679 | 50 | 122 | | |
| NAL13041-219 | CRHE-DPT0222-010.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 65 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7679 | 50 | 130 | | |
| NAL13041-219 | CRHE-DPT0222-010.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7679 | 50 | 94 | | |
| NAL13041-219 | CRHE-DPT0222-010.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7679 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-226 | CRHE-DPT0222-058.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7680 | | | | |
| NAL13041-226 | CRHE-DPT0222-058.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7680 | | | | |
| NAL13041-226 | CRHE-DPT0222-058.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7680 | | | | |
| NAL13041-226 | CRHE-DPT0222-058.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7680 | | | | |
| NAL13041-226 | CRHE-DPT0222-058.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7680 | | | | |
| NAL13041-226 | CRHE-DPT0222-058.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7680 | | | | |
| NAL13041-226 | CRHE-DPT0222-058.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7680 | 50 | 114 | | |
| NAL13041-226 | CRHE-DPT0222-058.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7680 | 50 | 120 | | |
| NAL13041-226 | CRHE-DPT0222-058.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7680 | 50 | 96 | | |
| NAL13041-226 | CRHE-DPT0222-058.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7680 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-227 | CRHE-DPT0223-010.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7681 | | | | |
| NAL13041-227 | CRHE-DPT0223-010.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7681 | | | | |
| NAL13041-227 | CRHE-DPT0223-010.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7681 | | | | |
| NAL13041-227 | CRHE-DPT0223-010.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7681 | | | | |
| NAL13041-227 | CRHE-DPT0223-010.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7681 | | | | |
| NAL13041-227 | CRHE-DPT0223-010.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7681 | | | | |
| NAL13041-227 | CRHE-DPT0223-010.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7681 | 50 | 118 | | |
| NAL13041-227 | CRHE-DPT0223-010.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 65 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7681 | 50 | 130 | | |
| NAL13041-227 | CRHE-DPT0223-010.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7681 | 50 | 96 | | |
| NAL13041-227 | CRHE-DPT0223-010.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7681 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-228 | CRHE-DPT0223-018.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7682 | | | | |
| NAL13041-228 | CRHE-DPT0223-018.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7682 | | | | |
| NAL13041-228 | CRHE-DPT0223-018.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7682 | | | | |
| NAL13041-228 | CRHE-DPT0223-018.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7682 | | | | |
| NAL13041-228 | CRHE-DPT0223-018.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7682 | | | | |
| NAL13041-228 | CRHE-DPT0223-018.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7682 | | | | |
| NAL13041-228 | CRHE-DPT0223-018.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7682 | 50 | 116 | | |
| NAL13041-228 | CRHE-DPT0223-018.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 63 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7682 | 50 | 126 | | |
| NAL13041-228 | CRHE-DPT0223-018.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7682 | 50 | 96 | | |
| NAL13041-228 | CRHE-DPT0223-018.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/28/2013 | 3/28/2013 | 3/28/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7682 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-229 | CRHE-DPT0223-023.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7683 | | | | |
| NAL13041-229 | CRHE-DPT0223-023.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7683 | | | | |
| NAL13041-229 | CRHE-DPT0223-023.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7683 | | | | |
| NAL13041-229 | CRHE-DPT0223-023.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7683 | | | | |
| NAL13041-229 | CRHE-DPT0223-023.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7683 | | | | |
| NAL13041-229 | CRHE-DPT0223-023.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7683 | | | | |
| NAL13041-229 | CRHE-DPT0223-023.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 61 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7683 | 50 | 122 | | |
| NAL13041-229 | CRHE-DPT0223-023.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 65 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7683 | 50 | 130 | | |
| NAL13041-229 | CRHE-DPT0223-023.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7683 | 50 | 94 | | |
| NAL13041-229 | CRHE-DPT0223-023.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7683 | 50 | 102 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-230 | CRHE-DPT0223-028.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7684 | | | | |
| NAL13041-230 | CRHE-DPT0223-028.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7684 | | | | |
| NAL13041-230 | CRHE-DPT0223-028.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7684 | | | | |
| NAL13041-230 | CRHE-DPT0223-028.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7684 | | | | |
| NAL13041-230 | CRHE-DPT0223-028.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7684 | | | | |
| NAL13041-230 | CRHE-DPT0223-028.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7684 | | | | |
| NAL13041-230 | CRHE-DPT0223-028.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7684 | 50 | 118 | | |
| NAL13041-230 | CRHE-DPT0223-028.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 65 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7684 | 50 | 130 | | |
| NAL13041-230 | CRHE-DPT0223-028.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7684 | 50 | 94 | | |
| NAL13041-230 | CRHE-DPT0223-028.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7684 | 50 | 100 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-231 | CRHE-DPT0223-033.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7685 | | | | |
| NAL13041-231 | CRHE-DPT0223-033.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7685 | | | | |
| NAL13041-231 | CRHE-DPT0223-033.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7685 | | | | |
| NAL13041-231 | CRHE-DPT0223-033.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7685 | | | | |
| NAL13041-231 | CRHE-DPT0223-033.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7685 | | | | |
| NAL13041-231 | CRHE-DPT0223-033.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7685 | | | | |
| NAL13041-231 | CRHE-DPT0223-033.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7685 | 50 | 110 | | |
| NAL13041-231 | CRHE-DPT0223-033.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7685 | 50 | 118 | | |
| NAL13041-231 | CRHE-DPT0223-033.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7685 | 50 | 96 | | |
| NAL13041-231 | CRHE-DPT0223-033.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7685 | 50 | 100 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-232 | CRHE-DPT0223-038.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7686 | | | | |
| NAL13041-232 | CRHE-DPT0223-038.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7686 | | | | |
| NAL13041-232 | CRHE-DPT0223-038.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7686 | | | | |
| NAL13041-232 | CRHE-DPT0223-038.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7686 | | | | |
| NAL13041-232 | CRHE-DPT0223-038.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7686 | | | | |
| NAL13041-232 | CRHE-DPT0223-038.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7686 | | | | |
| NAL13041-232 | CRHE-DPT0223-038.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7686 | 50 | 116 | | |
| NAL13041-232 | CRHE-DPT0223-038.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 64 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7686 | 50 | 128 | | |
| NAL13041-232 | CRHE-DPT0223-038.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7686 | 50 | 94 | | |
| NAL13041-232 | CRHE-DPT0223-038.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7686 | 50 | 102 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-233 | CRHE-DPT0223-043.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7687 | | | | |
| NAL13041-233 | CRHE-DPT0223-043.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7687 | | | | |
| NAL13041-233 | CRHE-DPT0223-043.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7687 | | | | |
| NAL13041-233 | CRHE-DPT0223-043.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7687 | | | | |
| NAL13041-233 | CRHE-DPT0223-043.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7687 | | | | |
| NAL13041-233 | CRHE-DPT0223-043.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7687 | | | | |
| NAL13041-233 | CRHE-DPT0223-043.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 62 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7687 | 50 | 124 | | |
| NAL13041-233 | CRHE-DPT0223-043.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 67 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7687 | 50 | 134 | | |
| NAL13041-233 | CRHE-DPT0223-043.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7687 | 50 | 94 | | |
| NAL13041-233 | CRHE-DPT0223-043.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7687 | 50 | 100 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032813CCVA | P032813CCVA | TRG | 75-01-4 | Vinyl Chloride | 53 | | ug/L | 1.0 | 0.13 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 106 | | |
| P032813CCVA | P032813CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 48 | | ug/L | 1.0 | 0.18 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 96 | | |
| P032813CCVA | P032813CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 46 | | ug/L | 1.0 | 0.28 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 92 | | |
| P032813CCVA | P032813CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 46 | | ug/L | 1.0 | 0.20 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 92 | | |
| P032813CCVA | P032813CCVA | TRG | 79-01-6 | Trichloroethene | 53 | | ug/L | 1.0 | 0.22 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 106 | | |
| P032813CCVA | P032813CCVA | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 108 | | |
| P032813CCVA | P032813CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 102 | | |
| P032813CCVA | P032813CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 106 | | |
| P032813CCVA | P032813CCVA | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 102 | | |
| P032813CCVA | P032813CCVA | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7664 | 50 | 102 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032813MBKA | P032813MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | | | | |
| P032813MBKA | P032813MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | | | | |
| P032813MBKA | P032813MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | | | | |
| P032813MBKA | P032813MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | | | | |
| P032813MBKA | P032813MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | | | | |
| P032813MBKA | P032813MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | | | | |
| P032813MBKA | P032813MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | 50 | 112 | | |
| P032813MBKA | P032813MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | 50 | 118 | | |
| P032813MBKA | P032813MBKA | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | 50 | 94 | | |
| P032813MBKA | P032813MBKA | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 3/28/2013 | 3/28/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7668 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

**Geosyntec Consultants**
**316 S Baylen Str., Suite 201**
**Pensacola, FL 32502**
**ATTN: Ms. Jill Johnson**

**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

Analytical results meet the requirements of NELAC Standards. The results reported apply solely to the sample analyzed and all results are reported on a dry weight basis unless stated otherwise. Any questions concerning this report should be directed to Scott D. Wall, President.
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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032813CCVB | P032813CCVB | TRG | 75-01-4 | Vinyl Chloride | 46 | | ug/L | 1.0 | 0.13 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7689 | 50 | 92 | | |
| P032813CCVB | P032813CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 41 | | ug/L | 1.0 | 0.18 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7689 | 50 | 82 | | |
| P032813CCVB | P032813CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 41 | | ug/L | 1.0 | 0.28 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7689 | 50 | 82 | | |
| P032813CCVB | P032813CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 42 | | ug/L | 1.0 | 0.20 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7689 | 50 | 84 | | |
| P032813CCVB | P032813CCVB | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7689 | 50 | 102 | | |
| P032813CCVB | P032813CCVB | TRG | 127-18-4 | Tetrachloroethene | 49 | | ug/L | 1.0 | 0.16 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7689 | 50 | 98 | | |
| P032813CCVB | P032813CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7689 | 50 | 100 | | |
| P032813CCVB | P032813CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7689 | 50 | 106 | | |
| P032813CCVB | P032813CCVB | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7689 | 50 | 100 | | |
| P032813CCVB | P032813CCVB | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7689 | 50 | 104 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032813BLCS | P032813BLCS | TRG | 75-01-4 | Vinyl Chloride | 48 | | ug/L | 1.0 | 0.13 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7690 | 50 | 96 | | |
| P032813BLCS | P032813BLCS | TRG | 75-35-4 | 1,1-Dichloroethene | 48 | | ug/L | 1.0 | 0.18 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7690 | 50 | 96 | | |
| P032813BLCS | P032813BLCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 45 | | ug/L | 1.0 | 0.28 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7690 | 50 | 90 | | |
| P032813BLCS | P032813BLCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 47 | | ug/L | 1.0 | 0.20 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7690 | 50 | 94 | | |
| P032813BLCS | P032813BLCS | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7690 | 50 | 100 | | |
| P032813BLCS | P032813BLCS | TRG | 127-18-4 | Tetrachloroethene | 47 | | ug/L | 1.0 | 0.16 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7690 | 50 | 94 | | |
| P032813BLCS | P032813BLCS | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7690 | 50 | 110 | | |
| P032813BLCS | P032813BLCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7690 | 50 | 116 | | |
| P032813BLCS | P032813BLCS | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7690 | 50 | 102 | | |
| P032813BLCS | P032813BLCS | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7690 | 50 | 104 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032813BLCD | P032813BLCD | TRG | 75-01-4 | Vinyl Chloride | 51 | | ug/L | 1.0 | 0.13 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7691 | 50 | 102 | 6 | |
| P032813BLCD | P032813BLCD | TRG | 75-35-4 | 1,1-Dichloroethene | 45 | | ug/L | 1.0 | 0.18 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7691 | 50 | 90 | 6 | |
| P032813BLCD | P032813BLCD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 44 | | ug/L | 1.0 | 0.28 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7691 | 50 | 88 | 2 | |
| P032813BLCD | P032813BLCD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 46 | | ug/L | 1.0 | 0.20 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7691 | 50 | 92 | 2 | |
| P032813BLCD | P032813BLCD | TRG | 79-01-6 | Trichloroethene | 54 | | ug/L | 1.0 | 0.22 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7691 | 50 | 108 | 8 | |
| P032813BLCD | P032813BLCD | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7691 | 50 | 100 | 6 | |
| P032813BLCD | P032813BLCD | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7691 | 50 | 102 | 8 | |
| P032813BLCD | P032813BLCD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7691 | 50 | 104 | 11 | |
| P032813BLCD | P032813BLCD | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7691 | 50 | 102 | 0 | |
| P032813BLCD | P032813BLCD | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7691 | 50 | 104 | 0 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-199MS | CRHE-DPT0220-010.0-20130327MS | TRG | 75-01-4 | Vinyl Chloride | 53 | | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7692 | 50 | 106 | | |
| NAL13041-199MS | CRHE-DPT0220-010.0-20130327MS | TRG | 75-35-4 | 1,1-Dichloroethene | 54 | | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7692 | 50 | 108 | | |
| NAL13041-199MS | CRHE-DPT0220-010.0-20130327MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7692 | 50 | 106 | | |
| NAL13041-199MS | CRHE-DPT0220-010.0-20130327MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7692 | 50 | 108 | | |
| NAL13041-199MS | CRHE-DPT0220-010.0-20130327MS | TRG | 79-01-6 | Trichloroethene | 58 | | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7692 | 50 | 116 | | |
| NAL13041-199MS | CRHE-DPT0220-010.0-20130327MS | TRG | 127-18-4 | Tetrachloroethene | 56 | | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7692 | 50 | 112 | | |
| NAL13041-199MS | CRHE-DPT0220-010.0-20130327MS | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7692 | 50 | 108 | | |
| NAL13041-199MS | CRHE-DPT0220-010.0-20130327MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7692 | 50 | 108 | | |
| NAL13041-199MS | CRHE-DPT0220-010.0-20130327MS | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7692 | 50 | 102 | | |
| NAL13041-199MS | CRHE-DPT0220-010.0-20130327MS | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7692 | 50 | 104 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-199MSD | CRHE-DPT0220-010.0-20130327MSD | TRG | 75-01-4 | Vinyl Chloride | 42 | | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7693 | 50 | 84 | 23 | |
| NAL13041-199MSD | CRHE-DPT0220-010.0-20130327MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 42 | | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7693 | 50 | 84 | 25 | |
| NAL13041-199MSD | CRHE-DPT0220-010.0-20130327MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 42 | | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7693 | 50 | 84 | 23 | |
| NAL13041-199MSD | CRHE-DPT0220-010.0-20130327MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 44 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7693 | 50 | 88 | 20 | |
| NAL13041-199MSD | CRHE-DPT0220-010.0-20130327MSD | TRG | 79-01-6 | Trichloroethene | 48 | | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7693 | 50 | 96 | 19 | |
| NAL13041-199MSD | CRHE-DPT0220-010.0-20130327MSD | TRG | 127-18-4 | Tetrachloroethene | 44 | | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7693 | 50 | 88 | 24 | |
| NAL13041-199MSD | CRHE-DPT0220-010.0-20130327MSD | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7693 | 50 | 108 | 0 | |
| NAL13041-199MSD | CRHE-DPT0220-010.0-20130327MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7693 | 50 | 116 | 7 | |
| NAL13041-199MSD | CRHE-DPT0220-010.0-20130327MSD | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7693 | 50 | 102 | 0 | |
| NAL13041-199MSD | CRHE-DPT0220-010.0-20130327MSD | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | 3/27/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7693 | 50 | 104 | 0 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-212 | CRHE-DPT0221-018.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7721 | | | | |
| NAL13041-212 | CRHE-DPT0221-018.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7721 | | | | |
| NAL13041-212 | CRHE-DPT0221-018.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7721 | | | | |
| NAL13041-212 | CRHE-DPT0221-018.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 21 | | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7721 | | | | |
| NAL13041-212 | CRHE-DPT0221-018.0-20130328 | TRG | 79-01-6 | Trichloroethene | 9.6 | | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7721 | | | | |
| NAL13041-212 | CRHE-DPT0221-018.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7721 | | | | |
| NAL13041-212 | CRHE-DPT0221-018.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7721 | 50 | 120 | | |
| NAL13041-212 | CRHE-DPT0221-018.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 64 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7721 | 50 | 128 | | |
| NAL13041-212 | CRHE-DPT0221-018.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7721 | 50 | 96 | | |
| NAL13041-212 | CRHE-DPT0221-018.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7721 | 50 | 100 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-213 | CRHE-DPT0221-023.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7222 | | | | |
| NAL13041-213 | CRHE-DPT0221-023.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7222 | | | | |
| NAL13041-213 | CRHE-DPT0221-023.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7222 | | | | |
| NAL13041-213 | CRHE-DPT0221-023.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7222 | | | | |
| NAL13041-213 | CRHE-DPT0221-023.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7222 | | | | |
| NAL13041-213 | CRHE-DPT0221-023.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7222 | | | | |
| NAL13041-213 | CRHE-DPT0221-023.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7222 | 50 | 118 | | |
| NAL13041-213 | CRHE-DPT0221-023.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 63 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7222 | 50 | 126 | | |
| NAL13041-213 | CRHE-DPT0221-023.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7222 | 50 | 96 | | |
| NAL13041-213 | CRHE-DPT0221-023.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7222 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-214 | CRHE-DPT0221-028.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7223 | | | | |
| NAL13041-214 | CRHE-DPT0221-028.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7223 | | | | |
| NAL13041-214 | CRHE-DPT0221-028.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7223 | | | | |
| NAL13041-214 | CRHE-DPT0221-028.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7223 | | | | |
| NAL13041-214 | CRHE-DPT0221-028.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7223 | | | | |
| NAL13041-214 | CRHE-DPT0221-028.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7223 | | | | |
| NAL13041-214 | CRHE-DPT0221-028.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7223 | 50 | 116 | | |
| NAL13041-214 | CRHE-DPT0221-028.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 62 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7223 | 50 | 124 | | |
| NAL13041-214 | CRHE-DPT0221-028.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7223 | 50 | 96 | | |
| NAL13041-214 | CRHE-DPT0221-028.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7223 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-215 | CRHE-DPT0221-033.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7224 | | | | |
| NAL13041-215 | CRHE-DPT0221-033.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7224 | | | | |
| NAL13041-215 | CRHE-DPT0221-033.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7224 | | | | |
| NAL13041-215 | CRHE-DPT0221-033.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7224 | | | | |
| NAL13041-215 | CRHE-DPT0221-033.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7224 | | | | |
| NAL13041-215 | CRHE-DPT0221-033.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7224 | | | | |
| NAL13041-215 | CRHE-DPT0221-033.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7224 | 50 | 120 | | |
| NAL13041-215 | CRHE-DPT0221-033.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 66 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7224 | 50 | 132 | | |
| NAL13041-215 | CRHE-DPT0221-033.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7224 | 50 | 94 | | |
| NAL13041-215 | CRHE-DPT0221-033.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7224 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-216 | CRHE-DPT0221-038.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7225 | | | | |
| NAL13041-216 | CRHE-DPT0221-038.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7225 | | | | |
| NAL13041-216 | CRHE-DPT0221-038.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7225 | | | | |
| NAL13041-216 | CRHE-DPT0221-038.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7225 | | | | |
| NAL13041-216 | CRHE-DPT0221-038.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7225 | | | | |
| NAL13041-216 | CRHE-DPT0221-038.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7225 | | | | |
| NAL13041-216 | CRHE-DPT0221-038.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 62 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7225 | 50 | 124 | | |
| NAL13041-216 | CRHE-DPT0221-038.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 70 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7225 | 50 | 140 | | |
| NAL13041-216 | CRHE-DPT0221-038.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7225 | 50 | 94 | | |
| NAL13041-216 | CRHE-DPT0221-038.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7225 | 50 | 104 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-217 | CRHE-DPT0221-043.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | 1200 | | ug/L | 50 | 6.5 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7226 | | | | |
| NAL13041-217 | CRHE-DPT0221-043.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7226 | | | | |
| NAL13041-217 | CRHE-DPT0221-043.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 50 | 14 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7226 | | | | |
| NAL13041-217 | CRHE-DPT0221-043.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1500 | | ug/L | 50 | 10 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7226 | | | | |
| NAL13041-217 | CRHE-DPT0221-043.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 50 | 11 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7226 | | | | |
| NAL13041-217 | CRHE-DPT0221-043.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7226 | | | | |
| NAL13041-217 | CRHE-DPT0221-043.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7226 | 50 | 114 | | |
| NAL13041-217 | CRHE-DPT0221-043.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 62 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7226 | 50 | 124 | | |
| NAL13041-217 | CRHE-DPT0221-043.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7226 | 50 | 96 | | |
| NAL13041-217 | CRHE-DPT0221-043.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7226 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-220 | CRHE-DPT0222-018.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7227 | | | | |
| NAL13041-220 | CRHE-DPT0222-018.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7227 | | | | |
| NAL13041-220 | CRHE-DPT0222-018.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7227 | | | | |
| NAL13041-220 | CRHE-DPT0222-018.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7227 | | | | |
| NAL13041-220 | CRHE-DPT0222-018.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7227 | | | | |
| NAL13041-220 | CRHE-DPT0222-018.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7227 | | | | |
| NAL13041-220 | CRHE-DPT0222-018.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 61 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7227 | 50 | 122 | | |
| NAL13041-220 | CRHE-DPT0222-018.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 66 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7227 | 50 | 132 | | |
| NAL13041-220 | CRHE-DPT0222-018.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7227 | 50 | 94 | | |
| NAL13041-220 | CRHE-DPT0222-018.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7227 | 50 | 102 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-221 | CRHE-DPT0222-023.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7228 | | | | |
| NAL13041-221 | CRHE-DPT0222-023.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7228 | | | | |
| NAL13041-221 | CRHE-DPT0222-023.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7228 | | | | |
| NAL13041-221 | CRHE-DPT0222-023.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7228 | | | | |
| NAL13041-221 | CRHE-DPT0222-023.0-20130328 | TRG | 79-01-6 | Trichloroethene | 1.2 | | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7228 | | | | |
| NAL13041-221 | CRHE-DPT0222-023.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7228 | | | | |
| NAL13041-221 | CRHE-DPT0222-023.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7228 | 50 | 110 | | |
| NAL13041-221 | CRHE-DPT0222-023.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 62 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7228 | 50 | 124 | | |
| NAL13041-221 | CRHE-DPT0222-023.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7228 | 50 | 94 | | |
| NAL13041-221 | CRHE-DPT0222-023.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7228 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-234 | CRHE-DPT0223-058.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7698 | | | | |
| NAL13041-234 | CRHE-DPT0223-058.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7698 | | | | |
| NAL13041-234 | CRHE-DPT0223-058.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7698 | | | | |
| NAL13041-234 | CRHE-DPT0223-058.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7698 | | | | |
| NAL13041-234 | CRHE-DPT0223-058.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7698 | | | | |
| NAL13041-234 | CRHE-DPT0223-058.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7698 | | | | |
| NAL13041-234 | CRHE-DPT0223-058.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7698 | 50 | 98 | | |
| NAL13041-234 | CRHE-DPT0223-058.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7698 | 50 | 116 | | |
| NAL13041-234 | CRHE-DPT0223-058.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7698 | 50 | 96 | | |
| NAL13041-234 | CRHE-DPT0223-058.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7698 | 50 | 104 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-235 | CRHE-DPT0224-010.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7701 | | | | |
| NAL13041-235 | CRHE-DPT0224-010.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7701 | | | | |
| NAL13041-235 | CRHE-DPT0224-010.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7701 | | | | |
| NAL13041-235 | CRHE-DPT0224-010.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 9.8 | | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7701 | | | | |
| NAL13041-235 | CRHE-DPT0224-010.0-20130328 | TRG | 79-01-6 | Trichloroethene | 11 | | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7701 | | | | |
| NAL13041-235 | CRHE-DPT0224-010.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7701 | | | | |
| NAL13041-235 | CRHE-DPT0224-010.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7701 | 50 | 118 | | |
| NAL13041-235 | CRHE-DPT0224-010.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7701 | 50 | 120 | | |
| NAL13041-235 | CRHE-DPT0224-010.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7701 | 50 | 96 | | |
| NAL13041-235 | CRHE-DPT0224-010.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7701 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-236 | CRHE-DPT0224-018.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7704 | | | | |
| NAL13041-236 | CRHE-DPT0224-018.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7704 | | | | |
| NAL13041-236 | CRHE-DPT0224-018.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7704 | | | | |
| NAL13041-236 | CRHE-DPT0224-018.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7704 | | | | |
| NAL13041-236 | CRHE-DPT0224-018.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7704 | | | | |
| NAL13041-236 | CRHE-DPT0224-018.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7704 | | | | |
| NAL13041-236 | CRHE-DPT0224-018.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7704 | 50 | 94 | | |
| NAL13041-236 | CRHE-DPT0224-018.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7704 | 50 | 96 | | |
| NAL13041-236 | CRHE-DPT0224-018.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7704 | 50 | 98 | | |
| NAL13041-236 | CRHE-DPT0224-018.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7704 | 50 | 94 | | |

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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-237 | CRHE-DPT0224-023.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7706 | | | | |
| NAL13041-237 | CRHE-DPT0224-023.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7706 | | | | |
| NAL13041-237 | CRHE-DPT0224-023.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7706 | | | | |
| NAL13041-237 | CRHE-DPT0224-023.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7706 | | | | |
| NAL13041-237 | CRHE-DPT0224-023.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7706 | | | | |
| NAL13041-237 | CRHE-DPT0224-023.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7706 | | | | |
| NAL13041-237 | CRHE-DPT0224-023.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7706 | 50 | 114 | | |
| NAL13041-237 | CRHE-DPT0224-023.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7706 | 50 | 120 | | |
| NAL13041-237 | CRHE-DPT0224-023.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7706 | 50 | 96 | | |
| NAL13041-237 | CRHE-DPT0224-023.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7706 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-238 | CRHE-DPT0224-028.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | 260 | | ug/L | 50 | 6.5 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7707 | | | | |
| NAL13041-238 | CRHE-DPT0224-028.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7707 | | | | |
| NAL13041-238 | CRHE-DPT0224-028.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 81 | | ug/L | 50 | 14 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7707 | | | | |
| NAL13041-238 | CRHE-DPT0224-028.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 380 | | ug/L | 50 | 10 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7707 | | | | |
| NAL13041-238 | CRHE-DPT0224-028.0-20130328 | TRG | 79-01-6 | Trichloroethene | 230 | | ug/L | 50 | 11 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7707 | | | | |
| NAL13041-238 | CRHE-DPT0224-028.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7707 | | | | |
| NAL13041-238 | CRHE-DPT0224-028.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7707 | 50 | 108 | | |
| NAL13041-238 | CRHE-DPT0224-028.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7707 | 50 | 118 | | |
| NAL13041-238 | CRHE-DPT0224-028.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7707 | 50 | 94 | | |
| NAL13041-238 | CRHE-DPT0224-028.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7707 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-239 | CRHE-IDW193862-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 10.0 | 1.30 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7700 | | | | |
| NAL13041-239 | CRHE-IDW193862-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10.0 | 1.80 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7700 | | | | |
| NAL13041-239 | CRHE-IDW193862-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 10.0 | 2.80 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7700 | | | | |
| NAL13041-239 | CRHE-IDW193862-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 25 | | ug/L | 10.0 | 2.00 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7700 | | | | |
| NAL13041-239 | CRHE-IDW193862-20130328 | TRG | 79-01-6 | Trichloroethene | 11 | | ug/L | 10.0 | 2.20 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7700 | | | | |
| NAL13041-239 | CRHE-IDW193862-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10.0 | 1.60 | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7700 | | | | |
| NAL13041-239 | CRHE-IDW193862-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7700 | 50 | 102 | | |
| NAL13041-239 | CRHE-IDW193862-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7700 | 50 | 106 | | |
| NAL13041-239 | CRHE-IDW193862-20130328 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7700 | 50 | 98 | | |
| NAL13041-239 | CRHE-IDW193862-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/28/2013 | 3/29/2013 | 3/29/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7700 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-240 | CRHE-DPT0224-033.0-20130329 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 100 | 13 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7708 | | | | |
| NAL13041-240 | CRHE-DPT0224-033.0-20130329 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 100 | 18 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7708 | | | | |
| NAL13041-240 | CRHE-DPT0224-033.0-20130329 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 100 | 28 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7708 | | | | |
| NAL13041-240 | CRHE-DPT0224-033.0-20130329 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 64 | I | ug/L | 100 | 20 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7708 | | | | |
| NAL13041-240 | CRHE-DPT0224-033.0-20130329 | TRG | 79-01-6 | Trichloroethene | 54 | I | ug/L | 100 | 22 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7708 | | | | |
| NAL13041-240 | CRHE-DPT0224-033.0-20130329 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 100 | 16 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7708 | | | | |
| NAL13041-240 | CRHE-DPT0224-033.0-20130329 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7708 | 50 | 112 | | |
| NAL13041-240 | CRHE-DPT0224-033.0-20130329 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7708 | 50 | 120 | | |
| NAL13041-240 | CRHE-DPT0224-033.0-20130329 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7708 | 50 | 94 | | |
| NAL13041-240 | CRHE-DPT0224-033.0-20130329 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7708 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-241 | CRHE-DPT0224-038.0-20130329 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7710 | | | | |
| NAL13041-241 | CRHE-DPT0224-038.0-20130329 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7710 | | | | |
| NAL13041-241 | CRHE-DPT0224-038.0-20130329 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7710 | | | | |
| NAL13041-241 | CRHE-DPT0224-038.0-20130329 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7710 | | | | |
| NAL13041-241 | CRHE-DPT0224-038.0-20130329 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7710 | | | | |
| NAL13041-241 | CRHE-DPT0224-038.0-20130329 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7710 | | | | |
| NAL13041-241 | CRHE-DPT0224-038.0-20130329 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7710 | 50 | 104 | | |
| NAL13041-241 | CRHE-DPT0224-038.0-20130329 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7710 | 50 | 108 | | |
| NAL13041-241 | CRHE-DPT0224-038.0-20130329 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7710 | 50 | 98 | | |
| NAL13041-241 | CRHE-DPT0224-038.0-20130329 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7710 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-242 | CRHE-DPT0224-043.0-20130329 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7711 | | | | |
| NAL13041-242 | CRHE-DPT0224-043.0-20130329 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7711 | | | | |
| NAL13041-242 | CRHE-DPT0224-043.0-20130329 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7711 | | | | |
| NAL13041-242 | CRHE-DPT0224-043.0-20130329 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7711 | | | | |
| NAL13041-242 | CRHE-DPT0224-043.0-20130329 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7711 | | | | |
| NAL13041-242 | CRHE-DPT0224-043.0-20130329 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7711 | | | | |
| NAL13041-242 | CRHE-DPT0224-043.0-20130329 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7711 | 50 | 120 | | |
| NAL13041-242 | CRHE-DPT0224-043.0-20130329 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 64 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7711 | 50 | 128 | | |
| NAL13041-242 | CRHE-DPT0224-043.0-20130329 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7711 | 50 | 96 | | |
| NAL13041-242 | CRHE-DPT0224-043.0-20130329 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7711 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-243 | CRHE-DPT0224-058.0-20130329 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7699 | | | | |
| NAL13041-243 | CRHE-DPT0224-058.0-20130329 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7699 | | | | |
| NAL13041-243 | CRHE-DPT0224-058.0-20130329 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7699 | | | | |
| NAL13041-243 | CRHE-DPT0224-058.0-20130329 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7699 | | | | |
| NAL13041-243 | CRHE-DPT0224-058.0-20130329 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7699 | | | | |
| NAL13041-243 | CRHE-DPT0224-058.0-20130329 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7699 | | | | |
| NAL13041-243 | CRHE-DPT0224-058.0-20130329 | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7699 | 50 | 92 | | |
| NAL13041-243 | CRHE-DPT0224-058.0-20130329 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7699 | 50 | 98 | | |
| NAL13041-243 | CRHE-DPT0224-058.0-20130329 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7699 | 50 | 96 | | |
| NAL13041-243 | CRHE-DPT0224-058.0-20130329 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7699 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-251 | CRHE-DPT0225-058.0-20130329 | TRG | 75-01-4 | Vinyl Chloride | 2.6 | | ug/L | 1.0 | 0.13 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7702 | | | | |
| NAL13041-251 | CRHE-DPT0225-058.0-20130329 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7702 | | | | |
| NAL13041-251 | CRHE-DPT0225-058.0-20130329 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 1.7 | | ug/L | 1.0 | 0.28 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7702 | | | | |
| NAL13041-251 | CRHE-DPT0225-058.0-20130329 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 14 | | ug/L | 1.0 | 0.20 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7702 | | | | |
| NAL13041-251 | CRHE-DPT0225-058.0-20130329 | TRG | 79-01-6 | Trichloroethene | 16 | | ug/L | 1.0 | 0.22 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7702 | | | | |
| NAL13041-251 | CRHE-DPT0225-058.0-20130329 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7702 | | | | |
| NAL13041-251 | CRHE-DPT0225-058.0-20130329 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7702 | 50 | 114 | | |
| NAL13041-251 | CRHE-DPT0225-058.0-20130329 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7702 | 50 | 120 | | |
| NAL13041-251 | CRHE-DPT0225-058.0-20130329 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7702 | 50 | 96 | | |
| NAL13041-251 | CRHE-DPT0225-058.0-20130329 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7702 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032913CCVB | P032913CCVB | TRG | 75-01-4 | Vinyl Chloride | 47 | | ug/L | 1.0 | 0.13 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7696 | 50 | 94 | | |
| P032913CCVB | P032913CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 44 | | ug/L | 1.0 | 0.18 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7696 | 50 | 88 | | |
| P032913CCVB | P032913CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 45 | | ug/L | 1.0 | 0.28 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7696 | 50 | 90 | | |
| P032913CCVB | P032913CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 45 | | ug/L | 1.0 | 0.20 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7696 | 50 | 90 | | |
| P032913CCVB | P032913CCVB | TRG | 79-01-6 | Trichloroethene | 48 | | ug/L | 1.0 | 0.22 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7696 | 50 | 96 | | |
| P032913CCVB | P032913CCVB | TRG | 127-18-4 | Tetrachloroethene | 49 | | ug/L | 1.0 | 0.16 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7696 | 50 | 98 | | |
| P032913CCVB | P032913CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7696 | 50 | 104 | | |
| P032913CCVB | P032913CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7696 | 50 | 108 | | |
| P032913CCVB | P032913CCVB | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7696 | 50 | 102 | | |
| P032913CCVB | P032913CCVB | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7696 | 50 | 104 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032913MBKA | P032913MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7697 | | | | |
| P032913MBKA | P032913MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7697 | | | | |
| P032913MBKA | P032913MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7697 | | | | |
| P032913MBKA | P032913MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7697 | | | | |
| P032913MBKA | P032913MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7697 | | | | |
| P032913MBKA | P032913MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7697 | | | | |
| P032913MBKA | P032913MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7697 | 50 | 100 | | |
| P032913MBKA | P032913MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7697 | 50 | 110 | | |
| P032913MBKA | P032913MBKA | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7697 | 50 | 96 | | |
| P032913MBKA | P032913MBKA | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7697 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032913CCVD | P032913CCVD | TRG | 75-01-4 | Vinyl Chloride | 48 | | ug/L | 1.0 | 0.13 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7713 | 50 | 96 | | |
| P032913CCVD | P032913CCVD | TRG | 75-35-4 | 1,1-Dichloroethene | 48 | | ug/L | 1.0 | 0.18 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7713 | 50 | 96 | | |
| P032913CCVD | P032913CCVD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 42 | | ug/L | 1.0 | 0.28 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7713 | 50 | 84 | | |
| P032913CCVD | P032913CCVD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 46 | | ug/L | 1.0 | 0.20 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7713 | 50 | 92 | | |
| P032913CCVD | P032913CCVD | TRG | 79-01-6 | Trichloroethene | 60 | | ug/L | 1.0 | 0.22 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7713 | 50 | 120 | | |
| P032913CCVD | P032913CCVD | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7713 | 50 | 102 | | |
| P032913CCVD | P032913CCVD | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7713 | 50 | 96 | | |
| P032913CCVD | P032913CCVD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7713 | 50 | 96 | | |
| P032913CCVD | P032913CCVD | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7713 | 50 | 96 | | |
| P032913CCVD | P032913CCVD | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7713 | 50 | 104 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032913MBKB | P032913MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7718 | | | | |
| P032913MBKB | P032913MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7718 | | | | |
| P032913MBKB | P032913MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7718 | | | | |
| P032913MBKB | P032913MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7718 | | | | |
| P032913MBKB | P032913MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7718 | | | | |
| P032913MBKB | P032913MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7718 | | | | |
| P032913MBKB | P032913MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7718 | 50 | 116 | | |
| P032913MBKB | P032913MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 62 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7718 | 50 | 124 | | |
| P032913MBKB | P032913MBKB | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7718 | 50 | 96 | | |
| P032913MBKB | P032913MBKB | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7718 | 50 | 100 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032913ALCS | P032913ALCS | TRG | 75-01-4 | Vinyl Chloride | 40 | | ug/L | 1.0 | 0.13 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7714 | 50 | 80 | | |
| P032913ALCS | P032913ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 43 | | ug/L | 1.0 | 0.18 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7714 | 50 | 86 | | |
| P032913ALCS | P032913ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 38 | | ug/L | 1.0 | 0.28 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7714 | 50 | 76 | | |
| P032913ALCS | P032913ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 40 | | ug/L | 1.0 | 0.20 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7714 | 50 | 80 | | |
| P032913ALCS | P032913ALCS | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7714 | 50 | 102 | | |
| P032913ALCS | P032913ALCS | TRG | 127-18-4 | Tetrachloroethene | 47 | | ug/L | 1.0 | 0.16 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7714 | 50 | 94 | | |
| P032913ALCS | P032913ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7714 | 50 | 96 | | |
| P032913ALCS | P032913ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7714 | 50 | 98 | | |
| P032913ALCS | P032913ALCS | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7714 | 50 | 94 | | |
| P032913ALCS | P032913ALCS | SUR | 460-00-4 | Bromofluorobenzene | 53 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7714 | 50 | 106 | | |

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# FINAL ANALYTICAL REPORT

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**316 S Baylen Str., Suite 201**
**Pensacola, FL 32502**
**ATTN: Ms. Jill Johnson**

**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P032913ALCD | P032913ALCD | TRG | 75-01-4 | Vinyl Chloride | 50 | | ug/L | 1.0 | 0.13 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7715 | 50 | 100 | 22 | |
| P032913ALCD | P032913ALCD | TRG | 75-35-4 | 1,1-Dichloroethene | 56 | | ug/L | 1.0 | 0.18 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7715 | 50 | 112 | 26 | |
| P032913ALCD | P032913ALCD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.28 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7715 | 50 | 102 | 29 | |
| P032913ALCD | P032913ALCD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.20 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7715 | 50 | 102 | 24 | |
| P032913ALCD | P032913ALCD | TRG | 79-01-6 | Trichloroethene | 57 | | ug/L | 1.0 | 0.22 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7715 | 50 | 114 | 11 | |
| P032913ALCD | P032913ALCD | TRG | 127-18-4 | Tetrachloroethene | 55 | | ug/L | 1.0 | 0.16 | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7715 | 50 | 110 | 16 | |
| P032913ALCD | P032913ALCD | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7715 | 50 | 108 | 12 | |
| P032913ALCD | P032913ALCD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7715 | 50 | 116 | 17 | |
| P032913ALCD | P032913ALCD | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7715 | 50 | 100 | 6 | |
| P032913ALCD | P032913ALCD | SUR | 460-00-4 | Bromofluorobenzene | 54 | | ug/L | | | NA | 3/29/2013 | 3/29/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7715 | 50 | 108 | 2 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-241MS | CRHE-DPT0224-038.0-20130329MS | TRG | 75-01-4 | Vinyl Chloride | 50 | | ug/L | 1.0 | 0.13 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7716 | 50 | 100 | | |
| NAL13041-241MS | CRHE-DPT0224-038.0-20130329MS | TRG | 75-35-4 | 1,1-Dichloroethene | 54 | | ug/L | 1.0 | 0.18 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7716 | 50 | 108 | | |
| NAL13041-241MS | CRHE-DPT0224-038.0-20130329MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 49 | | ug/L | 1.0 | 0.28 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7716 | 50 | 98 | | |
| NAL13041-241MS | CRHE-DPT0224-038.0-20130329MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 50 | | ug/L | 1.0 | 0.20 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7716 | 50 | 100 | | |
| NAL13041-241MS | CRHE-DPT0224-038.0-20130329MS | TRG | 79-01-6 | Trichloroethene | 55 | | ug/L | 1.0 | 0.22 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7716 | 50 | 110 | | |
| NAL13041-241MS | CRHE-DPT0224-038.0-20130329MS | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7716 | 50 | 102 | | |
| NAL13041-241MS | CRHE-DPT0224-038.0-20130329MS | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7716 | 50 | 106 | | |
| NAL13041-241MS | CRHE-DPT0224-038.0-20130329MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7716 | 50 | 112 | | |
| NAL13041-241MS | CRHE-DPT0224-038.0-20130329MS | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7716 | 50 | 102 | | |
| NAL13041-241MS | CRHE-DPT0224-038.0-20130329MS | SUR | 460-00-4 | Bromofluorobenzene | 55 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7716 | 50 | 110 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-241MSD | CRHE-DPT0224-038.0-20130329MSD | TRG | 75-01-4 | Vinyl Chloride | 40 | | ug/L | 1.0 | 0.13 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7717 | 50 | 80 | 22 | |
| NAL13041-241MSD | CRHE-DPT0224-038.0-20130329MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 40 | | ug/L | 1.0 | 0.18 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7717 | 50 | 80 | 30 | |
| NAL13041-241MSD | CRHE-DPT0224-038.0-20130329MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 36 | | ug/L | 1.0 | 0.28 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7717 | 50 | 72 | 31 | |
| NAL13041-241MSD | CRHE-DPT0224-038.0-20130329MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 39 | | ug/L | 1.0 | 0.20 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7717 | 50 | 78 | 25 | |
| NAL13041-241MSD | CRHE-DPT0224-038.0-20130329MSD | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7717 | 50 | 102 | 8 | |
| NAL13041-241MSD | CRHE-DPT0224-038.0-20130329MSD | TRG | 127-18-4 | Tetrachloroethene | 46 | | ug/L | 1.0 | 0.16 | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7717 | 50 | 92 | 10 | |
| NAL13041-241MSD | CRHE-DPT0224-038.0-20130329MSD | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7717 | 50 | 94 | 12 | |
| NAL13041-241MSD | CRHE-DPT0224-038.0-20130329MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7717 | 50 | 96 | 15 | |
| NAL13041-241MSD | CRHE-DPT0224-038.0-20130329MSD | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7717 | 50 | 96 | 6 | |
| NAL13041-241MSD | CRHE-DPT0224-038.0-20130329MSD | SUR | 460-00-4 | Bromofluorobenzene | 53 | | ug/L | | | 3/29/2013 | 3/29/2013 | 3/29/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7717 | 50 | 106 | 4 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-222 | CRHE-DPT0222-028.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7750 | | | | |
| NAL13041-222 | CRHE-DPT0222-028.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7750 | | | | |
| NAL13041-222 | CRHE-DPT0222-028.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7750 | | | | |
| NAL13041-222 | CRHE-DPT0222-028.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7750 | | | | |
| NAL13041-222 | CRHE-DPT0222-028.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7750 | | | | |
| NAL13041-222 | CRHE-DPT0222-028.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7750 | | | | |
| NAL13041-222 | CRHE-DPT0222-028.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7750 | 50 | 100 | | |
| NAL13041-222 | CRHE-DPT0222-028.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7750 | 50 | 112 | | |
| NAL13041-222 | CRHE-DPT0222-028.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7750 | 50 | 96 | | |
| NAL13041-222 | CRHE-DPT0222-028.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7750 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-223 | CRHE-DPT0222-033.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7751 | | | | |
| NAL13041-223 | CRHE-DPT0222-033.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7751 | | | | |
| NAL13041-223 | CRHE-DPT0222-033.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7751 | | | | |
| NAL13041-223 | CRHE-DPT0222-033.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7751 | | | | |
| NAL13041-223 | CRHE-DPT0222-033.0-20130328 | TRG | 79-01-6 | Trichloroethene | 0.71 | I | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7751 | | | | |
| NAL13041-223 | CRHE-DPT0222-033.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7751 | | | | |
| NAL13041-223 | CRHE-DPT0222-033.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7751 | 50 | 108 | | |
| NAL13041-223 | CRHE-DPT0222-033.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7751 | 50 | 108 | | |
| NAL13041-223 | CRHE-DPT0222-033.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7751 | 50 | 96 | | |
| NAL13041-223 | CRHE-DPT0222-033.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7751 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-224 | CRHE-DPT0222-038.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7752 | | | | |
| NAL13041-224 | CRHE-DPT0222-038.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7752 | | | | |
| NAL13041-224 | CRHE-DPT0222-038.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7752 | | | | |
| NAL13041-224 | CRHE-DPT0222-038.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7752 | | | | |
| NAL13041-224 | CRHE-DPT0222-038.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7752 | | | | |
| NAL13041-224 | CRHE-DPT0222-038.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7752 | | | | |
| NAL13041-224 | CRHE-DPT0222-038.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7752 | 50 | 116 | | |
| NAL13041-224 | CRHE-DPT0222-038.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7752 | 50 | 116 | | |
| NAL13041-224 | CRHE-DPT0222-038.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7752 | 50 | 94 | | |
| NAL13041-224 | CRHE-DPT0222-038.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7752 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-225 | CRHE-DPT0222-043.0-20130328 | TRG | 75-01-4 | Vinyl Chloride | 32 | I | ug/L | 50 | 6.5 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7753 | | | | |
| NAL13041-225 | CRHE-DPT0222-043.0-20130328 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7753 | | | | |
| NAL13041-225 | CRHE-DPT0222-043.0-20130328 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 50 | 14 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7753 | | | | |
| NAL13041-225 | CRHE-DPT0222-043.0-20130328 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 50 | 10 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7753 | | | | |
| NAL13041-225 | CRHE-DPT0222-043.0-20130328 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 50 | 11 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7753 | | | | |
| NAL13041-225 | CRHE-DPT0222-043.0-20130328 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7753 | | | | |
| NAL13041-225 | CRHE-DPT0222-043.0-20130328 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7753 | 50 | 116 | | |
| NAL13041-225 | CRHE-DPT0222-043.0-20130328 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7753 | 50 | 118 | | |
| NAL13041-225 | CRHE-DPT0222-043.0-20130328 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7753 | 50 | 96 | | |
| NAL13041-225 | CRHE-DPT0222-043.0-20130328 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7753 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-246 | CRHE-DPT0225-023.0-20130329 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 50 | 6.5 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | | | | |
| NAL13041-246 | CRHE-DPT0225-023.0-20130329 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | | | | |
| NAL13041-246 | CRHE-DPT0225-023.0-20130329 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 50 | 14 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | | | | |
| NAL13041-246 | CRHE-DPT0225-023.0-20130329 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 50 | 10 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | | | | |
| NAL13041-246 | CRHE-DPT0225-023.0-20130329 | TRG | 79-01-6 | Trichloroethene | 53 | | ug/L | 50 | 11 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | | | | |
| NAL13041-246 | CRHE-DPT0225-023.0-20130329 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | | | | |
| NAL13041-246 | CRHE-DPT0225-023.0-20130329 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | 50 | 118 | | |
| NAL13041-246 | CRHE-DPT0225-023.0-20130329 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | 50 | 118 | | |
| NAL13041-246 | CRHE-DPT0225-023.0-20130329 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | 50 | 94 | | |
| NAL13041-246 | CRHE-DPT0225-023.0-20130329 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7554 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-247 | CRHE-DPT0225-028.0-20130329 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | | | | |
| NAL13041-247 | CRHE-DPT0225-028.0-20130329 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | | | | |
| NAL13041-247 | CRHE-DPT0225-028.0-20130329 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | | | | |
| NAL13041-247 | CRHE-DPT0225-028.0-20130329 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | | | | |
| NAL13041-247 | CRHE-DPT0225-028.0-20130329 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | | | | |
| NAL13041-247 | CRHE-DPT0225-028.0-20130329 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | | | | |
| NAL13041-247 | CRHE-DPT0225-028.0-20130329 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | 50 | 118 | | |
| NAL13041-247 | CRHE-DPT0225-028.0-20130329 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | 50 | 120 | | |
| NAL13041-247 | CRHE-DPT0225-028.0-20130329 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | 50 | 94 | | |
| NAL13041-247 | CRHE-DPT0225-028.0-20130329 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7555 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-248 | CRHE-DPT0225-033.0-20130329 | TRG | 75-01-4 | Vinyl Chloride | 210 | | ug/L | 100 | 13 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7772 | | | | |
| NAL13041-248 | CRHE-DPT0225-033.0-20130329 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 100 | 18 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7772 | | | | |
| NAL13041-248 | CRHE-DPT0225-033.0-20130329 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 87 | I | ug/L | 100 | 28 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7772 | | | | |
| NAL13041-248 | CRHE-DPT0225-033.0-20130329 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 980 | | ug/L | 100 | 20 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7772 | | | | |
| NAL13041-248 | CRHE-DPT0225-033.0-20130329 | TRG | 79-01-6 | Trichloroethene | 57 | I | ug/L | 100 | 22 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7772 | | | | |
| NAL13041-248 | CRHE-DPT0225-033.0-20130329 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 100 | 16 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7772 | | | | |
| NAL13041-248 | CRHE-DPT0225-033.0-20130329 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7772 | 50 | 108 | | |
| NAL13041-248 | CRHE-DPT0225-033.0-20130329 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7772 | 50 | 106 | | |
| NAL13041-248 | CRHE-DPT0225-033.0-20130329 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7772 | 50 | 94 | | |
| NAL13041-248 | CRHE-DPT0225-033.0-20130329 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7772 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-249 | CRHE-DPT0225-038.0-20130329 | TRG | 75-01-4 | Vinyl Chloride | 4400 | | ug/L | 1000 | 130 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7773 | | | | |
| NAL13041-249 | CRHE-DPT0225-038.0-20130329 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1000 | 180 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7773 | | | | |
| NAL13041-249 | CRHE-DPT0225-038.0-20130329 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 800 | I | ug/L | 1000 | 280 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7773 | | | | |
| NAL13041-249 | CRHE-DPT0225-038.0-20130329 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 40000 | | ug/L | 1000 | 200 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7773 | | | | |
| NAL13041-249 | CRHE-DPT0225-038.0-20130329 | TRG | 79-01-6 | Trichloroethene | 37000 | | ug/L | 1000 | 220 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7773 | | | | |
| NAL13041-249 | CRHE-DPT0225-038.0-20130329 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1000 | 160 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7773 | | | | |
| NAL13041-249 | CRHE-DPT0225-038.0-20130329 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7773 | 50 | 118 | | |
| NAL13041-249 | CRHE-DPT0225-038.0-20130329 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7773 | 50 | 116 | | |
| NAL13041-249 | CRHE-DPT0225-038.0-20130329 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7773 | 50 | 96 | | |
| NAL13041-249 | CRHE-DPT0225-038.0-20130329 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7773 | 50 | 92 | | |

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**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-250 | CRHE-DPT0225-043.0-20130329 | TRG | 75-01-4 | Vinyl Chloride | 620 | | ug/L | 250 | 33 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7774 | | | | |
| NAL13041-250 | CRHE-DPT0225-043.0-20130329 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7774 | | | | |
| NAL13041-250 | CRHE-DPT0225-043.0-20130329 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7774 | | | | |
| NAL13041-250 | CRHE-DPT0225-043.0-20130329 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 4400 | | ug/L | 250 | 50 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7774 | | | | |
| NAL13041-250 | CRHE-DPT0225-043.0-20130329 | TRG | 79-01-6 | Trichloroethene | 1800 | | ug/L | 250 | 55 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7774 | | | | |
| NAL13041-250 | CRHE-DPT0225-043.0-20130329 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7774 | | | | |
| NAL13041-250 | CRHE-DPT0225-043.0-20130329 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7774 | 50 | 112 | | |
| NAL13041-250 | CRHE-DPT0225-043.0-20130329 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7774 | 50 | 112 | | |
| NAL13041-250 | CRHE-DPT0225-043.0-20130329 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7774 | 50 | 96 | | |
| NAL13041-250 | CRHE-DPT0225-043.0-20130329 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7774 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-252 | CRHE-DPT0225-068.0-20130329 | TRG | 75-01-4 | Vinyl Chloride | 0.57 | I | ug/L | 1.0 | 0.13 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7775 | | | | |
| NAL13041-252 | CRHE-DPT0225-068.0-20130329 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7775 | | | | |
| NAL13041-252 | CRHE-DPT0225-068.0-20130329 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7775 | | | | |
| NAL13041-252 | CRHE-DPT0225-068.0-20130329 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 8.4 | | ug/L | 1.0 | 0.20 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7775 | | | | |
| NAL13041-252 | CRHE-DPT0225-068.0-20130329 | TRG | 79-01-6 | Trichloroethene | 12 | | ug/L | 1.0 | 0.22 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7775 | | | | |
| NAL13041-252 | CRHE-DPT0225-068.0-20130329 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7775 | | | | |
| NAL13041-252 | CRHE-DPT0225-068.0-20130329 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7775 | 50 | 114 | | |
| NAL13041-252 | CRHE-DPT0225-068.0-20130329 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7775 | 50 | 114 | | |
| NAL13041-252 | CRHE-DPT0225-068.0-20130329 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7775 | 50 | 96 | | |
| NAL13041-252 | CRHE-DPT0225-068.0-20130329 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/29/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7775 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-157 | CRHE-DPT0213-068.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 1.6 | | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7776 | | | | |
| NAL13041-157 | CRHE-DPT0213-068.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7776 | | | | |
| NAL13041-157 | CRHE-DPT0213-068.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7776 | | | | |
| NAL13041-157 | CRHE-DPT0213-068.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 37 | | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7776 | | | | |
| NAL13041-157 | CRHE-DPT0213-068.0-20130326 | TRG | 79-01-6 | Trichloroethene | 8.5 | | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7776 | | | | |
| NAL13041-157 | CRHE-DPT0213-068.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7776 | | | | |
| NAL13041-157 | CRHE-DPT0213-068.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7776 | 50 | 118 | | |
| NAL13041-157 | CRHE-DPT0213-068.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7776 | 50 | 116 | | |
| NAL13041-157 | CRHE-DPT0213-068.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7776 | 50 | 96 | | |
| NAL13041-157 | CRHE-DPT0213-068.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7776 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-167 | CRHE-DPT0216-018.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7778 | | | | |
| NAL13041-167 | CRHE-DPT0216-018.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7778 | | | | |
| NAL13041-167 | CRHE-DPT0216-018.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7778 | | | | |
| NAL13041-167 | CRHE-DPT0216-018.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7778 | | | | |
| NAL13041-167 | CRHE-DPT0216-018.0-20130326 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7778 | | | | |
| NAL13041-167 | CRHE-DPT0216-018.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7778 | | | | |
| NAL13041-167 | CRHE-DPT0216-018.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7778 | 50 | 92 | | |
| NAL13041-167 | CRHE-DPT0216-018.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7778 | 50 | 86 | | |
| NAL13041-167 | CRHE-DPT0216-018.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7778 | 50 | 98 | | |
| NAL13041-167 | CRHE-DPT0216-018.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7778 | 50 | 90 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-168 | CRHE-DPT0216-023.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 110 | | ug/L | 10 | 1.3 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7779 | | | | |
| NAL13041-168 | CRHE-DPT0216-023.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7779 | | | | |
| NAL13041-168 | CRHE-DPT0216-023.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 10 | 2.8 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7779 | | | | |
| NAL13041-168 | CRHE-DPT0216-023.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 160 | | ug/L | 10 | 2.0 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7779 | | | | |
| NAL13041-168 | CRHE-DPT0216-023.0-20130326 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 10 | 2.2 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7779 | | | | |
| NAL13041-168 | CRHE-DPT0216-023.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7779 | | | | |
| NAL13041-168 | CRHE-DPT0216-023.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7779 | 50 | 114 | | |
| NAL13041-168 | CRHE-DPT0216-023.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7779 | 50 | 112 | | |
| NAL13041-168 | CRHE-DPT0216-023.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7779 | 50 | 96 | | |
| NAL13041-168 | CRHE-DPT0216-023.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7779 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-169 | CRHE-DPT0216-028.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 10 | 1.3 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7764 | | | | |
| NAL13041-169 | CRHE-DPT0216-028.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7764 | | | | |
| NAL13041-169 | CRHE-DPT0216-028.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 10 | 2.8 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7764 | | | | |
| NAL13041-169 | CRHE-DPT0216-028.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 10 | 2.0 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7764 | | | | |
| NAL13041-169 | CRHE-DPT0216-028.0-20130326 | TRG | 79-01-6 | Trichloroethene | 240 | | ug/L | 10 | 2.2 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7764 | | | | |
| NAL13041-169 | CRHE-DPT0216-028.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7764 | | | | |
| NAL13041-169 | CRHE-DPT0216-028.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7764 | 50 | 116 | | |
| NAL13041-169 | CRHE-DPT0216-028.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7764 | 50 | 118 | | |
| NAL13041-169 | CRHE-DPT0216-028.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7764 | 50 | 96 | | |
| NAL13041-169 | CRHE-DPT0216-028.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7764 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-172 | CRHE-DPT0216-043.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 1800 | | ug/L | 250 | 32.50 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7765 | | | | |
| NAL13041-172 | CRHE-DPT0216-043.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45.00 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7765 | | | | |
| NAL13041-172 | CRHE-DPT0216-043.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 250 | 70.00 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7765 | | | | |
| NAL13041-172 | CRHE-DPT0216-043.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 15000 | | ug/L | 250 | 50.00 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7765 | | | | |
| NAL13041-172 | CRHE-DPT0216-043.0-20130326 | TRG | 79-01-6 | Trichloroethene | 4400 | | ug/L | 250 | 55.00 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7765 | | | | |
| NAL13041-172 | CRHE-DPT0216-043.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40.00 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7765 | | | | |
| NAL13041-172 | CRHE-DPT0216-043.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7765 | 50 | 118 | | |
| NAL13041-172 | CRHE-DPT0216-043.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 61 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7765 | 50 | 122 | | |
| NAL13041-172 | CRHE-DPT0216-043.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7765 | 50 | 94 | | |
| NAL13041-172 | CRHE-DPT0216-043.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7765 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-173 | CRHE-DPT0216-058.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 6.3 | | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7766 | | | | |
| NAL13041-173 | CRHE-DPT0216-058.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7766 | | | | |
| NAL13041-173 | CRHE-DPT0216-058.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 1.6 | | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7766 | | | | |
| NAL13041-173 | CRHE-DPT0216-058.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 110 | | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7766 | | | | |
| NAL13041-173 | CRHE-DPT0216-058.0-20130326 | TRG | 79-01-6 | Trichloroethene | 62 | | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7766 | | | | |
| NAL13041-173 | CRHE-DPT0216-058.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7766 | | | | |
| NAL13041-173 | CRHE-DPT0216-058.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7766 | 50 | 118 | | |
| NAL13041-173 | CRHE-DPT0216-058.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7766 | 50 | 120 | | |
| NAL13041-173 | CRHE-DPT0216-058.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7766 | 50 | 96 | | |
| NAL13041-173 | CRHE-DPT0216-058.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7766 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-176 | CRHE-DPT0217-023.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 1200 | | ug/L | 1000 | 130 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7767 | | | | |
| NAL13041-176 | CRHE-DPT0217-023.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1000 | 180 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7767 | | | | |
| NAL13041-176 | CRHE-DPT0217-023.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 1600 | | ug/L | 1000 | 280 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7767 | | | | |
| NAL13041-176 | CRHE-DPT0217-023.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 68000 | | ug/L | 1000 | 200 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7767 | | | | |
| NAL13041-176 | CRHE-DPT0217-023.0-20130326 | TRG | 79-01-6 | Trichloroethene | 7700 | | ug/L | 1000 | 220 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7767 | | | | |
| NAL13041-176 | CRHE-DPT0217-023.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1000 | 160 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7767 | | | | |
| NAL13041-176 | CRHE-DPT0217-023.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7767 | 50 | 116 | | |
| NAL13041-176 | CRHE-DPT0217-023.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7767 | 50 | 116 | | |
| NAL13041-176 | CRHE-DPT0217-023.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7767 | 50 | 94 | | |
| NAL13041-176 | CRHE-DPT0217-023.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1000 | 5.0 | 5.0 | NA | SW8260B | NALP7767 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-179 | CRHE-DPT0217-038.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 2100 | | ug/L | 100 | 13 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7780 | | | | |
| NAL13041-179 | CRHE-DPT0217-038.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 100 | 18 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7780 | | | | |
| NAL13041-179 | CRHE-DPT0217-038.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 100 | 28 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7780 | | | | |
| NAL13041-179 | CRHE-DPT0217-038.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 2900 | | ug/L | 100 | 20 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7780 | | | | |
| NAL13041-179 | CRHE-DPT0217-038.0-20130326 | TRG | 79-01-6 | Trichloroethene | 85 | I | ug/L | 100 | 22 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7780 | | | | |
| NAL13041-179 | CRHE-DPT0217-038.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 100 | 16 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7780 | | | | |
| NAL13041-179 | CRHE-DPT0217-038.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7780 | 50 | 116 | | |
| NAL13041-179 | CRHE-DPT0217-038.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7780 | 50 | 120 | | |
| NAL13041-179 | CRHE-DPT0217-038.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7780 | 50 | 94 | | |
| NAL13041-179 | CRHE-DPT0217-038.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7780 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-180 | CRHE-DPT0217-043.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 2.4 | | ug/L | 1.0 | 0.13 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7781 | | | | |
| NAL13041-180 | CRHE-DPT0217-043.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7781 | | | | |
| NAL13041-180 | CRHE-DPT0217-043.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7781 | | | | |
| NAL13041-180 | CRHE-DPT0217-043.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 38 | | ug/L | 1.0 | 0.20 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7781 | | | | |
| NAL13041-180 | CRHE-DPT0217-043.0-20130326 | TRG | 79-01-6 | Trichloroethene | 23 | | ug/L | 1.0 | 0.22 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7781 | | | | |
| NAL13041-180 | CRHE-DPT0217-043.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7781 | | | | |
| NAL13041-180 | CRHE-DPT0217-043.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7781 | 50 | 116 | | |
| NAL13041-180 | CRHE-DPT0217-043.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7781 | 50 | 118 | | |
| NAL13041-180 | CRHE-DPT0217-043.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7781 | 50 | 96 | | |
| NAL13041-180 | CRHE-DPT0217-043.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7781 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P033013CCVA | P033013CCVA | TRG | 75-01-4 | Vinyl Chloride | 47 | | ug/L | 1.0 | 0.13 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7744 | 50 | 94 | | |
| P033013CCVA | P033013CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 40 | | ug/L | 1.0 | 0.18 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7744 | 50 | 80 | | |
| P033013CCVA | P033013CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 44 | | ug/L | 1.0 | 0.28 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7744 | 50 | 88 | | |
| P033013CCVA | P033013CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 45 | | ug/L | 1.0 | 0.20 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7744 | 50 | 90 | | |
| P033013CCVA | P033013CCVA | TRG | 79-01-6 | Trichloroethene | 48 | | ug/L | 1.0 | 0.22 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7744 | 50 | 96 | | |
| P033013CCVA | P033013CCVA | TRG | 127-18-4 | Tetrachloroethene | 49 | | ug/L | 1.0 | 0.16 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7744 | 50 | 98 | | |
| P033013CCVA | P033013CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7744 | 50 | 92 | | |
| P033013CCVA | P033013CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7744 | 50 | 86 | | |
| P033013CCVA | P033013CCVA | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7744 | 50 | 98 | | |
| P033013CCVA | P033013CCVA | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7744 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P033013MBKA | P033013MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7748 | | | | |
| P033013MBKA | P033013MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7748 | | | | |
| P033013MBKA | P033013MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7748 | | | | |
| P033013MBKA | P033013MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7748 | | | | |
| P033013MBKA | P033013MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7748 | | | | |
| P033013MBKA | P033013MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7748 | | | | |
| P033013MBKA | P033013MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7748 | 50 | 116 | | |
| P033013MBKA | P033013MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7748 | 50 | 118 | | |
| P033013MBKA | P033013MBKA | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7748 | 50 | 96 | | |
| P033013MBKA | P033013MBKA | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7748 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P033113CCVB | P033113CCVB | TRG | 75-01-4 | Vinyl Chloride | 50 | | ug/L | 1.0 | 0.13 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7770 | 50 | 100 | | |
| P033113CCVB | P033113CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 46 | | ug/L | 1.0 | 0.18 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7770 | 50 | 92 | | |
| P033113CCVB | P033113CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 46 | | ug/L | 1.0 | 0.28 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7770 | 50 | 92 | | |
| P033113CCVB | P033113CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 48 | | ug/L | 1.0 | 0.20 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7770 | 50 | 96 | | |
| P033113CCVB | P033113CCVB | TRG | 79-01-6 | Trichloroethene | 47 | | ug/L | 1.0 | 0.22 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7770 | 50 | 94 | | |
| P033113CCVB | P033113CCVB | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7770 | 50 | 100 | | |
| P033113CCVB | P033113CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7770 | 50 | 98 | | |
| P033113CCVB | P033113CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7770 | 50 | 90 | | |
| P033113CCVB | P033113CCVB | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7770 | 50 | 98 | | |
| P033113CCVB | P033113CCVB | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7770 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P033113MBKA | P033113MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7771 | | | | |
| P033113MBKA | P033113MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7771 | | | | |
| P033113MBKA | P033113MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7771 | | | | |
| P033113MBKA | P033113MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7771 | | | | |
| P033113MBKA | P033113MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7771 | | | | |
| P033113MBKA | P033113MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7771 | | | | |
| P033113MBKA | P033113MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7771 | 50 | 112 | | |
| P033113MBKA | P033113MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7771 | 50 | 112 | | |
| P033113MBKA | P033113MBKA | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7771 | 50 | 94 | | |
| P033113MBKA | P033113MBKA | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7771 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P033013ALCS | P033013ALCS | TRG | 75-01-4 | Vinyl Chloride | 51 | | ug/L | 1.0 | 0.13 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7743 | 50 | 102 | | |
| P033013ALCS | P033013ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 49 | | ug/L | 1.0 | 0.18 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7743 | 50 | 98 | | |
| P033013ALCS | P033013ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.28 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7743 | 50 | 102 | | |
| P033013ALCS | P033013ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.20 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7743 | 50 | 104 | | |
| P033013ALCS | P033013ALCS | TRG | 79-01-6 | Trichloroethene | 49 | | ug/L | 1.0 | 0.22 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7743 | 50 | 98 | | |
| P033013ALCS | P033013ALCS | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7743 | 50 | 102 | | |
| P033013ALCS | P033013ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7743 | 50 | 102 | | |
| P033013ALCS | P033013ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7743 | 50 | 94 | | |
| P033013ALCS | P033013ALCS | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7743 | 50 | 102 | | |
| P033013ALCS | P033013ALCS | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | NA | 3/30/2013 | 3/30/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7743 | 50 | 102 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-222MS | CRHE-DPT0222-028.0-20130328MS | TRG | 75-01-4 | Vinyl Chloride | 49 | | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7746 | 50 | 98 | | |
| NAL13041-222MS | CRHE-DPT0222-028.0-20130328MS | TRG | 75-35-4 | 1,1-Dichloroethene | 49 | | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7746 | 50 | 98 | | |
| NAL13041-222MS | CRHE-DPT0222-028.0-20130328MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7746 | 50 | 104 | | |
| NAL13041-222MS | CRHE-DPT0222-028.0-20130328MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7746 | 50 | 106 | | |
| NAL13041-222MS | CRHE-DPT0222-028.0-20130328MS | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7746 | 50 | 100 | | |
| NAL13041-222MS | CRHE-DPT0222-028.0-20130328MS | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7746 | 50 | 102 | | |
| NAL13041-222MS | CRHE-DPT0222-028.0-20130328MS | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7746 | 50 | 102 | | |
| NAL13041-222MS | CRHE-DPT0222-028.0-20130328MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7746 | 50 | 94 | | |
| NAL13041-222MS | CRHE-DPT0222-028.0-20130328MS | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7746 | 50 | 102 | | |
| NAL13041-222MS | CRHE-DPT0222-028.0-20130328MS | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7746 | 50 | 100 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-222MSD | CRHE-DPT0222-028.0-20130328MSD | TRG | 75-01-4 | Vinyl Chloride | 43 | | ug/L | 1.0 | 0.13 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7747 | 50 | 86 | 13 | |
| NAL13041-222MSD | CRHE-DPT0222-028.0-20130328MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 39 | | ug/L | 1.0 | 0.18 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7747 | 50 | 78 | 23 | |
| NAL13041-222MSD | CRHE-DPT0222-028.0-20130328MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 42 | | ug/L | 1.0 | 0.28 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7747 | 50 | 84 | 21 | |
| NAL13041-222MSD | CRHE-DPT0222-028.0-20130328MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 43 | | ug/L | 1.0 | 0.20 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7747 | 50 | 86 | 21 | |
| NAL13041-222MSD | CRHE-DPT0222-028.0-20130328MSD | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7747 | 50 | 100 | 0 | |
| NAL13041-222MSD | CRHE-DPT0222-028.0-20130328MSD | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7747 | 50 | 102 | 0 | |
| NAL13041-222MSD | CRHE-DPT0222-028.0-20130328MSD | SUR | 1868-53-7 | Dibromofluoromethane | 45 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7747 | 50 | 90 | 13 | |
| NAL13041-222MSD | CRHE-DPT0222-028.0-20130328MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7747 | 50 | 86 | 9 | |
| NAL13041-222MSD | CRHE-DPT0222-028.0-20130328MSD | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7747 | 50 | 100 | 2 | |
| NAL13041-222MSD | CRHE-DPT0222-028.0-20130328MSD | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 3/28/2013 | 3/30/2013 | 3/30/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7747 | 50 | 100 | 0 | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-164 | CRHE-DPT0215-043.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 67 | | ug/L | 2.0 | 0.26 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7790 | | | | |
| NAL13041-164 | CRHE-DPT0215-043.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 2.0 | 0.36 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7790 | | | | |
| NAL13041-164 | CRHE-DPT0215-043.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 3.7 | | ug/L | 2.0 | 0.56 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7790 | | | | |
| NAL13041-164 | CRHE-DPT0215-043.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 230 | | ug/L | 2.0 | 0.40 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7790 | | | | |
| NAL13041-164 | CRHE-DPT0215-043.0-20130326 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 2.0 | 0.44 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7790 | | | | |
| NAL13041-164 | CRHE-DPT0215-043.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 2.0 | 0.32 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7790 | | | | |
| NAL13041-164 | CRHE-DPT0215-043.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7790 | 50 | 118 | | |
| NAL13041-164 | CRHE-DPT0215-043.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7790 | 50 | 120 | | |
| NAL13041-164 | CRHE-DPT0215-043.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7790 | 50 | 94 | | |
| NAL13041-164 | CRHE-DPT0215-043.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 2 | 5.0 | 5.0 | NA | SW8260B | NALP7790 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-181 | CRHE-DPT0217-058.0-20130326 | TRG | 75-01-4 | Vinyl Chloride | 260 | | ug/L | 100 | 13 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7791 | | | | |
| NAL13041-181 | CRHE-DPT0217-058.0-20130326 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 100 | 18 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7791 | | | | |
| NAL13041-181 | CRHE-DPT0217-058.0-20130326 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 55 | I | ug/L | 100 | 28 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7791 | | | | |
| NAL13041-181 | CRHE-DPT0217-058.0-20130326 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 6000 | | ug/L | 100 | 20 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7791 | | | | |
| NAL13041-181 | CRHE-DPT0217-058.0-20130326 | TRG | 79-01-6 | Trichloroethene | 1400 | | ug/L | 100 | 22 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7791 | | | | |
| NAL13041-181 | CRHE-DPT0217-058.0-20130326 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 100 | 16 | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7791 | | | | |
| NAL13041-181 | CRHE-DPT0217-058.0-20130326 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7791 | 50 | 116 | | |
| NAL13041-181 | CRHE-DPT0217-058.0-20130326 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7791 | 50 | 114 | | |
| NAL13041-181 | CRHE-DPT0217-058.0-20130326 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7791 | 50 | 94 | | |
| NAL13041-181 | CRHE-DPT0217-058.0-20130326 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/26/2013 | 3/31/2013 | 3/31/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7791 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-195 | CRHE-DPT0219-033.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7792 | | | | |
| NAL13041-195 | CRHE-DPT0219-033.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7792 | | | | |
| NAL13041-195 | CRHE-DPT0219-033.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7792 | | | | |
| NAL13041-195 | CRHE-DPT0219-033.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7792 | | | | |
| NAL13041-195 | CRHE-DPT0219-033.0-20130327 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7792 | | | | |
| NAL13041-195 | CRHE-DPT0219-033.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7792 | | | | |
| NAL13041-195 | CRHE-DPT0219-033.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7792 | 50 | 106 | | |
| NAL13041-195 | CRHE-DPT0219-033.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7792 | 50 | 104 | | |
| NAL13041-195 | CRHE-DPT0219-033.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7792 | 50 | 98 | | |
| NAL13041-195 | CRHE-DPT0219-033.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7792 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-201 | CRHE-DPT0220-023.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7793 | | | | |
| NAL13041-201 | CRHE-DPT0220-023.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7793 | | | | |
| NAL13041-201 | CRHE-DPT0220-023.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7793 | | | | |
| NAL13041-201 | CRHE-DPT0220-023.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7793 | | | | |
| NAL13041-201 | CRHE-DPT0220-023.0-20130327 | TRG | 79-01-6 | Trichloroethene | 0.85 | I | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7793 | | | | |
| NAL13041-201 | CRHE-DPT0220-023.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7793 | | | | |
| NAL13041-201 | CRHE-DPT0220-023.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7793 | 50 | 120 | | |
| NAL13041-201 | CRHE-DPT0220-023.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7793 | 50 | 118 | | |
| NAL13041-201 | CRHE-DPT0220-023.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7793 | 50 | 94 | | |
| NAL13041-201 | CRHE-DPT0220-023.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7793 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-203 | CRHE-DPT0220-033.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7794 | | | | |
| NAL13041-203 | CRHE-DPT0220-033.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7794 | | | | |
| NAL13041-203 | CRHE-DPT0220-033.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7794 | | | | |
| NAL13041-203 | CRHE-DPT0220-033.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 2.1 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7794 | | | | |
| NAL13041-203 | CRHE-DPT0220-033.0-20130327 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7794 | | | | |
| NAL13041-203 | CRHE-DPT0220-033.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7794 | | | | |
| NAL13041-203 | CRHE-DPT0220-033.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7794 | 50 | 120 | | |
| NAL13041-203 | CRHE-DPT0220-033.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 61 | | ug/L | | | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7794 | 50 | 122 | | |
| NAL13041-203 | CRHE-DPT0220-033.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7794 | 50 | 96 | | |
| NAL13041-203 | CRHE-DPT0220-033.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7794 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-205 | CRHE-DPT0220-043.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | 1000 | | ug/L | 50 | 6.5 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7795 | | | | |
| NAL13041-205 | CRHE-DPT0220-043.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7795 | | | | |
| NAL13041-205 | CRHE-DPT0220-043.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 100 | | ug/L | 50 | 14 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7795 | | | | |
| NAL13041-205 | CRHE-DPT0220-043.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 4300 | | ug/L | 50 | 10 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7795 | | | | |
| NAL13041-205 | CRHE-DPT0220-043.0-20130327 | TRG | 79-01-6 | Trichloroethene | 1400 | | ug/L | 50 | 11 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7795 | | | | |
| NAL13041-205 | CRHE-DPT0220-043.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7795 | | | | |
| NAL13041-205 | CRHE-DPT0220-043.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7795 | 50 | 102 | | |
| NAL13041-205 | CRHE-DPT0220-043.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7795 | 50 | 102 | | |
| NAL13041-205 | CRHE-DPT0220-043.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7795 | 50 | 96 | | |
| NAL13041-205 | CRHE-DPT0220-043.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7795 | 50 | 92 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-207 | CRHE-DPT0220-058.0-20130327 | TRG | 75-01-4 | Vinyl Chloride | 2.1 | | ug/L | 1.0 | 0.13 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7796 | | | | |
| NAL13041-207 | CRHE-DPT0220-058.0-20130327 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7796 | | | | |
| NAL13041-207 | CRHE-DPT0220-058.0-20130327 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7796 | | | | |
| NAL13041-207 | CRHE-DPT0220-058.0-20130327 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 23 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7796 | | | | |
| NAL13041-207 | CRHE-DPT0220-058.0-20130327 | TRG | 79-01-6 | Trichloroethene | 12 | | ug/L | 1.0 | 0.22 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7796 | | | | |
| NAL13041-207 | CRHE-DPT0220-058.0-20130327 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7796 | | | | |
| NAL13041-207 | CRHE-DPT0220-058.0-20130327 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7796 | 50 | 98 | | |
| NAL13041-207 | CRHE-DPT0220-058.0-20130327 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7796 | 50 | 98 | | |
| NAL13041-207 | CRHE-DPT0220-058.0-20130327 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7796 | 50 | 96 | | |
| NAL13041-207 | CRHE-DPT0220-058.0-20130327 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 3/27/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7796 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-244 | CRHE-DPT0225-010.0-20130329 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7797 | | | | |
| NAL13041-244 | CRHE-DPT0225-010.0-20130329 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7797 | | | | |
| NAL13041-244 | CRHE-DPT0225-010.0-20130329 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7797 | | | | |
| NAL13041-244 | CRHE-DPT0225-010.0-20130329 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7797 | | | | |
| NAL13041-244 | CRHE-DPT0225-010.0-20130329 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7797 | | | | |
| NAL13041-244 | CRHE-DPT0225-010.0-20130329 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7797 | | | | |
| NAL13041-244 | CRHE-DPT0225-010.0-20130329 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7797 | 50 | 120 | | |
| NAL13041-244 | CRHE-DPT0225-010.0-20130329 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7797 | 50 | 118 | | |
| NAL13041-244 | CRHE-DPT0225-010.0-20130329 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7797 | 50 | 94 | | |
| NAL13041-244 | CRHE-DPT0225-010.0-20130329 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7797 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P033113CCVB | P033113CCVB | TRG | 75-01-4 | Vinyl Chloride | 49 | | ug/L | 1.0 | 0.13 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7782 | 50 | 98 | | |
| P033113CCVB | P033113CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 47 | | ug/L | 1.0 | 0.18 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7782 | 50 | 94 | | |
| P033113CCVB | P033113CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 48 | | ug/L | 1.0 | 0.28 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7782 | 50 | 96 | | |
| P033113CCVB | P033113CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 50 | | ug/L | 1.0 | 0.20 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7782 | 50 | 100 | | |
| P033113CCVB | P033113CCVB | TRG | 79-01-6 | Trichloroethene | 48 | | ug/L | 1.0 | 0.22 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7782 | 50 | 96 | | |
| P033113CCVB | P033113CCVB | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7782 | 50 | 102 | | |
| P033113CCVB | P033113CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7782 | 50 | 102 | | |
| P033113CCVB | P033113CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7782 | 50 | 98 | | |
| P033113CCVB | P033113CCVB | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7782 | 50 | 102 | | |
| P033113CCVB | P033113CCVB | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7782 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P033113MBKB | P033113MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7788 | | | | |
| P033113MBKB | P033113MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7788 | | | | |
| P033113MBKB | P033113MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7788 | | | | |
| P033113MBKB | P033113MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7788 | | | | |
| P033113MBKB | P033113MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7788 | | | | |
| P033113MBKB | P033113MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7788 | | | | |
| P033113MBKB | P033113MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7788 | 50 | 114 | | |
| P033113MBKB | P033113MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7788 | 50 | 116 | | |
| P033113MBKB | P033113MBKB | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7788 | 50 | 94 | | |
| P033113MBKB | P033113MBKB | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7788 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P033113ALCS | P033113ALCS | TRG | 75-01-4 | Vinyl Chloride | 48 | | ug/L | 1.0 | 0.13 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7784 | 50 | 96 | | |
| P033113ALCS | P033113ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 41 | | ug/L | 1.0 | 0.18 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7784 | 50 | 82 | | |
| P033113ALCS | P033113ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 44 | | ug/L | 1.0 | 0.28 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7784 | 50 | 88 | | |
| P033113ALCS | P033113ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 47 | | ug/L | 1.0 | 0.20 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7784 | 50 | 94 | | |
| P033113ALCS | P033113ALCS | TRG | 79-01-6 | Trichloroethene | 46 | | ug/L | 1.0 | 0.22 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7784 | 50 | 92 | | |
| P033113ALCS | P033113ALCS | TRG | 127-18-4 | Tetrachloroethene | 49 | | ug/L | 1.0 | 0.16 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7784 | 50 | 98 | | |
| P033113ALCS | P033113ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7784 | 50 | 92 | | |
| P033113ALCS | P033113ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7784 | 50 | 90 | | |
| P033113ALCS | P033113ALCS | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7784 | 50 | 100 | | |
| P033113ALCS | P033113ALCS | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7784 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P033113ALCD | P033113ALCD | TRG | 75-01-4 | Vinyl Chloride | 48 | | ug/L | 1.0 | 0.13 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7785 | 50 | 96 | 0 | |
| P033113ALCD | P033113ALCD | TRG | 75-35-4 | 1,1-Dichloroethene | 43 | | ug/L | 1.0 | 0.18 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7785 | 50 | 86 | 5 | |
| P033113ALCD | P033113ALCD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 45 | | ug/L | 1.0 | 0.28 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7785 | 50 | 90 | 2 | |
| P033113ALCD | P033113ALCD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 47 | | ug/L | 1.0 | 0.20 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7785 | 50 | 94 | 0 | |
| P033113ALCD | P033113ALCD | TRG | 79-01-6 | Trichloroethene | 49 | | ug/L | 1.0 | 0.22 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7785 | 50 | 98 | 6 | |
| P033113ALCD | P033113ALCD | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7785 | 50 | 100 | 2 | |
| P033113ALCD | P033113ALCD | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7785 | 50 | 94 | 2 | |
| P033113ALCD | P033113ALCD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7785 | 50 | 90 | 0 | |
| P033113ALCD | P033113ALCD | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7785 | 50 | 100 | 0 | |
| P033113ALCD | P033113ALCD | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 3/31/2013 | 3/31/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7785 | 50 | 98 | 2 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-195MS | CRHE-DPT0219-033.0-20130327MS | TRG | 75-01-4 | Vinyl Chloride | 46 | | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7786 | 50 | 92 | | |
| NAL13041-195MS | CRHE-DPT0219-033.0-20130327MS | TRG | 75-35-4 | 1,1-Dichloroethene | 42 | | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7786 | 50 | 84 | | |
| NAL13041-195MS | CRHE-DPT0219-033.0-20130327MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 45 | | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7786 | 50 | 90 | | |
| NAL13041-195MS | CRHE-DPT0219-033.0-20130327MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 45 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7786 | 50 | 90 | | |
| NAL13041-195MS | CRHE-DPT0219-033.0-20130327MS | TRG | 79-01-6 | Trichloroethene | 48 | | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7786 | 50 | 96 | | |
| NAL13041-195MS | CRHE-DPT0219-033.0-20130327MS | TRG | 127-18-4 | Tetrachloroethene | 49 | | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7786 | 50 | 98 | | |
| NAL13041-195MS | CRHE-DPT0219-033.0-20130327MS | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7786 | 50 | 92 | | |
| NAL13041-195MS | CRHE-DPT0219-033.0-20130327MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7786 | 50 | 90 | | |
| NAL13041-195MS | CRHE-DPT0219-033.0-20130327MS | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7786 | 50 | 100 | | |
| NAL13041-195MS | CRHE-DPT0219-033.0-20130327MS | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7786 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-195MSD | CRHE-DPT0219-033.0-20130327MSD | TRG | 75-01-4 | Vinyl Chloride | 49 | | ug/L | 1.0 | 0.13 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7787 | 50 | 98 | 6 | |
| NAL13041-195MSD | CRHE-DPT0219-033.0-20130327MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 48 | | ug/L | 1.0 | 0.18 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7787 | 50 | 96 | 13 | |
| NAL13041-195MSD | CRHE-DPT0219-033.0-20130327MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.28 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7787 | 50 | 102 | 13 | |
| NAL13041-195MSD | CRHE-DPT0219-033.0-20130327MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.20 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7787 | 50 | 104 | 14 | |
| NAL13041-195MSD | CRHE-DPT0219-033.0-20130327MSD | TRG | 79-01-6 | Trichloroethene | 48 | | ug/L | 1.0 | 0.22 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7787 | 50 | 96 | 0 | |
| NAL13041-195MSD | CRHE-DPT0219-033.0-20130327MSD | TRG | 127-18-4 | Tetrachloroethene | 48 | | ug/L | 1.0 | 0.16 | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7787 | 50 | 96 | 2 | |
| NAL13041-195MSD | CRHE-DPT0219-033.0-20130327MSD | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7787 | 50 | 102 | 10 | |
| NAL13041-195MSD | CRHE-DPT0219-033.0-20130327MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7787 | 50 | 100 | 11 | |
| NAL13041-195MSD | CRHE-DPT0219-033.0-20130327MSD | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7787 | 50 | 102 | 2 | |
| NAL13041-195MSD | CRHE-DPT0219-033.0-20130327MSD | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/27/2013 | 3/31/2013 | 3/31/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7787 | 50 | 96 | 2 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-245 RR | CRHE-DPT0225-018.0-20130329 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7803 | | | | |
| NAL13041-245 RR | CRHE-DPT0225-018.0-20130329 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7803 | | | | |
| NAL13041-245 RR | CRHE-DPT0225-018.0-20130329 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7803 | | | | |
| NAL13041-245 RR | CRHE-DPT0225-018.0-20130329 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7803 | | | | |
| NAL13041-245 RR | CRHE-DPT0225-018.0-20130329 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7803 | | | | |
| NAL13041-245 RR | CRHE-DPT0225-018.0-20130329 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7803 | | | | |
| NAL13041-245 RR | CRHE-DPT0225-018.0-20130329 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7803 | 50 | 114 | | |
| NAL13041-245 RR | CRHE-DPT0225-018.0-20130329 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7803 | 50 | 110 | | |
| NAL13041-245 RR | CRHE-DPT0225-018.0-20130329 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7803 | 50 | 96 | | |
| NAL13041-245 RR | CRHE-DPT0225-018.0-20130329 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/29/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7803 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-253 | CRHE-DPT0226-010.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | 1.2 | | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7808 | | | | |
| NAL13041-253 | CRHE-DPT0226-010.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7808 | | | | |
| NAL13041-253 | CRHE-DPT0226-010.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 0.86 | I | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7808 | | | | |
| NAL13041-253 | CRHE-DPT0226-010.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 26 | | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7808 | | | | |
| NAL13041-253 | CRHE-DPT0226-010.0-20130401 | TRG | 79-01-6 | Trichloroethene | 1.9 | | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7808 | | | | |
| NAL13041-253 | CRHE-DPT0226-010.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7808 | | | | |
| NAL13041-253 | CRHE-DPT0226-010.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7808 | 50 | 116 | | |
| NAL13041-253 | CRHE-DPT0226-010.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7808 | 50 | 114 | | |
| NAL13041-253 | CRHE-DPT0226-010.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7808 | 50 | 94 | | |
| NAL13041-253 | CRHE-DPT0226-010.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7808 | 50 | 92 | | |

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# FINAL ANALYTICAL REPORT

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-254 | CRHE-DPT0226-018.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7809 | | | | |
| NAL13041-254 | CRHE-DPT0226-018.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7809 | | | | |
| NAL13041-254 | CRHE-DPT0226-018.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7809 | | | | |
| NAL13041-254 | CRHE-DPT0226-018.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7809 | | | | |
| NAL13041-254 | CRHE-DPT0226-018.0-20130401 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7809 | | | | |
| NAL13041-254 | CRHE-DPT0226-018.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7809 | | | | |
| NAL13041-254 | CRHE-DPT0226-018.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7809 | 50 | 94 | | |
| NAL13041-254 | CRHE-DPT0226-018.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7809 | 50 | 106 | | |
| NAL13041-254 | CRHE-DPT0226-018.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7809 | 50 | 94 | | |
| NAL13041-254 | CRHE-DPT0226-018.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7809 | 50 | 90 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-255 | CRHE-DPT0226-023.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7810 | | | | |
| NAL13041-255 | CRHE-DPT0226-023.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7810 | | | | |
| NAL13041-255 | CRHE-DPT0226-023.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7810 | | | | |
| NAL13041-255 | CRHE-DPT0226-023.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7810 | | | | |
| NAL13041-255 | CRHE-DPT0226-023.0-20130401 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7810 | | | | |
| NAL13041-255 | CRHE-DPT0226-023.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7810 | | | | |
| NAL13041-255 | CRHE-DPT0226-023.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7810 | 50 | 114 | | |
| NAL13041-255 | CRHE-DPT0226-023.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7810 | 50 | 110 | | |
| NAL13041-255 | CRHE-DPT0226-023.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7810 | 50 | 94 | | |
| NAL13041-255 | CRHE-DPT0226-023.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7810 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-256 | CRHE-DPT0226-028.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7811 | | | | |
| NAL13041-256 | CRHE-DPT0226-028.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7811 | | | | |
| NAL13041-256 | CRHE-DPT0226-028.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7811 | | | | |
| NAL13041-256 | CRHE-DPT0226-028.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7811 | | | | |
| NAL13041-256 | CRHE-DPT0226-028.0-20130401 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7811 | | | | |
| NAL13041-256 | CRHE-DPT0226-028.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7811 | | | | |
| NAL13041-256 | CRHE-DPT0226-028.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7811 | 50 | 104 | | |
| NAL13041-256 | CRHE-DPT0226-028.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7811 | 50 | 100 | | |
| NAL13041-256 | CRHE-DPT0226-028.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7811 | 50 | 96 | | |
| NAL13041-256 | CRHE-DPT0226-028.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7811 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-257 | CRHE-DPT0226-033.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | 2.2 | | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7812 | | | | |
| NAL13041-257 | CRHE-DPT0226-033.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7812 | | | | |
| NAL13041-257 | CRHE-DPT0226-033.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7812 | | | | |
| NAL13041-257 | CRHE-DPT0226-033.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 3.6 | | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7812 | | | | |
| NAL13041-257 | CRHE-DPT0226-033.0-20130401 | TRG | 79-01-6 | Trichloroethene | 3.3 | | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7812 | | | | |
| NAL13041-257 | CRHE-DPT0226-033.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7812 | | | | |
| NAL13041-257 | CRHE-DPT0226-033.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7812 | 50 | 102 | | |
| NAL13041-257 | CRHE-DPT0226-033.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7812 | 50 | 100 | | |
| NAL13041-257 | CRHE-DPT0226-033.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7812 | 50 | 96 | | |
| NAL13041-257 | CRHE-DPT0226-033.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7812 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-258 | CRHE-DPT0226-038.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | 670 | | ug/L | 100 | 13 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7818 | | | | |
| NAL13041-258 | CRHE-DPT0226-038.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 100 | 18 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7818 | | | | |
| NAL13041-258 | CRHE-DPT0226-038.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 170 | | ug/L | 100 | 28 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7818 | | | | |
| NAL13041-258 | CRHE-DPT0226-038.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 4200 | | ug/L | 100 | 20 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7818 | | | | |
| NAL13041-258 | CRHE-DPT0226-038.0-20130401 | TRG | 79-01-6 | Trichloroethene | 44 | I | ug/L | 100 | 22 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7818 | | | | |
| NAL13041-258 | CRHE-DPT0226-038.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 100 | 16 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7818 | | | | |
| NAL13041-258 | CRHE-DPT0226-038.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7818 | 50 | 106 | | |
| NAL13041-258 | CRHE-DPT0226-038.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7818 | 50 | 102 | | |
| NAL13041-258 | CRHE-DPT0226-038.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7818 | 50 | 94 | | |
| NAL13041-258 | CRHE-DPT0226-038.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7818 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-259 | CRHE-DPT0226-043.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | 480 | | ug/L | 250 | 33 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7819 | | | | |
| NAL13041-259 | CRHE-DPT0226-043.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 250 | 45 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7819 | | | | |
| NAL13041-259 | CRHE-DPT0226-043.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 260 | | ug/L | 250 | 70 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7819 | | | | |
| NAL13041-259 | CRHE-DPT0226-043.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 6900 | | ug/L | 250 | 50 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7819 | | | | |
| NAL13041-259 | CRHE-DPT0226-043.0-20130401 | TRG | 79-01-6 | Trichloroethene | 1000 | | ug/L | 250 | 55 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7819 | | | | |
| NAL13041-259 | CRHE-DPT0226-043.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 250 | 40 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7819 | | | | |
| NAL13041-259 | CRHE-DPT0226-043.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7819 | 50 | 112 | | |
| NAL13041-259 | CRHE-DPT0226-043.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7819 | 50 | 110 | | |
| NAL13041-259 | CRHE-DPT0226-043.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7819 | 50 | 94 | | |
| NAL13041-259 | CRHE-DPT0226-043.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 250 | 5.0 | 5.0 | NA | SW8260B | NALP7819 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-260 | CRHE-DPT0226-058.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7806 | | | | |
| NAL13041-260 | CRHE-DPT0226-058.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7806 | | | | |
| NAL13041-260 | CRHE-DPT0226-058.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7806 | | | | |
| NAL13041-260 | CRHE-DPT0226-058.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7806 | | | | |
| NAL13041-260 | CRHE-DPT0226-058.0-20130401 | TRG | 79-01-6 | Trichloroethene | 0.62 | I | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7806 | | | | |
| NAL13041-260 | CRHE-DPT0226-058.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7806 | | | | |
| NAL13041-260 | CRHE-DPT0226-058.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7806 | 50 | 102 | | |
| NAL13041-260 | CRHE-DPT0226-058.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7806 | 50 | 102 | | |
| NAL13041-260 | CRHE-DPT0226-058.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7806 | 50 | 96 | | |
| NAL13041-260 | CRHE-DPT0226-058.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7806 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-261 | CRHE-DPT0227-010.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7820 | | | | |
| NAL13041-261 | CRHE-DPT0227-010.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7820 | | | | |
| NAL13041-261 | CRHE-DPT0227-010.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7820 | | | | |
| NAL13041-261 | CRHE-DPT0227-010.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7820 | | | | |
| NAL13041-261 | CRHE-DPT0227-010.0-20130401 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7820 | | | | |
| NAL13041-261 | CRHE-DPT0227-010.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7820 | | | | |
| NAL13041-261 | CRHE-DPT0227-010.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7820 | 50 | 114 | | |
| NAL13041-261 | CRHE-DPT0227-010.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7820 | 50 | 114 | | |
| NAL13041-261 | CRHE-DPT0227-010.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7820 | 50 | 92 | | |
| NAL13041-261 | CRHE-DPT0227-010.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7820 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-262 | CRHE-DPT0227-018.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7821 | | | | |
| NAL13041-262 | CRHE-DPT0227-018.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7821 | | | | |
| NAL13041-262 | CRHE-DPT0227-018.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7821 | | | | |
| NAL13041-262 | CRHE-DPT0227-018.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 0.83 | I | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7821 | | | | |
| NAL13041-262 | CRHE-DPT0227-018.0-20130401 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7821 | | | | |
| NAL13041-262 | CRHE-DPT0227-018.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7821 | | | | |
| NAL13041-262 | CRHE-DPT0227-018.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7821 | 50 | 110 | | |
| NAL13041-262 | CRHE-DPT0227-018.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7821 | 50 | 106 | | |
| NAL13041-262 | CRHE-DPT0227-018.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7821 | 50 | 96 | | |
| NAL13041-262 | CRHE-DPT0227-018.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7821 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-264 | CRHE-DPT0227-028.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7826 | | | | |
| NAL13041-264 | CRHE-DPT0227-028.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7826 | | | | |
| NAL13041-264 | CRHE-DPT0227-028.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7826 | | | | |
| NAL13041-264 | CRHE-DPT0227-028.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7826 | | | | |
| NAL13041-264 | CRHE-DPT0227-028.0-20130401 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7826 | | | | |
| NAL13041-264 | CRHE-DPT0227-028.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7826 | | | | |
| NAL13041-264 | CRHE-DPT0227-028.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7826 | 50 | 96 | | |
| NAL13041-264 | CRHE-DPT0227-028.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7826 | 50 | 96 | | |
| NAL13041-264 | CRHE-DPT0227-028.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7826 | 50 | 96 | | |
| NAL13041-264 | CRHE-DPT0227-028.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7826 | 50 | 90 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-265 | CRHE-DPT0227-033.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | 10 | | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7827 | | | | |
| NAL13041-265 | CRHE-DPT0227-033.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7827 | | | | |
| NAL13041-265 | CRHE-DPT0227-033.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 0.54 | I | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7827 | | | | |
| NAL13041-265 | CRHE-DPT0227-033.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 95 | | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7827 | | | | |
| NAL13041-265 | CRHE-DPT0227-033.0-20130401 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7827 | | | | |
| NAL13041-265 | CRHE-DPT0227-033.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7827 | | | | |
| NAL13041-265 | CRHE-DPT0227-033.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7827 | 50 | 106 | | |
| NAL13041-265 | CRHE-DPT0227-033.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7827 | 50 | 106 | | |
| NAL13041-265 | CRHE-DPT0227-033.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7827 | 50 | 96 | | |
| NAL13041-265 | CRHE-DPT0227-033.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/1/2013 | 4/1/2013 | 4/1/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7827 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-266 | CRHE-DPT0227-038.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | 970 | | ug/L | 100 | 13 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7828 | | | | |
| NAL13041-266 | CRHE-DPT0227-038.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 100 | 18 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7828 | | | | |
| NAL13041-266 | CRHE-DPT0227-038.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 57 | I | ug/L | 100 | 28 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7828 | | | | |
| NAL13041-266 | CRHE-DPT0227-038.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1100 | | ug/L | 100 | 20 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7828 | | | | |
| NAL13041-266 | CRHE-DPT0227-038.0-20130401 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 100 | 22 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7828 | | | | |
| NAL13041-266 | CRHE-DPT0227-038.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 100 | 16 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7828 | | | | |
| NAL13041-266 | CRHE-DPT0227-038.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7828 | 50 | 114 | | |
| NAL13041-266 | CRHE-DPT0227-038.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7828 | 50 | 116 | | |
| NAL13041-266 | CRHE-DPT0227-038.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7828 | 50 | 90 | | |
| NAL13041-266 | CRHE-DPT0227-038.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7828 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-267 | CRHE-DPT0227-043.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | 1600 | | ug/L | 100 | 13 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7829 | | | | |
| NAL13041-267 | CRHE-DPT0227-043.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 100 | 18 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7829 | | | | |
| NAL13041-267 | CRHE-DPT0227-043.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 210 | | ug/L | 100 | 28 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7829 | | | | |
| NAL13041-267 | CRHE-DPT0227-043.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 8200 | | ug/L | 100 | 20 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7829 | | | | |
| NAL13041-267 | CRHE-DPT0227-043.0-20130401 | TRG | 79-01-6 | Trichloroethene | 42 | I | ug/L | 100 | 22 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7829 | | | | |
| NAL13041-267 | CRHE-DPT0227-043.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 100 | 16 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7829 | | | | |
| NAL13041-267 | CRHE-DPT0227-043.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7829 | 50 | 116 | | |
| NAL13041-267 | CRHE-DPT0227-043.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7829 | 50 | 120 | | |
| NAL13041-267 | CRHE-DPT0227-043.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7829 | 50 | 92 | | |
| NAL13041-267 | CRHE-DPT0227-043.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7829 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-268 | CRHE-DPT0227-058.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | 5.3 | | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7830 | | | | |
| NAL13041-268 | CRHE-DPT0227-058.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7830 | | | | |
| NAL13041-268 | CRHE-DPT0227-058.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 1.2 | | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7830 | | | | |
| NAL13041-268 | CRHE-DPT0227-058.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7830 | | | | |
| NAL13041-268 | CRHE-DPT0227-058.0-20130401 | TRG | 79-01-6 | Trichloroethene | 3.6 | | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7830 | | | | |
| NAL13041-268 | CRHE-DPT0227-058.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7830 | | | | |
| NAL13041-268 | CRHE-DPT0227-058.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7830 | 50 | 120 | | |
| NAL13041-268 | CRHE-DPT0227-058.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7830 | 50 | 112 | | |
| NAL13041-268 | CRHE-DPT0227-058.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7830 | 50 | 94 | | |
| NAL13041-268 | CRHE-DPT0227-058.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7830 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-269 | CRHE-DPT0228-010.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7831 | | | | |
| NAL13041-269 | CRHE-DPT0228-010.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7831 | | | | |
| NAL13041-269 | CRHE-DPT0228-010.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7831 | | | | |
| NAL13041-269 | CRHE-DPT0228-010.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7831 | | | | |
| NAL13041-269 | CRHE-DPT0228-010.0-20130401 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7831 | | | | |
| NAL13041-269 | CRHE-DPT0228-010.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7831 | | | | |
| NAL13041-269 | CRHE-DPT0228-010.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7831 | 50 | 114 | | |
| NAL13041-269 | CRHE-DPT0228-010.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7831 | 50 | 114 | | |
| NAL13041-269 | CRHE-DPT0228-010.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7831 | 50 | 94 | | |
| NAL13041-269 | CRHE-DPT0228-010.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7831 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-270 | CRHE-DPT0228-018.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7832 | | | | |
| NAL13041-270 | CRHE-DPT0228-018.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7832 | | | | |
| NAL13041-270 | CRHE-DPT0228-018.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7832 | | | | |
| NAL13041-270 | CRHE-DPT0228-018.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7832 | | | | |
| NAL13041-270 | CRHE-DPT0228-018.0-20130401 | TRG | 79-01-6 | Trichloroethene | 0.54 | I | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7832 | | | | |
| NAL13041-270 | CRHE-DPT0228-018.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7832 | | | | |
| NAL13041-270 | CRHE-DPT0228-018.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7832 | 50 | 114 | | |
| NAL13041-270 | CRHE-DPT0228-018.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7832 | 50 | 114 | | |
| NAL13041-270 | CRHE-DPT0228-018.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7832 | 50 | 94 | | |
| NAL13041-270 | CRHE-DPT0228-018.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7832 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-271 | CRHE-DPT0228-028.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7833 | | | | |
| NAL13041-271 | CRHE-DPT0228-028.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7833 | | | | |
| NAL13041-271 | CRHE-DPT0228-028.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7833 | | | | |
| NAL13041-271 | CRHE-DPT0228-028.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 2.3 | | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7833 | | | | |
| NAL13041-271 | CRHE-DPT0228-028.0-20130401 | TRG | 79-01-6 | Trichloroethene | 6.1 | | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7833 | | | | |
| NAL13041-271 | CRHE-DPT0228-028.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7833 | | | | |
| NAL13041-271 | CRHE-DPT0228-028.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7833 | 50 | 112 | | |
| NAL13041-271 | CRHE-DPT0228-028.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7833 | 50 | 112 | | |
| NAL13041-271 | CRHE-DPT0228-028.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7833 | 50 | 94 | | |
| NAL13041-271 | CRHE-DPT0228-028.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7833 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040113CCVA | P040113CCVA | TRG | 75-01-4 | Vinyl Chloride | 49 | | ug/L | 1.0 | 0.13 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7799 | 50 | 98 | | |
| P040113CCVA | P040113CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 48 | | ug/L | 1.0 | 0.18 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7799 | 50 | 96 | | |
| P040113CCVA | P040113CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.28 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7799 | 50 | 106 | | |
| P040113CCVA | P040113CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.20 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7799 | 50 | 106 | | |
| P040113CCVA | P040113CCVA | TRG | 79-01-6 | Trichloroethene | 49 | | ug/L | 1.0 | 0.22 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7799 | 50 | 98 | | |
| P040113CCVA | P040113CCVA | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7799 | 50 | 102 | | |
| P040113CCVA | P040113CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7799 | 50 | 102 | | |
| P040113CCVA | P040113CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7799 | 50 | 98 | | |
| P040113CCVA | P040113CCVA | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7799 | 50 | 100 | | |
| P040113CCVA | P040113CCVA | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7799 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040113MBKA | P040113MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7802 | | | | |
| P040113MBKA | P040113MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7802 | | | | |
| P040113MBKA | P040113MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7802 | | | | |
| P040113MBKA | P040113MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7802 | | | | |
| P040113MBKA | P040113MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7802 | | | | |
| P040113MBKA | P040113MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7802 | | | | |
| P040113MBKA | P040113MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7802 | 50 | 114 | | |
| P040113MBKA | P040113MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7802 | 50 | 116 | | |
| P040113MBKA | P040113MBKA | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7802 | 50 | 94 | | |
| P040113MBKA | P040113MBKA | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7802 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040113CCVB | P040113CCVB | TRG | 75-01-4 | Vinyl Chloride | 57 | | ug/L | 1.0 | 0.13 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 114 | | |
| P040113CCVB | P040113CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 46 | | ug/L | 1.0 | 0.18 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 92 | | |
| P040113CCVB | P040113CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 48 | | ug/L | 1.0 | 0.28 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 96 | | |
| P040113CCVB | P040113CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 50 | | ug/L | 1.0 | 0.20 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 100 | | |
| P040113CCVB | P040113CCVB | TRG | 79-01-6 | Trichloroethene | 53 | | ug/L | 1.0 | 0.22 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 106 | | |
| P040113CCVB | P040113CCVB | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 108 | | |
| P040113CCVB | P040113CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 45 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 90 | | |
| P040113CCVB | P040113CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 88 | | |
| P040113CCVB | P040113CCVB | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 94 | | |
| P040113CCVB | P040113CCVB | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040113MBKB | P040113MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | | | | |
| P040113MBKB | P040113MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | | | | |
| P040113MBKB | P040113MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | | | | |
| P040113MBKB | P040113MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | | | | |
| P040113MBKB | P040113MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | | | | |
| P040113MBKB | P040113MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | | | | |
| P040113MBKB | P040113MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | 50 | 112 | | |
| P040113MBKB | P040113MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | 50 | 114 | | |
| P040113MBKB | P040113MBKB | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | 50 | 96 | | |
| P040113MBKB | P040113MBKB | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040113ALCS | P040113ALCS | TRG | 75-01-4 | Vinyl Chloride | 46 | | ug/L | 1.0 | 0.13 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7800 | 50 | 92 | | |
| P040113ALCS | P040113ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 38 | | ug/L | 1.0 | 0.18 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7800 | 50 | 76 | | |
| P040113ALCS | P040113ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 38 | | ug/L | 1.0 | 0.28 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7800 | 50 | 76 | | |
| P040113ALCS | P040113ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 42 | | ug/L | 1.0 | 0.20 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7800 | 50 | 84 | | |
| P040113ALCS | P040113ALCS | TRG | 79-01-6 | Trichloroethene | 49 | | ug/L | 1.0 | 0.22 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7800 | 50 | 98 | | |
| P040113ALCS | P040113ALCS | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7800 | 50 | 100 | | |
| P040113ALCS | P040113ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 42 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7800 | 50 | 84 | | |
| P040113ALCS | P040113ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 38 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7800 | 50 | 76 | | |
| P040113ALCS | P040113ALCS | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7800 | 50 | 94 | | |
| P040113ALCS | P040113ALCS | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7800 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040113ALCD | P040113ALCD | TRG | 75-01-4 | Vinyl Chloride | 49 | | ug/L | 1.0 | 0.13 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7801 | 50 | 98 | 6 | |
| P040113ALCD | P040113ALCD | TRG | 75-35-4 | 1,1-Dichloroethene | 43 | | ug/L | 1.0 | 0.18 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7801 | 50 | 86 | 12 | |
| P040113ALCD | P040113ALCD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 47 | | ug/L | 1.0 | 0.28 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7801 | 50 | 94 | 21 | |
| P040113ALCD | P040113ALCD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 48 | | ug/L | 1.0 | 0.20 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7801 | 50 | 96 | 13 | |
| P040113ALCD | P040113ALCD | TRG | 79-01-6 | Trichloroethene | 48 | | ug/L | 1.0 | 0.22 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7801 | 50 | 96 | 2 | |
| P040113ALCD | P040113ALCD | TRG | 127-18-4 | Tetrachloroethene | 49 | | ug/L | 1.0 | 0.16 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7801 | 50 | 98 | 2 | |
| P040113ALCD | P040113ALCD | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7801 | 50 | 100 | 17 | |
| P040113ALCD | P040113ALCD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7801 | 50 | 96 | 23 | |
| P040113ALCD | P040113ALCD | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7801 | 50 | 100 | 6 | |
| P040113ALCD | P040113ALCD | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7801 | 50 | 98 | 2 | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-245MS | CRHE-DPT0225-018.0-20130329MS | TRG | 75-01-4 | Vinyl Chloride | 48 | | ug/L | 1.0 | 0.13 | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7804 | 50 | 96 | | |
| NAL13041-245MS | CRHE-DPT0225-018.0-20130329MS | TRG | 75-35-4 | 1,1-Dichloroethene | 48 | | ug/L | 1.0 | 0.18 | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7804 | 50 | 96 | | |
| NAL13041-245MS | CRHE-DPT0225-018.0-20130329MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.28 | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7804 | 50 | 102 | | |
| NAL13041-245MS | CRHE-DPT0225-018.0-20130329MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.20 | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7804 | 50 | 104 | | |
| NAL13041-245MS | CRHE-DPT0225-018.0-20130329MS | TRG | 79-01-6 | Trichloroethene | 49 | | ug/L | 1.0 | 0.22 | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7804 | 50 | 98 | | |
| NAL13041-245MS | CRHE-DPT0225-018.0-20130329MS | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7804 | 50 | 102 | | |
| NAL13041-245MS | CRHE-DPT0225-018.0-20130329MS | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7804 | 50 | 102 | | |
| NAL13041-245MS | CRHE-DPT0225-018.0-20130329MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7804 | 50 | 98 | | |
| NAL13041-245MS | CRHE-DPT0225-018.0-20130329MS | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7804 | 50 | 100 | | |
| NAL13041-245MS | CRHE-DPT0225-018.0-20130329MS | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7804 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-245MSD | CRHE-DPT0225-018.0-20130329MSD | TRG | 75-01-4 | Vinyl Chloride | 51 | | ug/L | 1.0 | 0.13 | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7805 | 50 | 102 | 6 | |
| NAL13041-245MSD | CRHE-DPT0225-018.0-20130329MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 47 | | ug/L | 1.0 | 0.18 | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7805 | 50 | 94 | 2 | |
| NAL13041-245MSD | CRHE-DPT0225-018.0-20130329MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 50 | | ug/L | 1.0 | 0.28 | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7805 | 50 | 100 | 2 | |
| NAL13041-245MSD | CRHE-DPT0225-018.0-20130329MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 56 | | ug/L | 1.0 | 0.20 | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7805 | 50 | 112 | 7 | |
| NAL13041-245MSD | CRHE-DPT0225-018.0-20130329MSD | TRG | 79-01-6 | Trichloroethene | 54 | | ug/L | 1.0 | 0.22 | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7805 | 50 | 108 | 10 | |
| NAL13041-245MSD | CRHE-DPT0225-018.0-20130329MSD | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7805 | 50 | 100 | 2 | |
| NAL13041-245MSD | CRHE-DPT0225-018.0-20130329MSD | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7805 | 50 | 102 | 0 | |
| NAL13041-245MSD | CRHE-DPT0225-018.0-20130329MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7805 | 50 | 98 | 0 | |
| NAL13041-245MSD | CRHE-DPT0225-018.0-20130329MSD | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7805 | 50 | 100 | 0 | |
| NAL13041-245MSD | CRHE-DPT0225-018.0-20130329MSD | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 3/29/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7805 | 50 | 98 | 2 | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-263 RR | CRHE-DPT0227-023.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7842 | | | | |
| NAL13041-263 RR | CRHE-DPT0227-023.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7842 | | | | |
| NAL13041-263 RR | CRHE-DPT0227-023.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7842 | | | | |
| NAL13041-263 RR | CRHE-DPT0227-023.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1.3 | | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7842 | | | | |
| NAL13041-263 RR | CRHE-DPT0227-023.0-20130401 | TRG | 79-01-6 | Trichloroethene | 2.3 | | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7842 | | | | |
| NAL13041-263 RR | CRHE-DPT0227-023.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7842 | | | | |
| NAL13041-263 RR | CRHE-DPT0227-023.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7842 | 50 | 114 | | |
| NAL13041-263 RR | CRHE-DPT0227-023.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7842 | 50 | 114 | | |
| NAL13041-263 RR | CRHE-DPT0227-023.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7842 | 50 | 94 | | |
| NAL13041-263 RR | CRHE-DPT0227-023.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7842 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-272 | CRHE-DPT0228-030.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | 1000 | | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7834 | | | | |
| NAL13041-272 | CRHE-DPT0228-030.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7834 | | | | |
| NAL13041-272 | CRHE-DPT0228-030.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 0.62 | I | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7834 | | | | |
| NAL13041-272 | CRHE-DPT0228-030.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1.0 | | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7834 | | | | |
| NAL13041-272 | CRHE-DPT0228-030.0-20130401 | TRG | 79-01-6 | Trichloroethene | 1.1 | | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7834 | | | | |
| NAL13041-272 | CRHE-DPT0228-030.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7834 | | | | |
| NAL13041-272 | CRHE-DPT0228-030.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7834 | 50 | 114 | | |
| NAL13041-272 | CRHE-DPT0228-030.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7834 | 50 | 114 | | |
| NAL13041-272 | CRHE-DPT0228-030.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7834 | 50 | 92 | | |
| NAL13041-272 | CRHE-DPT0228-030.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7834 | 50 | 92 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-273 | CRHE-DPT0228-038.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | 1000 | | ug/L | 50 | 6.5 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7843 | | | | |
| NAL13041-273 | CRHE-DPT0228-038.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7843 | | | | |
| NAL13041-273 | CRHE-DPT0228-038.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 31 | I | ug/L | 50 | 14 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7843 | | | | |
| NAL13041-273 | CRHE-DPT0228-038.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 130 | | ug/L | 50 | 10 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7843 | | | | |
| NAL13041-273 | CRHE-DPT0228-038.0-20130401 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 50 | 11 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7843 | | | | |
| NAL13041-273 | CRHE-DPT0228-038.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7843 | | | | |
| NAL13041-273 | CRHE-DPT0228-038.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7843 | 50 | 108 | | |
| NAL13041-273 | CRHE-DPT0228-038.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7843 | 50 | 108 | | |
| NAL13041-273 | CRHE-DPT0228-038.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7843 | 50 | 96 | | |
| NAL13041-273 | CRHE-DPT0228-038.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7843 | 50 | 90 | | |

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# FINAL ANALYTICAL REPORT

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-274 | CRHE-DPT0228-043.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | 2900 | | ug/L | 100 | 13 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7844 | | | | |
| NAL13041-274 | CRHE-DPT0228-043.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 100 | 18 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7844 | | | | |
| NAL13041-274 | CRHE-DPT0228-043.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 100 | 28 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7844 | | | | |
| NAL13041-274 | CRHE-DPT0228-043.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 300 | | ug/L | 100 | 20 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7844 | | | | |
| NAL13041-274 | CRHE-DPT0228-043.0-20130401 | TRG | 79-01-6 | Trichloroethene | 76 | I | ug/L | 100 | 22 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7844 | | | | |
| NAL13041-274 | CRHE-DPT0228-043.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 100 | 16 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7844 | | | | |
| NAL13041-274 | CRHE-DPT0228-043.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7844 | 50 | 114 | | |
| NAL13041-274 | CRHE-DPT0228-043.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7844 | 50 | 114 | | |
| NAL13041-274 | CRHE-DPT0228-043.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7844 | 50 | 94 | | |
| NAL13041-274 | CRHE-DPT0228-043.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7844 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-275 | CRHE-DPT0228-023.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7837 | | | | |
| NAL13041-275 | CRHE-DPT0228-023.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7837 | | | | |
| NAL13041-275 | CRHE-DPT0228-023.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7837 | | | | |
| NAL13041-275 | CRHE-DPT0228-023.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7837 | | | | |
| NAL13041-275 | CRHE-DPT0228-023.0-20130401 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7837 | | | | |
| NAL13041-275 | CRHE-DPT0228-023.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7837 | | | | |
| NAL13041-275 | CRHE-DPT0228-023.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7837 | 50 | 112 | | |
| NAL13041-275 | CRHE-DPT0228-023.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7837 | 50 | 118 | | |
| NAL13041-275 | CRHE-DPT0228-023.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7837 | 50 | 94 | | |
| NAL13041-275 | CRHE-DPT0228-023.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7837 | 50 | 90 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-276 | CRHE-DPT0228-058.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | 4.6 | | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7838 | | | | |
| NAL13041-276 | CRHE-DPT0228-058.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7838 | | | | |
| NAL13041-276 | CRHE-DPT0228-058.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7838 | | | | |
| NAL13041-276 | CRHE-DPT0228-058.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7838 | | | | |
| NAL13041-276 | CRHE-DPT0228-058.0-20130401 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7838 | | | | |
| NAL13041-276 | CRHE-DPT0228-058.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7838 | | | | |
| NAL13041-276 | CRHE-DPT0228-058.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7838 | 50 | 118 | | |
| NAL13041-276 | CRHE-DPT0228-058.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 65 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7838 | 50 | 130 | | |
| NAL13041-276 | CRHE-DPT0228-058.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 45 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7838 | 50 | 90 | | |
| NAL13041-276 | CRHE-DPT0228-058.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7838 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-277 | CRHE-DPT0229-010.0-20130401 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7839 | | | | |
| NAL13041-277 | CRHE-DPT0229-010.0-20130401 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7839 | | | | |
| NAL13041-277 | CRHE-DPT0229-010.0-20130401 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7839 | | | | |
| NAL13041-277 | CRHE-DPT0229-010.0-20130401 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7839 | | | | |
| NAL13041-277 | CRHE-DPT0229-010.0-20130401 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7839 | | | | |
| NAL13041-277 | CRHE-DPT0229-010.0-20130401 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7839 | | | | |
| NAL13041-277 | CRHE-DPT0229-010.0-20130401 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7839 | 50 | 102 | | |
| NAL13041-277 | CRHE-DPT0229-010.0-20130401 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7839 | 50 | 120 | | |
| NAL13041-277 | CRHE-DPT0229-010.0-20130401 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7839 | 50 | 92 | | |
| NAL13041-277 | CRHE-DPT0229-010.0-20130401 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7839 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-278 | CRHE-DPT0229-018.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7845 | | | | |
| NAL13041-278 | CRHE-DPT0229-018.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7845 | | | | |
| NAL13041-278 | CRHE-DPT0229-018.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7845 | | | | |
| NAL13041-278 | CRHE-DPT0229-018.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7845 | | | | |
| NAL13041-278 | CRHE-DPT0229-018.0-20130402 | TRG | 79-01-6 | Trichloroethene | 0.81 | I | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7845 | | | | |
| NAL13041-278 | CRHE-DPT0229-018.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7845 | | | | |
| NAL13041-278 | CRHE-DPT0229-018.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7845 | 50 | 112 | | |
| NAL13041-278 | CRHE-DPT0229-018.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7845 | 50 | 110 | | |
| NAL13041-278 | CRHE-DPT0229-018.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7845 | 50 | 94 | | |
| NAL13041-278 | CRHE-DPT0229-018.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7845 | 50 | 90 | | |

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# FINAL ANALYTICAL REPORT

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**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-279 | CRHE-DPT0229-023.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7850 | | | | |
| NAL13041-279 | CRHE-DPT0229-023.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7850 | | | | |
| NAL13041-279 | CRHE-DPT0229-023.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7850 | | | | |
| NAL13041-279 | CRHE-DPT0229-023.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7850 | | | | |
| NAL13041-279 | CRHE-DPT0229-023.0-20130402 | TRG | 79-01-6 | Trichloroethene | 0.53 | I | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7850 | | | | |
| NAL13041-279 | CRHE-DPT0229-023.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7850 | | | | |
| NAL13041-279 | CRHE-DPT0229-023.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7850 | 50 | 104 | | |
| NAL13041-279 | CRHE-DPT0229-023.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7850 | 50 | 96 | | |
| NAL13041-279 | CRHE-DPT0229-023.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7850 | 50 | 94 | | |
| NAL13041-279 | CRHE-DPT0229-023.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7850 | 50 | 90 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-280 | CRHE-DPT0229-028.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7851 | | | | |
| NAL13041-280 | CRHE-DPT0229-028.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7851 | | | | |
| NAL13041-280 | CRHE-DPT0229-028.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7851 | | | | |
| NAL13041-280 | CRHE-DPT0229-028.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7851 | | | | |
| NAL13041-280 | CRHE-DPT0229-028.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7851 | | | | |
| NAL13041-280 | CRHE-DPT0229-028.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7851 | | | | |
| NAL13041-280 | CRHE-DPT0229-028.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7851 | 50 | 116 | | |
| NAL13041-280 | CRHE-DPT0229-028.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7851 | 50 | 110 | | |
| NAL13041-280 | CRHE-DPT0229-028.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7851 | 50 | 94 | | |
| NAL13041-280 | CRHE-DPT0229-028.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7851 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-281 | CRHE-DPT0229-033.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | 19 | | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7852 | | | | |
| NAL13041-281 | CRHE-DPT0229-033.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7852 | | | | |
| NAL13041-281 | CRHE-DPT0229-033.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 2.3 | | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7852 | | | | |
| NAL13041-281 | CRHE-DPT0229-033.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 7.4 | | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7852 | | | | |
| NAL13041-281 | CRHE-DPT0229-033.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7852 | | | | |
| NAL13041-281 | CRHE-DPT0229-033.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7852 | | | | |
| NAL13041-281 | CRHE-DPT0229-033.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7852 | 50 | 110 | | |
| NAL13041-281 | CRHE-DPT0229-033.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7852 | 50 | 102 | | |
| NAL13041-281 | CRHE-DPT0229-033.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7852 | 50 | 94 | | |
| NAL13041-281 | CRHE-DPT0229-033.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7852 | 50 | 90 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-282 | CRHE-DPT0229-038.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | 290 | | ug/L | 50 | 6.5 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7853 | | | | |
| NAL13041-282 | CRHE-DPT0229-038.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7853 | | | | |
| NAL13041-282 | CRHE-DPT0229-038.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 71 | | ug/L | 50 | 14 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7853 | | | | |
| NAL13041-282 | CRHE-DPT0229-038.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 2500 | | ug/L | 50 | 10 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7853 | | | | |
| NAL13041-282 | CRHE-DPT0229-038.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 50 | 11 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7853 | | | | |
| NAL13041-282 | CRHE-DPT0229-038.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7853 | | | | |
| NAL13041-282 | CRHE-DPT0229-038.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7853 | 50 | 96 | | |
| NAL13041-282 | CRHE-DPT0229-038.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7853 | 50 | 88 | | |
| NAL13041-282 | CRHE-DPT0229-038.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7853 | 50 | 96 | | |
| NAL13041-282 | CRHE-DPT0229-038.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 43 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7853 | 50 | 86 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-283 | CRHE-DPT0229-043.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | 150 | | ug/L | 50 | 6.5 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7854 | | | | |
| NAL13041-283 | CRHE-DPT0229-043.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7854 | | | | |
| NAL13041-283 | CRHE-DPT0229-043.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 55 | | ug/L | 50 | 14 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7854 | | | | |
| NAL13041-283 | CRHE-DPT0229-043.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1900 | | ug/L | 50 | 10 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7854 | | | | |
| NAL13041-283 | CRHE-DPT0229-043.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 50 | 11 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7854 | | | | |
| NAL13041-283 | CRHE-DPT0229-043.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7854 | | | | |
| NAL13041-283 | CRHE-DPT0229-043.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7854 | 50 | 108 | | |
| NAL13041-283 | CRHE-DPT0229-043.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7854 | 50 | 104 | | |
| NAL13041-283 | CRHE-DPT0229-043.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7854 | 50 | 94 | | |
| NAL13041-283 | CRHE-DPT0229-043.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7854 | 50 | 92 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-284 | CRHE-DPT0229-058.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | 2.1 | | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7855 | | | | |
| NAL13041-284 | CRHE-DPT0229-058.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7855 | | | | |
| NAL13041-284 | CRHE-DPT0229-058.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7855 | | | | |
| NAL13041-284 | CRHE-DPT0229-058.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 11 | | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7855 | | | | |
| NAL13041-284 | CRHE-DPT0229-058.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7855 | | | | |
| NAL13041-284 | CRHE-DPT0229-058.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7855 | | | | |
| NAL13041-284 | CRHE-DPT0229-058.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7855 | 50 | 116 | | |
| NAL13041-284 | CRHE-DPT0229-058.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7855 | 50 | 112 | | |
| NAL13041-284 | CRHE-DPT0229-058.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7855 | 50 | 94 | | |
| NAL13041-284 | CRHE-DPT0229-058.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7855 | 50 | 90 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-285 | CRHE-DPT0230-010.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7856 | | | | |
| NAL13041-285 | CRHE-DPT0230-010.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7856 | | | | |
| NAL13041-285 | CRHE-DPT0230-010.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7856 | | | | |
| NAL13041-285 | CRHE-DPT0230-010.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7856 | | | | |
| NAL13041-285 | CRHE-DPT0230-010.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7856 | | | | |
| NAL13041-285 | CRHE-DPT0230-010.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7856 | | | | |
| NAL13041-285 | CRHE-DPT0230-010.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7856 | 50 | 106 | | |
| NAL13041-285 | CRHE-DPT0230-010.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7856 | 50 | 98 | | |
| NAL13041-285 | CRHE-DPT0230-010.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7856 | 50 | 94 | | |
| NAL13041-285 | CRHE-DPT0230-010.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7856 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-286 | CRHE-DPT0230-018.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7857 | | | | |
| NAL13041-286 | CRHE-DPT0230-018.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7857 | | | | |
| NAL13041-286 | CRHE-DPT0230-018.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7857 | | | | |
| NAL13041-286 | CRHE-DPT0230-018.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 0.81 | I | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7857 | | | | |
| NAL13041-286 | CRHE-DPT0230-018.0-20130402 | TRG | 79-01-6 | Trichloroethene | 1.5 | | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7857 | | | | |
| NAL13041-286 | CRHE-DPT0230-018.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7857 | | | | |
| NAL13041-286 | CRHE-DPT0230-018.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7857 | 50 | 102 | | |
| NAL13041-286 | CRHE-DPT0230-018.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7857 | 50 | 96 | | |
| NAL13041-286 | CRHE-DPT0230-018.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7857 | 50 | 94 | | |
| NAL13041-286 | CRHE-DPT0230-018.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7857 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-287 | CRHE-DPT0230-023.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7858 | | | | |
| NAL13041-287 | CRHE-DPT0230-023.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7858 | | | | |
| NAL13041-287 | CRHE-DPT0230-023.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7858 | | | | |
| NAL13041-287 | CRHE-DPT0230-023.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7858 | | | | |
| NAL13041-287 | CRHE-DPT0230-023.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7858 | | | | |
| NAL13041-287 | CRHE-DPT0230-023.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7858 | | | | |
| NAL13041-287 | CRHE-DPT0230-023.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7858 | 50 | 110 | | |
| NAL13041-287 | CRHE-DPT0230-023.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7858 | 50 | 102 | | |
| NAL13041-287 | CRHE-DPT0230-023.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7858 | 50 | 94 | | |
| NAL13041-287 | CRHE-DPT0230-023.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7858 | 50 | 90 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-288 | CRHE-DPT0230-028.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7859 | | | | |
| NAL13041-288 | CRHE-DPT0230-028.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7859 | | | | |
| NAL13041-288 | CRHE-DPT0230-028.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7859 | | | | |
| NAL13041-288 | CRHE-DPT0230-028.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7859 | | | | |
| NAL13041-288 | CRHE-DPT0230-028.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7859 | | | | |
| NAL13041-288 | CRHE-DPT0230-028.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7859 | | | | |
| NAL13041-288 | CRHE-DPT0230-028.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7859 | 50 | 116 | | |
| NAL13041-288 | CRHE-DPT0230-028.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7859 | 50 | 112 | | |
| NAL13041-288 | CRHE-DPT0230-028.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7859 | 50 | 94 | | |
| NAL13041-288 | CRHE-DPT0230-028.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/2/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7859 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040113CCVB | P040113CCVB | TRG | 75-01-4 | Vinyl Chloride | 57 | | ug/L | 1.0 | 0.13 | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 114 | | |
| P040113CCVB | P040113CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 46 | | ug/L | 1.0 | 0.18 | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 92 | | |
| P040113CCVB | P040113CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 48 | | ug/L | 1.0 | 0.28 | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 96 | | |
| P040113CCVB | P040113CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 50 | | ug/L | 1.0 | 0.20 | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 100 | | |
| P040113CCVB | P040113CCVB | TRG | 79-01-6 | Trichloroethene | 53 | | ug/L | 1.0 | 0.22 | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 106 | | |
| P040113CCVB | P040113CCVB | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 108 | | |
| P040113CCVB | P040113CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 45 | | ug/L | | | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 90 | | |
| P040113CCVB | P040113CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 88 | | |
| P040113CCVB | P040113CCVB | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 94 | | |
| P040113CCVB | P040113CCVB | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7823 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**ATTN: Ms. Jill Johnson**

**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040113MBKB | P040113MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | | | | |
| P040113MBKB | P040113MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | | | | |
| P040113MBKB | P040113MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | | | | |
| P040113MBKB | P040113MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | | | | |
| P040113MBKB | P040113MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | | | | |
| P040113MBKB | P040113MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | | | | |
| P040113MBKB | P040113MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | 50 | 112 | | |
| P040113MBKB | P040113MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | 50 | 114 | | |
| P040113MBKB | P040113MBKB | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | 50 | 96 | | |
| P040113MBKB | P040113MBKB | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 4/1/2013 | 4/1/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7825 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040213CCVA | P040213CCVA | TRG | 75-01-4 | Vinyl Chloride | 57 | | ug/L | 1.0 | 0.13 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7840 | 50 | 114 | | |
| P040213CCVA | P040213CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 42 | | ug/L | 1.0 | 0.18 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7840 | 50 | 84 | | |
| P040213CCVA | P040213CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 46 | | ug/L | 1.0 | 0.28 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7840 | 50 | 92 | | |
| P040213CCVA | P040213CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 47 | | ug/L | 1.0 | 0.20 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7840 | 50 | 94 | | |
| P040213CCVA | P040213CCVA | TRG | 79-01-6 | Trichloroethene | 48 | | ug/L | 1.0 | 0.22 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7840 | 50 | 96 | | |
| P040213CCVA | P040213CCVA | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7840 | 50 | 100 | | |
| P040213CCVA | P040213CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7840 | 50 | 96 | | |
| P040213CCVA | P040213CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7840 | 50 | 88 | | |
| P040213CCVA | P040213CCVA | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7840 | 50 | 94 | | |
| P040213CCVA | P040213CCVA | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7840 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040213MBKA | P040213MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7841 | | | | |
| P040213MBKA | P040213MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7841 | | | | |
| P040213MBKA | P040213MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7841 | | | | |
| P040213MBKA | P040213MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7841 | | | | |
| P040213MBKA | P040213MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7841 | | | | |
| P040213MBKA | P040213MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7841 | | | | |
| P040213MBKA | P040213MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7841 | 50 | 100 | | |
| P040213MBKA | P040213MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7841 | 50 | 96 | | |
| P040213MBKA | P040213MBKA | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7841 | 50 | 94 | | |
| P040213MBKA | P040213MBKA | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7841 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040213ALCS | P040213ALCS | TRG | 75-01-4 | Vinyl Chloride | 59 | | ug/L | 1.0 | 0.13 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7863 | 50 | 118 | | |
| P040213ALCS | P040213ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 41 | | ug/L | 1.0 | 0.18 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7863 | 50 | 82 | | |
| P040213ALCS | P040213ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 46 | | ug/L | 1.0 | 0.28 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7863 | 50 | 92 | | |
| P040213ALCS | P040213ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 49 | | ug/L | 1.0 | 0.20 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7863 | 50 | 98 | | |
| P040213ALCS | P040213ALCS | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7863 | 50 | 100 | | |
| P040213ALCS | P040213ALCS | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7863 | 50 | 100 | | |
| P040213ALCS | P040213ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7863 | 50 | 94 | | |
| P040213ALCS | P040213ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7863 | 50 | 86 | | |
| P040213ALCS | P040213ALCS | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7863 | 50 | 98 | | |
| P040213ALCS | P040213ALCS | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7863 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040213ALCD | P040213ALCD | TRG | 75-01-4 | Vinyl Chloride | 60 | | ug/L | 1.0 | 0.13 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7864 | 50 | 120 | 2 | |
| P040213ALCD | P040213ALCD | TRG | 75-35-4 | 1,1-Dichloroethene | 42 | | ug/L | 1.0 | 0.18 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7864 | 50 | 84 | 2 | |
| P040213ALCD | P040213ALCD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 47 | | ug/L | 1.0 | 0.28 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7864 | 50 | 94 | 2 | |
| P040213ALCD | P040213ALCD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 49 | | ug/L | 1.0 | 0.20 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7864 | 50 | 98 | 0 | |
| P040213ALCD | P040213ALCD | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7864 | 50 | 100 | 0 | |
| P040213ALCD | P040213ALCD | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7864 | 50 | 100 | 0 | |
| P040213ALCD | P040213ALCD | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7864 | 50 | 96 | 2 | |
| P040213ALCD | P040213ALCD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7864 | 50 | 86 | 0 | |
| P040213ALCD | P040213ALCD | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7864 | 50 | 96 | 2 | |
| P040213ALCD | P040213ALCD | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7864 | 50 | 94 | 0 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-277MS | CRHE-DPT0229-010.0-20130401MS | TRG | 75-01-4 | Vinyl Chloride | 63 | | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7865 | 50 | 126 | | |
| NAL13041-277MS | CRHE-DPT0229-010.0-20130401MS | TRG | 75-35-4 | 1,1-Dichloroethene | 46 | | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7865 | 50 | 92 | | |
| NAL13041-277MS | CRHE-DPT0229-010.0-20130401MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7865 | 50 | 110 | | |
| NAL13041-277MS | CRHE-DPT0229-010.0-20130401MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 56 | | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7865 | 50 | 112 | | |
| NAL13041-277MS | CRHE-DPT0229-010.0-20130401MS | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7865 | 50 | 102 | | |
| NAL13041-277MS | CRHE-DPT0229-010.0-20130401MS | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7865 | 50 | 100 | | |
| NAL13041-277MS | CRHE-DPT0229-010.0-20130401MS | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7865 | 50 | 104 | | |
| NAL13041-277MS | CRHE-DPT0229-010.0-20130401MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7865 | 50 | 94 | | |
| NAL13041-277MS | CRHE-DPT0229-010.0-20130401MS | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7865 | 50 | 98 | | |
| NAL13041-277MS | CRHE-DPT0229-010.0-20130401MS | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7865 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-277MSD | CRHE-DPT0229-010.0-20130401MSD | TRG | 75-01-4 | Vinyl Chloride | 65 | | ug/L | 1.0 | 0.13 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7866 | 50 | 130 | 3 | |
| NAL13041-277MSD | CRHE-DPT0229-010.0-20130401MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 47 | | ug/L | 1.0 | 0.18 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7866 | 50 | 94 | 2 | |
| NAL13041-277MSD | CRHE-DPT0229-010.0-20130401MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.28 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7866 | 50 | 110 | 0 | |
| NAL13041-277MSD | CRHE-DPT0229-010.0-20130401MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 56 | | ug/L | 1.0 | 0.20 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7866 | 50 | 112 | 0 | |
| NAL13041-277MSD | CRHE-DPT0229-010.0-20130401MSD | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7866 | 50 | 102 | 0 | |
| NAL13041-277MSD | CRHE-DPT0229-010.0-20130401MSD | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7866 | 50 | 102 | 2 | |
| NAL13041-277MSD | CRHE-DPT0229-010.0-20130401MSD | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7866 | 50 | 100 | 4 | |
| NAL13041-277MSD | CRHE-DPT0229-010.0-20130401MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7866 | 50 | 96 | 2 | |
| NAL13041-277MSD | CRHE-DPT0229-010.0-20130401MSD | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7866 | 50 | 100 | 2 | |
| NAL13041-277MSD | CRHE-DPT0229-010.0-20130401MSD | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/1/2013 | 4/2/2013 | 4/2/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7866 | 50 | 96 | 0 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-289 | CRHE-DPT0230-033.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7885 | | | | |
| NAL13041-289 | CRHE-DPT0230-033.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7885 | | | | |
| NAL13041-289 | CRHE-DPT0230-033.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7885 | | | | |
| NAL13041-289 | CRHE-DPT0230-033.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7885 | | | | |
| NAL13041-289 | CRHE-DPT0230-033.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7885 | | | | |
| NAL13041-289 | CRHE-DPT0230-033.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7885 | | | | |
| NAL13041-289 | CRHE-DPT0230-033.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7885 | 50 | 104 | | |
| NAL13041-289 | CRHE-DPT0230-033.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7885 | 50 | 110 | | |
| NAL13041-289 | CRHE-DPT0230-033.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7885 | 50 | 96 | | |
| NAL13041-289 | CRHE-DPT0230-033.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7885 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-291 | CRHE-DPT0230-043.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | 37 | | ug/L | 10 | 1.3 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7869 | | | | |
| NAL13041-291 | CRHE-DPT0230-043.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7869 | | | | |
| NAL13041-291 | CRHE-DPT0230-043.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 10 | 2.8 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7869 | | | | |
| NAL13041-291 | CRHE-DPT0230-043.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 13 | | ug/L | 10 | 2.0 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7869 | | | | |
| NAL13041-291 | CRHE-DPT0230-043.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 10 | 2.2 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7869 | | | | |
| NAL13041-291 | CRHE-DPT0230-043.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7869 | | | | |
| NAL13041-291 | CRHE-DPT0230-043.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7869 | 50 | 108 | | |
| NAL13041-291 | CRHE-DPT0230-043.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7869 | 50 | 104 | | |
| NAL13041-291 | CRHE-DPT0230-043.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7869 | 50 | 94 | | |
| NAL13041-291 | CRHE-DPT0230-043.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7869 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-293 | CRHE-DPT0231-018.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7871 | | | | |
| NAL13041-293 | CRHE-DPT0231-018.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7871 | | | | |
| NAL13041-293 | CRHE-DPT0231-018.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7871 | | | | |
| NAL13041-293 | CRHE-DPT0231-018.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7871 | | | | |
| NAL13041-293 | CRHE-DPT0231-018.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7871 | | | | |
| NAL13041-293 | CRHE-DPT0231-018.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7871 | | | | |
| NAL13041-293 | CRHE-DPT0231-018.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7871 | 50 | 112 | | |
| NAL13041-293 | CRHE-DPT0231-018.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7871 | 50 | 106 | | |
| NAL13041-293 | CRHE-DPT0231-018.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7871 | 50 | 96 | | |
| NAL13041-293 | CRHE-DPT0231-018.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7871 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-294 | CRHE-DPT0231-023.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7872 | | | | |
| NAL13041-294 | CRHE-DPT0231-023.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7872 | | | | |
| NAL13041-294 | CRHE-DPT0231-023.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7872 | | | | |
| NAL13041-294 | CRHE-DPT0231-023.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7872 | | | | |
| NAL13041-294 | CRHE-DPT0231-023.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7872 | | | | |
| NAL13041-294 | CRHE-DPT0231-023.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7872 | | | | |
| NAL13041-294 | CRHE-DPT0231-023.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7872 | 50 | 120 | | |
| NAL13041-294 | CRHE-DPT0231-023.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7872 | 50 | 116 | | |
| NAL13041-294 | CRHE-DPT0231-023.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7872 | 50 | 94 | | |
| NAL13041-294 | CRHE-DPT0231-023.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7872 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-295 | CRHE-DPT0231-028.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7873 | | | | |
| NAL13041-295 | CRHE-DPT0231-028.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7873 | | | | |
| NAL13041-295 | CRHE-DPT0231-028.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7873 | | | | |
| NAL13041-295 | CRHE-DPT0231-028.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7873 | | | | |
| NAL13041-295 | CRHE-DPT0231-028.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7873 | | | | |
| NAL13041-295 | CRHE-DPT0231-028.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7873 | | | | |
| NAL13041-295 | CRHE-DPT0231-028.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7873 | 50 | 120 | | |
| NAL13041-295 | CRHE-DPT0231-028.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7873 | 50 | 114 | | |
| NAL13041-295 | CRHE-DPT0231-028.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7873 | 50 | 94 | | |
| NAL13041-295 | CRHE-DPT0231-028.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7873 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-297 | CRHE-DPT0231-038.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | 1100 | | ug/L | 50 | 6.5 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7875 | | | | |
| NAL13041-297 | CRHE-DPT0231-038.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7875 | | | | |
| NAL13041-297 | CRHE-DPT0231-038.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 78 | | ug/L | 50 | 14 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7875 | | | | |
| NAL13041-297 | CRHE-DPT0231-038.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 2600 | | ug/L | 50 | 10 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7875 | | | | |
| NAL13041-297 | CRHE-DPT0231-038.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 50 | 11 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7875 | | | | |
| NAL13041-297 | CRHE-DPT0231-038.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7875 | | | | |
| NAL13041-297 | CRHE-DPT0231-038.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 61 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7875 | 50 | 122 | | |
| NAL13041-297 | CRHE-DPT0231-038.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7875 | 50 | 116 | | |
| NAL13041-297 | CRHE-DPT0231-038.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7875 | 50 | 92 | | |
| NAL13041-297 | CRHE-DPT0231-038.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7875 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-298 | CRHE-DPT0231-043.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | 910 | | ug/L | 50 | 6.5 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7876 | | | | |
| NAL13041-298 | CRHE-DPT0231-043.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7876 | | | | |
| NAL13041-298 | CRHE-DPT0231-043.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 290 | | ug/L | 50 | 14 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7876 | | | | |
| NAL13041-298 | CRHE-DPT0231-043.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 9900 | | ug/L | 50 | 10 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7876 | | | | |
| NAL13041-298 | CRHE-DPT0231-043.0-20130402 | TRG | 79-01-6 | Trichloroethene | 650 | | ug/L | 50 | 11 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7876 | | | | |
| NAL13041-298 | CRHE-DPT0231-043.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7876 | | | | |
| NAL13041-298 | CRHE-DPT0231-043.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7876 | 50 | 116 | | |
| NAL13041-298 | CRHE-DPT0231-043.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7876 | 50 | 110 | | |
| NAL13041-298 | CRHE-DPT0231-043.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7876 | 50 | 94 | | |
| NAL13041-298 | CRHE-DPT0231-043.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7876 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-299 | CRHE-DPT0231-010.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7877 | | | | |
| NAL13041-299 | CRHE-DPT0231-010.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7877 | | | | |
| NAL13041-299 | CRHE-DPT0231-010.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7877 | | | | |
| NAL13041-299 | CRHE-DPT0231-010.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1.4 | | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7877 | | | | |
| NAL13041-299 | CRHE-DPT0231-010.0-20130402 | TRG | 79-01-6 | Trichloroethene | 3.5 | | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7877 | | | | |
| NAL13041-299 | CRHE-DPT0231-010.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7877 | | | | |
| NAL13041-299 | CRHE-DPT0231-010.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7877 | 50 | 118 | | |
| NAL13041-299 | CRHE-DPT0231-010.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7877 | 50 | 112 | | |
| NAL13041-299 | CRHE-DPT0231-010.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7877 | 50 | 94 | | |
| NAL13041-299 | CRHE-DPT0231-010.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7877 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-300 | CRHE-DPT0231-058.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | 2.2 | | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7878 | | | | |
| NAL13041-300 | CRHE-DPT0231-058.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7878 | | | | |
| NAL13041-300 | CRHE-DPT0231-058.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7878 | | | | |
| NAL13041-300 | CRHE-DPT0231-058.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 7.2 | | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7878 | | | | |
| NAL13041-300 | CRHE-DPT0231-058.0-20130402 | TRG | 79-01-6 | Trichloroethene | 1.2 | | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7878 | | | | |
| NAL13041-300 | CRHE-DPT0231-058.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7878 | | | | |
| NAL13041-300 | CRHE-DPT0231-058.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 61 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7878 | 50 | 122 | | |
| NAL13041-300 | CRHE-DPT0231-058.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 60 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7878 | 50 | 120 | | |
| NAL13041-300 | CRHE-DPT0231-058.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7878 | 50 | 94 | | |
| NAL13041-300 | CRHE-DPT0231-058.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/2/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7878 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-301 | CRHE-DPT0232-010.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7890 | | | | |
| NAL13041-301 | CRHE-DPT0232-010.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7890 | | | | |
| NAL13041-301 | CRHE-DPT0232-010.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7890 | | | | |
| NAL13041-301 | CRHE-DPT0232-010.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7890 | | | | |
| NAL13041-301 | CRHE-DPT0232-010.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7890 | | | | |
| NAL13041-301 | CRHE-DPT0232-010.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7890 | | | | |
| NAL13041-301 | CRHE-DPT0232-010.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7890 | 50 | 106 | | |
| NAL13041-301 | CRHE-DPT0232-010.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7890 | 50 | 102 | | |
| NAL13041-301 | CRHE-DPT0232-010.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7890 | 50 | 98 | | |
| NAL13041-301 | CRHE-DPT0232-010.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7890 | 50 | 92 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-302 | CRHE-DPT0232-018.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7889 | | | | |
| NAL13041-302 | CRHE-DPT0232-018.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7889 | | | | |
| NAL13041-302 | CRHE-DPT0232-018.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7889 | | | | |
| NAL13041-302 | CRHE-DPT0232-018.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7889 | | | | |
| NAL13041-302 | CRHE-DPT0232-018.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7889 | | | | |
| NAL13041-302 | CRHE-DPT0232-018.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7889 | | | | |
| NAL13041-302 | CRHE-DPT0232-018.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7889 | 50 | 102 | | |
| NAL13041-302 | CRHE-DPT0232-018.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7889 | 50 | 96 | | |
| NAL13041-302 | CRHE-DPT0232-018.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7889 | 50 | 98 | | |
| NAL13041-302 | CRHE-DPT0232-018.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7889 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-303 | CRHE-DPT0232-023.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7888 | | | | |
| NAL13041-303 | CRHE-DPT0232-023.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7888 | | | | |
| NAL13041-303 | CRHE-DPT0232-023.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7888 | | | | |
| NAL13041-303 | CRHE-DPT0232-023.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7888 | | | | |
| NAL13041-303 | CRHE-DPT0232-023.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7888 | | | | |
| NAL13041-303 | CRHE-DPT0232-023.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7888 | | | | |
| NAL13041-303 | CRHE-DPT0232-023.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7888 | 50 | 106 | | |
| NAL13041-303 | CRHE-DPT0232-023.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7888 | 50 | 102 | | |
| NAL13041-303 | CRHE-DPT0232-023.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7888 | 50 | 98 | | |
| NAL13041-303 | CRHE-DPT0232-023.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7888 | 50 | 92 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-304 | CRHE-DPT0232-028.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7887 | | | | |
| NAL13041-304 | CRHE-DPT0232-028.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7887 | | | | |
| NAL13041-304 | CRHE-DPT0232-028.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7887 | | | | |
| NAL13041-304 | CRHE-DPT0232-028.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7887 | | | | |
| NAL13041-304 | CRHE-DPT0232-028.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7887 | | | | |
| NAL13041-304 | CRHE-DPT0232-028.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7887 | | | | |
| NAL13041-304 | CRHE-DPT0232-028.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7887 | 50 | 110 | | |
| NAL13041-304 | CRHE-DPT0232-028.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7887 | 50 | 106 | | |
| NAL13041-304 | CRHE-DPT0232-028.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7887 | 50 | 96 | | |
| NAL13041-304 | CRHE-DPT0232-028.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7887 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-305 | CRHE-DPT0232-033.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | 280 | | ug/L | 10 | 1.3 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7886 | | | | |
| NAL13041-305 | CRHE-DPT0232-033.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7886 | | | | |
| NAL13041-305 | CRHE-DPT0232-033.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 10 | 2.8 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7886 | | | | |
| NAL13041-305 | CRHE-DPT0232-033.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 180 | | ug/L | 10 | 2.0 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7886 | | | | |
| NAL13041-305 | CRHE-DPT0232-033.0-20130403 | TRG | 79-01-6 | Trichloroethene | 3.9 | I | ug/L | 10 | 2.2 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7886 | | | | |
| NAL13041-305 | CRHE-DPT0232-033.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7886 | | | | |
| NAL13041-305 | CRHE-DPT0232-033.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7886 | 50 | 108 | | |
| NAL13041-305 | CRHE-DPT0232-033.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7886 | 50 | 104 | | |
| NAL13041-305 | CRHE-DPT0232-033.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7886 | 50 | 98 | | |
| NAL13041-305 | CRHE-DPT0232-033.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7886 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-308 | CRHE-DPT0232-058.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | 0.61 | I | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7882 | | | | |
| NAL13041-308 | CRHE-DPT0232-058.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7882 | | | | |
| NAL13041-308 | CRHE-DPT0232-058.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7882 | | | | |
| NAL13041-308 | CRHE-DPT0232-058.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1.2 | | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7882 | | | | |
| NAL13041-308 | CRHE-DPT0232-058.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7882 | | | | |
| NAL13041-308 | CRHE-DPT0232-058.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7882 | | | | |
| NAL13041-308 | CRHE-DPT0232-058.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7882 | 50 | 98 | | |
| NAL13041-308 | CRHE-DPT0232-058.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 46 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7882 | 50 | 92 | | |
| NAL13041-308 | CRHE-DPT0232-058.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7882 | 50 | 94 | | |
| NAL13041-308 | CRHE-DPT0232-058.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7882 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-316 | CRHE-DPT0233-058.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7891 | | | | |
| NAL13041-316 | CRHE-DPT0233-058.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7891 | | | | |
| NAL13041-316 | CRHE-DPT0233-058.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7891 | | | | |
| NAL13041-316 | CRHE-DPT0233-058.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7891 | | | | |
| NAL13041-316 | CRHE-DPT0233-058.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7891 | | | | |
| NAL13041-316 | CRHE-DPT0233-058.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7891 | | | | |
| NAL13041-316 | CRHE-DPT0233-058.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7891 | 50 | 102 | | |
| NAL13041-316 | CRHE-DPT0233-058.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7891 | 50 | 94 | | |
| NAL13041-316 | CRHE-DPT0233-058.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7891 | 50 | 98 | | |
| NAL13041-316 | CRHE-DPT0233-058.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7891 | 50 | 92 | | |

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# FINAL ANALYTICAL REPORT

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**ATTN: Ms. Jill Johnson**

**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040213CCVB | P040213CCVB | TRG | 75-01-4 | Vinyl Chloride | 59 | | ug/L | 1.0 | 0.13 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7862 | 50 | 118 | | |
| P040213CCVB | P040213CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 43 | | ug/L | 1.0 | 0.18 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7862 | 50 | 86 | | |
| P040213CCVB | P040213CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 48 | | ug/L | 1.0 | 0.28 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7862 | 50 | 96 | | |
| P040213CCVB | P040213CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 49 | | ug/L | 1.0 | 0.20 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7862 | 50 | 98 | | |
| P040213CCVB | P040213CCVB | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7862 | 50 | 102 | | |
| P040213CCVB | P040213CCVB | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7862 | 50 | 100 | | |
| P040213CCVB | P040213CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7862 | 50 | 96 | | |
| P040213CCVB | P040213CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7862 | 50 | 88 | | |
| P040213CCVB | P040213CCVB | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7862 | 50 | 96 | | |
| P040213CCVB | P040213CCVB | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7862 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040213MBKB | P040213MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7867 | | | | |
| P040213MBKB | P040213MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7867 | | | | |
| P040213MBKB | P040213MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7867 | | | | |
| P040213MBKB | P040213MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7867 | | | | |
| P040213MBKB | P040213MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7867 | | | | |
| P040213MBKB | P040213MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7867 | | | | |
| P040213MBKB | P040213MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7867 | 50 | 108 | | |
| P040213MBKB | P040213MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7867 | 50 | 104 | | |
| P040213MBKB | P040213MBKB | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7867 | 50 | 94 | | |
| P040213MBKB | P040213MBKB | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 4/2/2013 | 4/2/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7867 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040313CCVB | P040313CCVB | TRG | 75-01-4 | Vinyl Chloride | 56 | | ug/L | 1.0 | 0.13 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7880 | 50 | 112 | | |
| P040313CCVB | P040313CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 40 | | ug/L | 1.0 | 0.18 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7880 | 50 | 80 | | |
| P040313CCVB | P040313CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 41 | | ug/L | 1.0 | 0.28 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7880 | 50 | 82 | | |
| P040313CCVB | P040313CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 43 | | ug/L | 1.0 | 0.20 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7880 | 50 | 86 | | |
| P040313CCVB | P040313CCVB | TRG | 79-01-6 | Trichloroethene | 47 | | ug/L | 1.0 | 0.22 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7880 | 50 | 94 | | |
| P040313CCVB | P040313CCVB | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7880 | 50 | 100 | | |
| P040313CCVB | P040313CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 43 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7880 | 50 | 86 | | |
| P040313CCVB | P040313CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 39 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7880 | 50 | 78 | | |
| P040313CCVB | P040313CCVB | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7880 | 50 | 98 | | |
| P040313CCVB | P040313CCVB | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | - | NA | SW8260B | NALP7880 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040313MBKA | P040313MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | | | | |
| P040313MBKA | P040313MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | | | | |
| P040313MBKA | P040313MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | | | | |
| P040313MBKA | P040313MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | | | | |
| P040313MBKA | P040313MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | | | | |
| P040313MBKA | P040313MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | | | | |
| P040313MBKA | P040313MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | 50 | 98 | | |
| P040313MBKA | P040313MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | 50 | 108 | | |
| P040313MBKA | P040313MBKA | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | 50 | 96 | | |
| P040313MBKA | P040313MBKA | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040313ALCS | P040313ALCS | TRG | 75-01-4 | Vinyl Chloride | 54 | | ug/L | 1.0 | 0.13 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7899 | 50 | 108 | | |
| P040313ALCS | P040313ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 38 | | ug/L | 1.0 | 0.18 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7899 | 50 | 76 | | |
| P040313ALCS | P040313ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 39 | | ug/L | 1.0 | 0.28 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7899 | 50 | 78 | | |
| P040313ALCS | P040313ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 42 | | ug/L | 1.0 | 0.20 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7899 | 50 | 84 | | |
| P040313ALCS | P040313ALCS | TRG | 79-01-6 | Trichloroethene | 48 | | ug/L | 1.0 | 0.22 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7899 | 50 | 96 | | |
| P040313ALCS | P040313ALCS | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7899 | 50 | 102 | | |
| P040313ALCS | P040313ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7899 | 50 | 92 | | |
| P040313ALCS | P040313ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 42 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7899 | 50 | 84 | | |
| P040313ALCS | P040313ALCS | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7899 | 50 | 100 | | |
| P040313ALCS | P040313ALCS | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7899 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040313ALCD | P040313ALCD | TRG | 75-01-4 | Vinyl Chloride | 57 | | ug/L | 1.0 | 0.13 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7900 | 50 | 114 | 5 | |
| P040313ALCD | P040313ALCD | TRG | 75-35-4 | 1,1-Dichloroethene | 41 | | ug/L | 1.0 | 0.18 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7900 | 50 | 82 | 8 | |
| P040313ALCD | P040313ALCD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 47 | | ug/L | 1.0 | 0.28 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7900 | 50 | 94 | 19 | |
| P040313ALCD | P040313ALCD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 47 | | ug/L | 1.0 | 0.20 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7900 | 50 | 94 | 11 | |
| P040313ALCD | P040313ALCD | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7900 | 50 | 100 | 4 | |
| P040313ALCD | P040313ALCD | TRG | 127-18-4 | Tetrachloroethene | 52 | | ug/L | 1.0 | 0.16 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7900 | 50 | 104 | 2 | |
| P040313ALCD | P040313ALCD | SUR | 1868-53-7 | Dibromofluoromethane | 46 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7900 | 50 | 92 | 0 | |
| P040313ALCD | P040313ALCD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 43 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7900 | 50 | 86 | 2 | |
| P040313ALCD | P040313ALCD | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7900 | 50 | 102 | 2 | |
| P040313ALCD | P040313ALCD | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7900 | 50 | 96 | 2 | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-308MS | CRHE-DPT0232-058.0-20130403MS | TRG | 75-01-4 | Vinyl Chloride | 62 | | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7902 | 50 | 123 | | 0.61 |
| NAL13041-308MS | CRHE-DPT0232-058.0-20130403MS | TRG | 75-35-4 | 1,1-Dichloroethene | 50 | | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7902 | 50 | 100 | | |
| NAL13041-308MS | CRHE-DPT0232-058.0-20130403MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 56 | | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7902 | 50 | 112 | | |
| NAL13041-308MS | CRHE-DPT0232-058.0-20130403MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 56 | | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7902 | 50 | 112 | | 1.2 |
| NAL13041-308MS | CRHE-DPT0232-058.0-20130403MS | TRG | 79-01-6 | Trichloroethene | 55 | | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7902 | 50 | 110 | | |
| NAL13041-308MS | CRHE-DPT0232-058.0-20130403MS | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7902 | 50 | 102 | | |
| NAL13041-308MS | CRHE-DPT0232-058.0-20130403MS | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7902 | 50 | 100 | | |
| NAL13041-308MS | CRHE-DPT0232-058.0-20130403MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7902 | 50 | 102 | | |
| NAL13041-308MS | CRHE-DPT0232-058.0-20130403MS | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7902 | 50 | 102 | | |
| NAL13041-308MS | CRHE-DPT0232-058.0-20130403MS | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7902 | 50 | 96 | | |

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**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-308MSD | CRHE-DPT0232-058.0-20130403MSD | TRG | 75-01-4 | Vinyl Chloride | 53 | | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7903 | 50 | 105 | 16 | 0.61 |
| NAL13041-308MSD | CRHE-DPT0232-058.0-20130403MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 41 | | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7903 | 50 | 82 | 20 | |
| NAL13041-308MSD | CRHE-DPT0232-058.0-20130403MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 46 | | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7903 | 50 | 92 | 20 | |
| NAL13041-308MSD | CRHE-DPT0232-058.0-20130403MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 49 | | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7903 | 50 | 98 | 13 | 1.2 |
| NAL13041-308MSD | CRHE-DPT0232-058.0-20130403MSD | TRG | 79-01-6 | Trichloroethene | 48 | | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7903 | 50 | 96 | 14 | |
| NAL13041-308MSD | CRHE-DPT0232-058.0-20130403MSD | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7903 | 50 | 100 | 2 | |
| NAL13041-308MSD | CRHE-DPT0232-058.0-20130403MSD | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7903 | 50 | 100 | 0 | |
| NAL13041-308MSD | CRHE-DPT0232-058.0-20130403MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7903 | 50 | 94 | 8 | |
| NAL13041-308MSD | CRHE-DPT0232-058.0-20130403MSD | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7903 | 50 | 102 | 0 | |
| NAL13041-308MSD | CRHE-DPT0232-058.0-20130403MSD | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7903 | 50 | 96 | 0 | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-309 | CRHE-DPT0233-010.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7898 | | | | |
| NAL13041-309 | CRHE-DPT0233-010.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7898 | | | | |
| NAL13041-309 | CRHE-DPT0233-010.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7898 | | | | |
| NAL13041-309 | CRHE-DPT0233-010.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7898 | | | | |
| NAL13041-309 | CRHE-DPT0233-010.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7898 | | | | |
| NAL13041-309 | CRHE-DPT0233-010.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7898 | | | | |
| NAL13041-309 | CRHE-DPT0233-010.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7898 | 50 | 116 | | |
| NAL13041-309 | CRHE-DPT0233-010.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7898 | 50 | 110 | | |
| NAL13041-309 | CRHE-DPT0233-010.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7898 | 50 | 96 | | |
| NAL13041-309 | CRHE-DPT0233-010.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7898 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-311 | CRHE-DPT0233-023.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7896 | | | | |
| NAL13041-311 | CRHE-DPT0233-023.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7896 | | | | |
| NAL13041-311 | CRHE-DPT0233-023.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7896 | | | | |
| NAL13041-311 | CRHE-DPT0233-023.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7896 | | | | |
| NAL13041-311 | CRHE-DPT0233-023.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7896 | | | | |
| NAL13041-311 | CRHE-DPT0233-023.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7896 | | | | |
| NAL13041-311 | CRHE-DPT0233-023.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7896 | 50 | 108 | | |
| NAL13041-311 | CRHE-DPT0233-023.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7896 | 50 | 102 | | |
| NAL13041-311 | CRHE-DPT0233-023.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7896 | 50 | 96 | | |
| NAL13041-311 | CRHE-DPT0233-023.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7896 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-312 | CRHE-DPT0233-028.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7895 | | | | |
| NAL13041-312 | CRHE-DPT0233-028.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7895 | | | | |
| NAL13041-312 | CRHE-DPT0233-028.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7895 | | | | |
| NAL13041-312 | CRHE-DPT0233-028.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7895 | | | | |
| NAL13041-312 | CRHE-DPT0233-028.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7895 | | | | |
| NAL13041-312 | CRHE-DPT0233-028.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7895 | | | | |
| NAL13041-312 | CRHE-DPT0233-028.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7895 | 50 | 110 | | |
| NAL13041-312 | CRHE-DPT0233-028.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7895 | 50 | 104 | | |
| NAL13041-312 | CRHE-DPT0233-028.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7895 | 50 | 96 | | |
| NAL13041-312 | CRHE-DPT0233-028.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7895 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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**ATTN: Ms. Jill Johnson**

**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-314 | CRHE-DPT0233-038.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | 37 | I | ug/L | 100 | 13 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7893 | | | | |
| NAL13041-314 | CRHE-DPT0233-038.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 100 | 18 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7893 | | | | |
| NAL13041-314 | CRHE-DPT0233-038.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 100 | 28 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7893 | | | | |
| NAL13041-314 | CRHE-DPT0233-038.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 100 | 20 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7893 | | | | |
| NAL13041-314 | CRHE-DPT0233-038.0-20130403 | TRG | 79-01-6 | Trichloroethene | 83 | I | ug/L | 100 | 22 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7893 | | | | |
| NAL13041-314 | CRHE-DPT0233-038.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 100 | 16 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7893 | | | | |
| NAL13041-314 | CRHE-DPT0233-038.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7893 | 50 | 112 | | |
| NAL13041-314 | CRHE-DPT0233-038.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7893 | 50 | 106 | | |
| NAL13041-314 | CRHE-DPT0233-038.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7893 | 50 | 96 | | |
| NAL13041-314 | CRHE-DPT0233-038.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7893 | 50 | 100 | | |

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**ATTN: Ms. Jill Johnson**

**Project #:** **NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-315 | CRHE-DPT0233-043.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | 600 | | ug/L | 100 | 13 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7892 | | | | |
| NAL13041-315 | CRHE-DPT0233-043.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 100 | 18 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7892 | | | | |
| NAL13041-315 | CRHE-DPT0233-043.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 100 | 28 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7892 | | | | |
| NAL13041-315 | CRHE-DPT0233-043.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 97 | I | ug/L | 100 | 20 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7892 | | | | |
| NAL13041-315 | CRHE-DPT0233-043.0-20130403 | TRG | 79-01-6 | Trichloroethene | 28 | I | ug/L | 100 | 22 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7892 | | | | |
| NAL13041-315 | CRHE-DPT0233-043.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 100 | 16 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7892 | | | | |
| NAL13041-315 | CRHE-DPT0233-043.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7892 | 50 | 98 | | |
| NAL13041-315 | CRHE-DPT0233-043.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7892 | 50 | 90 | | |
| NAL13041-315 | CRHE-DPT0233-043.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7892 | 50 | 98 | | |
| NAL13041-315 | CRHE-DPT0233-043.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 100 | 5.0 | 5.0 | NA | SW8260B | NALP7892 | 50 | 90 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-317 | CRHE-DPT0234-010.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7906 | | | | |
| NAL13041-317 | CRHE-DPT0234-010.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7906 | | | | |
| NAL13041-317 | CRHE-DPT0234-010.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7906 | | | | |
| NAL13041-317 | CRHE-DPT0234-010.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7906 | | | | |
| NAL13041-317 | CRHE-DPT0234-010.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7906 | | | | |
| NAL13041-317 | CRHE-DPT0234-010.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7906 | | | | |
| NAL13041-317 | CRHE-DPT0234-010.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7906 | 50 | 112 | | |
| NAL13041-317 | CRHE-DPT0234-010.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7906 | 50 | 110 | | |
| NAL13041-317 | CRHE-DPT0234-010.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7906 | 50 | 94 | | |
| NAL13041-317 | CRHE-DPT0234-010.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/3/2013 | 4/3/2013 | 4/3/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7906 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-318 | CRHE-DPT0234-018.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7907 | | | | |
| NAL13041-318 | CRHE-DPT0234-018.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7907 | | | | |
| NAL13041-318 | CRHE-DPT0234-018.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7907 | | | | |
| NAL13041-318 | CRHE-DPT0234-018.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7907 | | | | |
| NAL13041-318 | CRHE-DPT0234-018.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7907 | | | | |
| NAL13041-318 | CRHE-DPT0234-018.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7907 | | | | |
| NAL13041-318 | CRHE-DPT0234-018.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7907 | 50 | 118 | | |
| NAL13041-318 | CRHE-DPT0234-018.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7907 | 50 | 116 | | |
| NAL13041-318 | CRHE-DPT0234-018.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7907 | 50 | 96 | | |
| NAL13041-318 | CRHE-DPT0234-018.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7907 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-319 | CRHE-DPT0234-023.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7908 | | | | |
| NAL13041-319 | CRHE-DPT0234-023.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7908 | | | | |
| NAL13041-319 | CRHE-DPT0234-023.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7908 | | | | |
| NAL13041-319 | CRHE-DPT0234-023.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7908 | | | | |
| NAL13041-319 | CRHE-DPT0234-023.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7908 | | | | |
| NAL13041-319 | CRHE-DPT0234-023.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7908 | | | | |
| NAL13041-319 | CRHE-DPT0234-023.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7908 | 50 | 116 | | |
| NAL13041-319 | CRHE-DPT0234-023.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7908 | 50 | 110 | | |
| NAL13041-319 | CRHE-DPT0234-023.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7908 | 50 | 98 | | |
| NAL13041-319 | CRHE-DPT0234-023.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7908 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-320 | CRHE-DPT0234-028.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7909 | | | | |
| NAL13041-320 | CRHE-DPT0234-028.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7909 | | | | |
| NAL13041-320 | CRHE-DPT0234-028.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7909 | | | | |
| NAL13041-320 | CRHE-DPT0234-028.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7909 | | | | |
| NAL13041-320 | CRHE-DPT0234-028.0-20130403 | TRG | 79-01-6 | Trichloroethene | 2.2 | | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7909 | | | | |
| NAL13041-320 | CRHE-DPT0234-028.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7909 | | | | |
| NAL13041-320 | CRHE-DPT0234-028.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7909 | 50 | 108 | | |
| NAL13041-320 | CRHE-DPT0234-028.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7909 | 50 | 104 | | |
| NAL13041-320 | CRHE-DPT0234-028.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7909 | 50 | 98 | | |
| NAL13041-320 | CRHE-DPT0234-028.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7909 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-321 | CRHE-DPT0234-033.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | 46 | | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7910 | | | | |
| NAL13041-321 | CRHE-DPT0234-033.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7910 | | | | |
| NAL13041-321 | CRHE-DPT0234-033.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 4.5 | | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7910 | | | | |
| NAL13041-321 | CRHE-DPT0234-033.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7910 | | | | |
| NAL13041-321 | CRHE-DPT0234-033.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7910 | | | | |
| NAL13041-321 | CRHE-DPT0234-033.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7910 | | | | |
| NAL13041-321 | CRHE-DPT0234-033.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7910 | 50 | 114 | | |
| NAL13041-321 | CRHE-DPT0234-033.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7910 | 50 | 116 | | |
| NAL13041-321 | CRHE-DPT0234-033.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7910 | 50 | 96 | | |
| NAL13041-321 | CRHE-DPT0234-033.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7910 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-331 | CRHE-DPT0235-038.0-20130404 | TRG | 75-01-4 | Vinyl Chloride | 470 | | ug/L | 10 | 1.3 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7923 | | | | |
| NAL13041-331 | CRHE-DPT0235-038.0-20130404 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7923 | | | | |
| NAL13041-331 | CRHE-DPT0235-038.0-20130404 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 5.7 | I | ug/L | 10 | 2.8 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7923 | | | | |
| NAL13041-331 | CRHE-DPT0235-038.0-20130404 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 25 | | ug/L | 10 | 2.0 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7923 | | | | |
| NAL13041-331 | CRHE-DPT0235-038.0-20130404 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 10 | 2.2 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7923 | | | | |
| NAL13041-331 | CRHE-DPT0235-038.0-20130404 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7923 | | | | |
| NAL13041-331 | CRHE-DPT0235-038.0-20130404 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7923 | 50 | 110 | | |
| NAL13041-331 | CRHE-DPT0235-038.0-20130404 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7923 | 50 | 108 | | |
| NAL13041-331 | CRHE-DPT0235-038.0-20130404 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7923 | 50 | 96 | | |
| NAL13041-331 | CRHE-DPT0235-038.0-20130404 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7923 | 50 | 92 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-332 | CRHE-DPT0235-043.0-20130404 | TRG | 75-01-4 | Vinyl Chloride | 1000 | | ug/L | 10 | 1.3 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7922 | | | | |
| NAL13041-332 | CRHE-DPT0235-043.0-20130404 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7922 | | | | |
| NAL13041-332 | CRHE-DPT0235-043.0-20130404 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 18 | | ug/L | 10 | 2.8 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7922 | | | | |
| NAL13041-332 | CRHE-DPT0235-043.0-20130404 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 10 | 2.0 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7922 | | | | |
| NAL13041-332 | CRHE-DPT0235-043.0-20130404 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 10 | 2.2 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7922 | | | | |
| NAL13041-332 | CRHE-DPT0235-043.0-20130404 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7922 | | | | |
| NAL13041-332 | CRHE-DPT0235-043.0-20130404 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7922 | 50 | 108 | | |
| NAL13041-332 | CRHE-DPT0235-043.0-20130404 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7922 | 50 | 106 | | |
| NAL13041-332 | CRHE-DPT0235-043.0-20130404 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7922 | 50 | 96 | | |
| NAL13041-332 | CRHE-DPT0235-043.0-20130404 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7922 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-333 | CRHE-DPT0235-058.0-20130404 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7921 | | | | |
| NAL13041-333 | CRHE-DPT0235-058.0-20130404 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7921 | | | | |
| NAL13041-333 | CRHE-DPT0235-058.0-20130404 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7921 | | | | |
| NAL13041-333 | CRHE-DPT0235-058.0-20130404 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7921 | | | | |
| NAL13041-333 | CRHE-DPT0235-058.0-20130404 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7921 | | | | |
| NAL13041-333 | CRHE-DPT0235-058.0-20130404 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7921 | | | | |
| NAL13041-333 | CRHE-DPT0235-058.0-20130404 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7921 | 50 | 102 | | |
| NAL13041-333 | CRHE-DPT0235-058.0-20130404 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7921 | 50 | 98 | | |
| NAL13041-333 | CRHE-DPT0235-058.0-20130404 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7921 | 50 | 98 | | |
| NAL13041-333 | CRHE-DPT0235-058.0-20130404 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7921 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040313CCVB | P040313CCVB | TRG | 75-01-4 | Vinyl Chloride | 56 | | ug/L | 1.0 | 0.13 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7880 | 50 | 112 | | |
| P040313CCVB | P040313CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 40 | | ug/L | 1.0 | 0.18 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7880 | 50 | 80 | | |
| P040313CCVB | P040313CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 41 | | ug/L | 1.0 | 0.28 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7880 | 50 | 82 | | |
| P040313CCVB | P040313CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 43 | | ug/L | 1.0 | 0.20 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7880 | 50 | 86 | | |
| P040313CCVB | P040313CCVB | TRG | 79-01-6 | Trichloroethene | 47 | | ug/L | 1.0 | 0.22 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7880 | 50 | 94 | | |
| P040313CCVB | P040313CCVB | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7880 | 50 | 100 | | |
| P040313CCVB | P040313CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 43 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7880 | 50 | 86 | | |
| P040313CCVB | P040313CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 39 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7880 | 50 | 78 | | |
| P040313CCVB | P040313CCVB | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7880 | 50 | 98 | | |
| P040313CCVB | P040313CCVB | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7880 | 50 | 96 | | |

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160 Veterans Blvd. • South Haven, Michigan 49090
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# FINAL ANALYTICAL REPORT

**Geosyntec Consultants**
**316 S Baylen Str., Suite 201**
**Pensacola, FL 32502**
**ATTN: Ms. Jill Johnson**

**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

Analytical results meet the requirements of NELAC Standards. The results reported apply solely to the sample analyzed and all results are reported on a dry weight basis unless stated otherwise. Any questions concerning this report should be directed to Scott D. Wall, President.
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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040313MBKA | P040313MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | | | | |
| P040313MBKA | P040313MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | | | | |
| P040313MBKA | P040313MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | | | | |
| P040313MBKA | P040313MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | | | | |
| P040313MBKA | P040313MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | | | | |
| P040313MBKA | P040313MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | | | | |
| P040313MBKA | P040313MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | 50 | 98 | | |
| P040313MBKA | P040313MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | 50 | 108 | | |
| P040313MBKA | P040313MBKA | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | 50 | 96 | | |
| P040313MBKA | P040313MBKA | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7881 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040313CCVC | P040313CCVC | TRG | 75-01-4 | Vinyl Chloride | 60 | | ug/L | 1.0 | 0.13 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7901 | 50 | 120 | | |
| P040313CCVC | P040313CCVC | TRG | 75-35-4 | 1,1-Dichloroethene | 46 | | ug/L | 1.0 | 0.18 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7901 | 50 | 92 | | |
| P040313CCVC | P040313CCVC | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.28 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7901 | 50 | 108 | | |
| P040313CCVC | P040313CCVC | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.20 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7901 | 50 | 108 | | |
| P040313CCVC | P040313CCVC | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7901 | 50 | 102 | | |
| P040313CCVC | P040313CCVC | TRG | 127-18-4 | Tetrachloroethene | 53 | | ug/L | 1.0 | 0.16 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7901 | 50 | 106 | | |
| P040313CCVC | P040313CCVC | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7901 | 50 | 104 | | |
| P040313CCVC | P040313CCVC | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7901 | 50 | 96 | | |
| P040313CCVC | P040313CCVC | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7901 | 50 | 102 | | |
| P040313CCVC | P040313CCVC | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7901 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040313MBKB | P040313MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7905 | | | | |
| P040313MBKB | P040313MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7905 | | | | |
| P040313MBKB | P040313MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7905 | | | | |
| P040313MBKB | P040313MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7905 | | | | |
| P040313MBKB | P040313MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7905 | | | | |
| P040313MBKB | P040313MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7905 | | | | |
| P040313MBKB | P040313MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7905 | 50 | 114 | | |
| P040313MBKB | P040313MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7905 | 50 | 112 | | |
| P040313MBKB | P040313MBKB | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7905 | 50 | 96 | | |
| P040313MBKB | P040313MBKB | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7905 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040313BLCS | P040313BLCS | TRG | 75-01-4 | Vinyl Chloride | 57 | | ug/L | 1.0 | 0.13 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7904 | 50 | 114 | | |
| P040313BLCS | P040313BLCS | TRG | 75-35-4 | 1,1-Dichloroethene | 43 | | ug/L | 1.0 | 0.18 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7904 | 50 | 86 | | |
| P040313BLCS | P040313BLCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 48 | | ug/L | 1.0 | 0.28 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7904 | 50 | 96 | | |
| P040313BLCS | P040313BLCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 50 | | ug/L | 1.0 | 0.20 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7904 | 50 | 100 | | |
| P040313BLCS | P040313BLCS | TRG | 79-01-6 | Trichloroethene | 47 | | ug/L | 1.0 | 0.22 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7904 | 50 | 94 | | |
| P040313BLCS | P040313BLCS | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7904 | 50 | 100 | | |
| P040313BLCS | P040313BLCS | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7904 | 50 | 100 | | |
| P040313BLCS | P040313BLCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 46 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7904 | 50 | 92 | | |
| P040313BLCS | P040313BLCS | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7904 | 50 | 102 | | |
| P040313BLCS | P040313BLCS | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | NA | 4/3/2013 | 4/3/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7904 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-309MS | CRHE-DPT0233-010.0-20130403MS | TRG | 75-01-4 | Vinyl Chloride | 57 | | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7919 | 50 | 114 | | |
| NAL13041-309MS | CRHE-DPT0233-010.0-20130403MS | TRG | 75-35-4 | 1,1-Dichloroethene | 49 | | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7919 | 50 | 98 | | |
| NAL13041-309MS | CRHE-DPT0233-010.0-20130403MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7919 | 50 | 108 | | |
| NAL13041-309MS | CRHE-DPT0233-010.0-20130403MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 57 | | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7919 | 50 | 114 | | |
| NAL13041-309MS | CRHE-DPT0233-010.0-20130403MS | TRG | 79-01-6 | Trichloroethene | 48 | | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7919 | 50 | 96 | | |
| NAL13041-309MS | CRHE-DPT0233-010.0-20130403MS | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7919 | 50 | 102 | | |
| NAL13041-309MS | CRHE-DPT0233-010.0-20130403MS | SUR | 1868-53-7 | Dibromofluoromethane | 50 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7919 | 50 | 100 | | |
| NAL13041-309MS | CRHE-DPT0233-010.0-20130403MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7919 | 50 | 94 | | |
| NAL13041-309MS | CRHE-DPT0233-010.0-20130403MS | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7919 | 50 | 100 | | |
| NAL13041-309MS | CRHE-DPT0233-010.0-20130403MS | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7919 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-309MSD | CRHE-DPT0233-010.0-20130403MSD | TRG | 75-01-4 | Vinyl Chloride | 52 | | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7920 | 50 | 104 | 9 | |
| NAL13041-309MSD | CRHE-DPT0233-010.0-20130403MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 44 | | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7920 | 50 | 88 | 11 | |
| NAL13041-309MSD | CRHE-DPT0233-010.0-20130403MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 46 | | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7920 | 50 | 92 | 16 | |
| NAL13041-309MSD | CRHE-DPT0233-010.0-20130403MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 47 | | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7920 | 50 | 94 | 19 | |
| NAL13041-309MSD | CRHE-DPT0233-010.0-20130403MSD | TRG | 79-01-6 | Trichloroethene | 49 | | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7920 | 50 | 98 | 2 | |
| NAL13041-309MSD | CRHE-DPT0233-010.0-20130403MSD | TRG | 127-18-4 | Tetrachloroethene | 51 | | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7920 | 50 | 102 | 0 | |
| NAL13041-309MSD | CRHE-DPT0233-010.0-20130403MSD | SUR | 1868-53-7 | Dibromofluoromethane | 45 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7920 | 50 | 90 | 11 | |
| NAL13041-309MSD | CRHE-DPT0233-010.0-20130403MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 41 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7920 | 50 | 82 | 14 | |
| NAL13041-309MSD | CRHE-DPT0233-010.0-20130403MSD | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7920 | 50 | 98 | 2 | |
| NAL13041-309MSD | CRHE-DPT0233-010.0-20130403MSD | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/3/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7920 | 50 | 96 | 0 | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-290 RR | CRHE-DPT0230-038.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | 1.7 | | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7928 | | | | |
| NAL13041-290 RR | CRHE-DPT0230-038.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7928 | | | | |
| NAL13041-290 RR | CRHE-DPT0230-038.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 0.58 | I | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7928 | | | | |
| NAL13041-290 RR | CRHE-DPT0230-038.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7928 | | | | |
| NAL13041-290 RR | CRHE-DPT0230-038.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7928 | | | | |
| NAL13041-290 RR | CRHE-DPT0230-038.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7928 | | | | |
| NAL13041-290 RR | CRHE-DPT0230-038.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7928 | 50 | 110 | | |
| NAL13041-290 RR | CRHE-DPT0230-038.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7928 | 50 | 102 | | |
| NAL13041-290 RR | CRHE-DPT0230-038.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7928 | 50 | 98 | | |
| NAL13041-290 RR | CRHE-DPT0230-038.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7928 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-292 RR | CRHE-DPT0230-058.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7929 | | | | |
| NAL13041-292 RR | CRHE-DPT0230-058.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7929 | | | | |
| NAL13041-292 RR | CRHE-DPT0230-058.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7929 | | | | |
| NAL13041-292 RR | CRHE-DPT0230-058.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7929 | | | | |
| NAL13041-292 RR | CRHE-DPT0230-058.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7929 | | | | |
| NAL13041-292 RR | CRHE-DPT0230-058.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7929 | | | | |
| NAL13041-292 RR | CRHE-DPT0230-058.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7929 | 50 | 108 | | |
| NAL13041-292 RR | CRHE-DPT0230-058.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7929 | 50 | 102 | | |
| NAL13041-292 RR | CRHE-DPT0230-058.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7929 | 50 | 96 | | |
| NAL13041-292 RR | CRHE-DPT0230-058.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/2/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7929 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-296 RR | CRHE-DPT0231-033.0-20130402 | TRG | 75-01-4 | Vinyl Chloride | 0.82 | I | ug/L | 1.0 | 0.13 | 4/2/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7946 | | | | |
| NAL13041-296 RR | CRHE-DPT0231-033.0-20130402 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/2/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7946 | | | | |
| NAL13041-296 RR | CRHE-DPT0231-033.0-20130402 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 1.2 | | ug/L | 1.0 | 0.28 | 4/2/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7946 | | | | |
| NAL13041-296 RR | CRHE-DPT0231-033.0-20130402 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/2/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7946 | | | | |
| NAL13041-296 RR | CRHE-DPT0231-033.0-20130402 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/2/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7946 | | | | |
| NAL13041-296 RR | CRHE-DPT0231-033.0-20130402 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/2/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7946 | | | | |
| NAL13041-296 RR | CRHE-DPT0231-033.0-20130402 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 4/2/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7946 | 50 | 116 | | |
| NAL13041-296 RR | CRHE-DPT0231-033.0-20130402 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 4/2/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7946 | 50 | 112 | | |
| NAL13041-296 RR | CRHE-DPT0231-033.0-20130402 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/2/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7946 | 50 | 96 | | |
| NAL13041-296 RR | CRHE-DPT0231-033.0-20130402 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/2/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7946 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-306 RR | CRHE-DPT0232-038.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | 250 | | ug/L | 10 | 1.3 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7947 | | | | |
| NAL13041-306 RR | CRHE-DPT0232-038.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7947 | | | | |
| NAL13041-306 RR | CRHE-DPT0232-038.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 7.9 | I | ug/L | 10 | 2.8 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7947 | | | | |
| NAL13041-306 RR | CRHE-DPT0232-038.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 230 | | ug/L | 10 | 2.0 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7947 | | | | |
| NAL13041-306 RR | CRHE-DPT0232-038.0-20130403 | TRG | 79-01-6 | Trichloroethene | 8.6 | I | ug/L | 10 | 2.2 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7947 | | | | |
| NAL13041-306 RR | CRHE-DPT0232-038.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.60 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7947 | | | | |
| NAL13041-306 RR | CRHE-DPT0232-038.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7947 | 50 | 118 | | |
| NAL13041-306 RR | CRHE-DPT0232-038.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7947 | 50 | 118 | | |
| NAL13041-306 RR | CRHE-DPT0232-038.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7947 | 50 | 96 | | |
| NAL13041-306 RR | CRHE-DPT0232-038.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7947 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-307 RR | CRHE-DPT0232-043.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | 210 | U | ug/L | 50 | 6.5 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7948 | | | | |
| NAL13041-307 RR | CRHE-DPT0232-043.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7948 | | | | |
| NAL13041-307 RR | CRHE-DPT0232-043.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 26 | I | ug/L | 50 | 14 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7948 | | | | |
| NAL13041-307 RR | CRHE-DPT0232-043.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 810 | | ug/L | 50 | 10 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7948 | | | | |
| NAL13041-307 RR | CRHE-DPT0232-043.0-20130403 | TRG | 79-01-6 | Trichloroethene | 24 | I | ug/L | 50 | 11 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7948 | | | | |
| NAL13041-307 RR | CRHE-DPT0232-043.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7948 | | | | |
| NAL13041-307 RR | CRHE-DPT0232-043.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7948 | 50 | 98 | | |
| NAL13041-307 RR | CRHE-DPT0232-043.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7948 | 50 | 104 | | |
| NAL13041-307 RR | CRHE-DPT0232-043.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7948 | 50 | 98 | | |
| NAL13041-307 RR | CRHE-DPT0232-043.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7948 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-310 RR | CRHE-DPT0233-018.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7949 | | | | |
| NAL13041-310 RR | CRHE-DPT0233-018.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7949 | | | | |
| NAL13041-310 RR | CRHE-DPT0233-018.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7949 | | | | |
| NAL13041-310 RR | CRHE-DPT0233-018.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 1.1 | | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7949 | | | | |
| NAL13041-310 RR | CRHE-DPT0233-018.0-20130403 | TRG | 79-01-6 | Trichloroethene | 1.4 | | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7949 | | | | |
| NAL13041-310 RR | CRHE-DPT0233-018.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7949 | | | | |
| NAL13041-310 RR | CRHE-DPT0233-018.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7949 | 50 | 114 | | |
| NAL13041-310 RR | CRHE-DPT0233-018.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7949 | 50 | 112 | | |
| NAL13041-310 RR | CRHE-DPT0233-018.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7949 | 50 | 98 | | |
| NAL13041-310 RR | CRHE-DPT0233-018.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7949 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Prep. Date | Analysis Date | Matrix | Dil. | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-313 RR | CRHE-DPT0233-033.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7950 | | | | |
| NAL13041-313 RR | CRHE-DPT0233-033.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7950 | | | | |
| NAL13041-313 RR | CRHE-DPT0233-033.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7950 | | | | |
| NAL13041-313 RR | CRHE-DPT0233-033.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7950 | | | | |
| NAL13041-313 RR | CRHE-DPT0233-033.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7950 | | | | |
| NAL13041-313 RR | CRHE-DPT0233-033.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7950 | | | | |
| NAL13041-313 RR | CRHE-DPT0233-033.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7950 | 50 | 118 | | |
| NAL13041-313 RR | CRHE-DPT0233-033.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7950 | 50 | 116 | | |
| NAL13041-313 RR | CRHE-DPT0233-033.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7950 | 50 | 100 | | |
| NAL13041-313 RR | CRHE-DPT0233-033.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7950 | 50 | 98 | | |

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Prep. Date | Analysis Date | Matrix | Dil. | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-322 RR | CRHE-DPT0234-038.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | 700 | | ug/L | 10 | 1.3 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7951 | | | | |
| NAL13041-322 RR | CRHE-DPT0234-038.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7951 | | | | |
| NAL13041-322 RR | CRHE-DPT0234-038.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 20 | | ug/L | 10 | 2.8 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7951 | | | | |
| NAL13041-322 RR | CRHE-DPT0234-038.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 360 | | ug/L | 10 | 2.0 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7951 | | | | |
| NAL13041-322 RR | CRHE-DPT0234-038.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 10 | 2.2 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7951 | | | | |
| NAL13041-322 RR | CRHE-DPT0234-038.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7951 | | | | |
| NAL13041-322 RR | CRHE-DPT0234-038.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7951 | 50 | 114 | | |
| NAL13041-322 RR | CRHE-DPT0234-038.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7951 | 50 | 112 | | |
| NAL13041-322 RR | CRHE-DPT0234-038.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7951 | 50 | 96 | | |
| NAL13041-322 RR | CRHE-DPT0234-038.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7951 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Prep. Date | Analysis Date | Matrix | Dil. | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-327 | CRHE-DPT0235-018.0-20130404 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7927 | | | | |
| NAL13041-327 | CRHE-DPT0235-018.0-20130404 | TRG | 75-35-4 | 1,1-Dichloroethene | 0.84 | I | ug/L | 1.0 | 0.18 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7927 | | | | |
| NAL13041-327 | CRHE-DPT0235-018.0-20130404 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7927 | | | | |
| NAL13041-327 | CRHE-DPT0235-018.0-20130404 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 0.77 | I | ug/L | 1.0 | 0.20 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7927 | | | | |
| NAL13041-327 | CRHE-DPT0235-018.0-20130404 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7927 | | | | |
| NAL13041-327 | CRHE-DPT0235-018.0-20130404 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7927 | | | | |
| NAL13041-327 | CRHE-DPT0235-018.0-20130404 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7927 | 50 | 112 | | |
| NAL13041-327 | CRHE-DPT0235-018.0-20130404 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7927 | 50 | 108 | | |
| NAL13041-327 | CRHE-DPT0235-018.0-20130404 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7927 | 50 | 96 | | |
| NAL13041-327 | CRHE-DPT0235-018.0-20130404 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7927 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Prep. Date | Analysis Date | Matrix | Dil. | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-328 | CRHE-DPT0235-023.0-20130404 | TRG | 75-01-4 | Vinyl Chloride | 1.2 | | ug/L | 1.0 | 0.13 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7926 | | | | |
| NAL13041-328 | CRHE-DPT0235-023.0-20130404 | TRG | 75-35-4 | 1,1-Dichloroethene | 1.1 | | ug/L | 1.0 | 0.18 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7926 | | | | |
| NAL13041-328 | CRHE-DPT0235-023.0-20130404 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7926 | | | | |
| NAL13041-328 | CRHE-DPT0235-023.0-20130404 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 0.69 | I | ug/L | 1.0 | 0.20 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7926 | | | | |
| NAL13041-328 | CRHE-DPT0235-023.0-20130404 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7926 | | | | |
| NAL13041-328 | CRHE-DPT0235-023.0-20130404 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7926 | | | | |
| NAL13041-328 | CRHE-DPT0235-023.0-20130404 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7926 | 50 | 114 | | |
| NAL13041-328 | CRHE-DPT0235-023.0-20130404 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7926 | 50 | 108 | | |
| NAL13041-328 | CRHE-DPT0235-023.0-20130404 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7926 | 50 | 96 | | |
| NAL13041-328 | CRHE-DPT0235-023.0-20130404 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7926 | 50 | 96 | | |

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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Prep. Date | Analysis Date | Matrix | Dil. | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-329 | CRHE-DPT0235-028.0-20130404 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7925 | | | | |
| NAL13041-329 | CRHE-DPT0235-028.0-20130404 | TRG | 75-35-4 | 1,1-Dichloroethene | 0.65 | I | ug/L | 1.0 | 0.18 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7925 | | | | |
| NAL13041-329 | CRHE-DPT0235-028.0-20130404 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7925 | | | | |
| NAL13041-329 | CRHE-DPT0235-028.0-20130404 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 0.89 | I | ug/L | 1.0 | 0.20 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7925 | | | | |
| NAL13041-329 | CRHE-DPT0235-028.0-20130404 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7925 | | | | |
| NAL13041-329 | CRHE-DPT0235-028.0-20130404 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7925 | | | | |
| NAL13041-329 | CRHE-DPT0235-028.0-20130404 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7925 | 50 | 110 | | |
| NAL13041-329 | CRHE-DPT0235-028.0-20130404 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7925 | 50 | 108 | | |
| NAL13041-329 | CRHE-DPT0235-028.0-20130404 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7925 | 50 | 98 | | |
| NAL13041-329 | CRHE-DPT0235-028.0-20130404 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7925 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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**ATTN: Ms. Jill Johnson**

**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Prep. Date | Analysis Date | Matrix | Dil. | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-330 | CRHE-DPT0235-033.0-20130404 | TRG | 75-01-4 | Vinyl Chloride | 120 | | ug/L | 1.0 | 0.13 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7924 | | | | |
| NAL13041-330 | CRHE-DPT0235-033.0-20130404 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7924 | | | | |
| NAL13041-330 | CRHE-DPT0235-033.0-20130404 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 0.64 | I | ug/L | 1.0 | 0.28 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7924 | | | | |
| NAL13041-330 | CRHE-DPT0235-033.0-20130404 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 7.4 | | ug/L | 1.0 | 0.20 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7924 | | | | |
| NAL13041-330 | CRHE-DPT0235-033.0-20130404 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7924 | | | | |
| NAL13041-330 | CRHE-DPT0235-033.0-20130404 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7924 | | | | |
| NAL13041-330 | CRHE-DPT0235-033.0-20130404 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7924 | 50 | 110 | | |
| NAL13041-330 | CRHE-DPT0235-033.0-20130404 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7924 | 50 | 108 | | |
| NAL13041-330 | CRHE-DPT0235-033.0-20130404 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7924 | 50 | 96 | | |
| NAL13041-330 | CRHE-DPT0235-033.0-20130404 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7924 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-334 | CRHE-DPT0236-010.0-20130404 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7930 | | | | |
| NAL13041-334 | CRHE-DPT0236-010.0-20130404 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7930 | | | | |
| NAL13041-334 | CRHE-DPT0236-010.0-20130404 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7930 | | | | |
| NAL13041-334 | CRHE-DPT0236-010.0-20130404 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7930 | | | | |
| NAL13041-334 | CRHE-DPT0236-010.0-20130404 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7930 | | | | |
| NAL13041-334 | CRHE-DPT0236-010.0-20130404 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7930 | | | | |
| NAL13041-334 | CRHE-DPT0236-010.0-20130404 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7930 | 50 | 106 | | |
| NAL13041-334 | CRHE-DPT0236-010.0-20130404 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7930 | 50 | 100 | | |
| NAL13041-334 | CRHE-DPT0236-010.0-20130404 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7930 | 50 | 98 | | |
| NAL13041-334 | CRHE-DPT0236-010.0-20130404 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7930 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Prep. Date | Analysis Date | Matrix | Dil. | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-335 | CRHE-DPT0236-018.0-20130404 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7931 | | | | |
| NAL13041-335 | CRHE-DPT0236-018.0-20130404 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7931 | | | | |
| NAL13041-335 | CRHE-DPT0236-018.0-20130404 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7931 | | | | |
| NAL13041-335 | CRHE-DPT0236-018.0-20130404 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7931 | | | | |
| NAL13041-335 | CRHE-DPT0236-018.0-20130404 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7931 | | | | |
| NAL13041-335 | CRHE-DPT0236-018.0-20130404 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7931 | | | | |
| NAL13041-335 | CRHE-DPT0236-018.0-20130404 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7931 | 50 | 114 | | |
| NAL13041-335 | CRHE-DPT0236-018.0-20130404 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7931 | 50 | 110 | | |
| NAL13041-335 | CRHE-DPT0236-018.0-20130404 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7931 | 50 | 98 | | |
| NAL13041-335 | CRHE-DPT0236-018.0-20130404 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7931 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Prep. Date | Analysis Date | Matrix | Dil. | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-336 | CRHE-DPT0236-023.0-20130404 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7932 | | | | |
| NAL13041-336 | CRHE-DPT0236-023.0-20130404 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7932 | | | | |
| NAL13041-336 | CRHE-DPT0236-023.0-20130404 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7932 | | | | |
| NAL13041-336 | CRHE-DPT0236-023.0-20130404 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7932 | | | | |
| NAL13041-336 | CRHE-DPT0236-023.0-20130404 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7932 | | | | |
| NAL13041-336 | CRHE-DPT0236-023.0-20130404 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7932 | | | | |
| NAL13041-336 | CRHE-DPT0236-023.0-20130404 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7932 | 50 | 118 | | |
| NAL13041-336 | CRHE-DPT0236-023.0-20130404 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7932 | 50 | 114 | | |
| NAL13041-336 | CRHE-DPT0236-023.0-20130404 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7932 | 50 | 98 | | |
| NAL13041-336 | CRHE-DPT0236-023.0-20130404 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7932 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Prep. Date | Analysis Date | Matrix | Dil. | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-337 | CRHE-DPT0236-028.0-20130404 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7933 | | | | |
| NAL13041-337 | CRHE-DPT0236-028.0-20130404 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7933 | | | | |
| NAL13041-337 | CRHE-DPT0236-028.0-20130404 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7933 | | | | |
| NAL13041-337 | CRHE-DPT0236-028.0-20130404 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7933 | | | | |
| NAL13041-337 | CRHE-DPT0236-028.0-20130404 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7933 | | | | |
| NAL13041-337 | CRHE-DPT0236-028.0-20130404 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7933 | | | | |
| NAL13041-337 | CRHE-DPT0236-028.0-20130404 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7933 | 50 | 112 | | |
| NAL13041-337 | CRHE-DPT0236-028.0-20130404 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7933 | 50 | 108 | | |
| NAL13041-337 | CRHE-DPT0236-028.0-20130404 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7933 | 50 | 96 | | |
| NAL13041-337 | CRHE-DPT0236-028.0-20130404 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7933 | 50 | 94 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Prep. Date | Analysis Date | Matrix | Dil. | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-338 | CRHE-DPT0236-033.0-20130404 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7934 | | | | |
| NAL13041-338 | CRHE-DPT0236-033.0-20130404 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7934 | | | | |
| NAL13041-338 | CRHE-DPT0236-033.0-20130404 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7934 | | | | |
| NAL13041-338 | CRHE-DPT0236-033.0-20130404 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7934 | | | | |
| NAL13041-338 | CRHE-DPT0236-033.0-20130404 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7934 | | | | |
| NAL13041-338 | CRHE-DPT0236-033.0-20130404 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7934 | | | | |
| NAL13041-338 | CRHE-DPT0236-033.0-20130404 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7934 | 50 | 116 | | |
| NAL13041-338 | CRHE-DPT0236-033.0-20130404 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7934 | 50 | 112 | | |
| NAL13041-338 | CRHE-DPT0236-033.0-20130404 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7934 | 50 | 98 | | |
| NAL13041-338 | CRHE-DPT0236-033.0-20130404 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7934 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Prep. Date | Analysis Date | Matrix | Dil. | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-339 | CRHE-DPT0236-038.0-20130404 | TRG | 75-01-4 | Vinyl Chloride | 480 | | ug/L | 10 | 1.3 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7935 | | | | |
| NAL13041-339 | CRHE-DPT0236-038.0-20130404 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7935 | | | | |
| NAL13041-339 | CRHE-DPT0236-038.0-20130404 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 14 | | ug/L | 10 | 2.8 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7935 | | | | |
| NAL13041-339 | CRHE-DPT0236-038.0-20130404 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 19 | | ug/L | 10 | 2.0 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7935 | | | | |
| NAL13041-339 | CRHE-DPT0236-038.0-20130404 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 10 | 2.2 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7935 | | | | |
| NAL13041-339 | CRHE-DPT0236-038.0-20130404 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7935 | | | | |
| NAL13041-339 | CRHE-DPT0236-038.0-20130404 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7935 | 50 | 104 | | |
| NAL13041-339 | CRHE-DPT0236-038.0-20130404 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7935 | 50 | 102 | | |
| NAL13041-339 | CRHE-DPT0236-038.0-20130404 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7935 | 50 | 98 | | |
| NAL13041-339 | CRHE-DPT0236-038.0-20130404 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7935 | 50 | 92 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-341 | CRHE-DPT0236-058.0-20130404 | TRG | 75-01-4 | Vinyl Chloride | 5.5 | | ug/L | 1.0 | 0.13 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7937 | | | | |
| NAL13041-341 | CRHE-DPT0236-058.0-20130404 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7937 | | | | |
| NAL13041-341 | CRHE-DPT0236-058.0-20130404 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7937 | | | | |
| NAL13041-341 | CRHE-DPT0236-058.0-20130404 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7937 | | | | |
| NAL13041-341 | CRHE-DPT0236-058.0-20130404 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7937 | | | | |
| NAL13041-341 | CRHE-DPT0236-058.0-20130404 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7937 | | | | |
| NAL13041-341 | CRHE-DPT0236-058.0-20130404 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7937 | 50 | 106 | | |
| NAL13041-341 | CRHE-DPT0236-058.0-20130404 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 53 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7937 | 50 | 106 | | |
| NAL13041-341 | CRHE-DPT0236-058.0-20130404 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7937 | 50 | 98 | | |
| NAL13041-341 | CRHE-DPT0236-058.0-20130404 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7937 | 50 | 100 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Prep. Date | Analysis Date | Matrix | Dil. | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040413CCVA | P040413CCVA | TRG | 75-01-4 | Vinyl Chloride | 60 | | ug/L | 1.0 | 0.13 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7917 | 50 | 120 | | |
| P040413CCVA | P040413CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 46 | | ug/L | 1.0 | 0.18 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7917 | 50 | 92 | | |
| P040413CCVA | P040413CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.28 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7917 | 50 | 106 | | |
| P040413CCVA | P040413CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.20 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7917 | 50 | 104 | | |
| P040413CCVA | P040413CCVA | TRG | 79-01-6 | Trichloroethene | 49 | | ug/L | 1.0 | 0.22 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7917 | 50 | 98 | | |
| P040413CCVA | P040413CCVA | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7917 | 50 | 108 | | |
| P040413CCVA | P040413CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7917 | 50 | 96 | | |
| P040413CCVA | P040413CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7917 | 50 | 90 | | |
| P040413CCVA | P040413CCVA | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7917 | 50 | 102 | | |
| P040413CCVA | P040413CCVA | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7917 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040413MBKA | P040413MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7918 | | | | |
| P040413MBKA | P040413MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7918 | | | | |
| P040413MBKA | P040413MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7918 | | | | |
| P040413MBKA | P040413MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7918 | | | | |
| P040413MBKA | P040413MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7918 | | | | |
| P040413MBKA | P040413MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7918 | | | | |
| P040413MBKA | P040413MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7918 | 50 | 110 | | |
| P040413MBKA | P040413MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7918 | 50 | 110 | | |
| P040413MBKA | P040413MBKA | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7918 | 50 | 94 | | |
| P040413MBKA | P040413MBKA | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7918 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040413CCVC | P040413CCVC | TRG | 75-01-4 | Vinyl Chloride | 59 | | ug/L | 1.0 | 0.13 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 118 | | |
| P040413CCVC | P040413CCVC | TRG | 75-35-4 | 1,1-Dichloroethene | 46 | | ug/L | 1.0 | 0.18 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 92 | | |
| P040413CCVC | P040413CCVC | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 47 | | ug/L | 1.0 | 0.28 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 94 | | |
| P040413CCVC | P040413CCVC | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 47 | | ug/L | 1.0 | 0.20 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 94 | | |
| P040413CCVC | P040413CCVC | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 100 | | |
| P040413CCVC | P040413CCVC | TRG | 127-18-4 | Tetrachloroethene | 49 | | ug/L | 1.0 | 0.16 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 98 | | |
| P040413CCVC | P040413CCVC | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 96 | | |
| P040413CCVC | P040413CCVC | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 90 | | |
| P040413CCVC | P040413CCVC | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 100 | | |
| P040413CCVC | P040413CCVC | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Prep. Date | Analysis Date | Matrix | Dil. | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040413MBKB | P040413MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | | | | |
| P040413MBKB | P040413MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | | | | |
| P040413MBKB | P040413MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | | | | |
| P040413MBKB | P040413MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | | | | |
| P040413MBKB | P040413MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | | | | |
| P040413MBKB | P040413MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | | | | |
| P040413MBKB | P040413MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | 50 | 118 | | |
| P040413MBKB | P040413MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | 50 | 112 | | |
| P040413MBKB | P040413MBKB | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | 50 | 96 | | |
| P040413MBKB | P040413MBKB | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Prep. Date | Analysis Date | Matrix | Dil. | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040413ALCS | P040413ALCS | TRG | 75-01-4 | Vinyl Chloride | 59 | | ug/L | 1.0 | 0.13 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7940 | 50 | 118 | | |
| P040413ALCS | P040413ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 52 | | ug/L | 1.0 | 0.18 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7940 | 50 | 104 | | |
| P040413ALCS | P040413ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 58 | | ug/L | 1.0 | 0.28 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7940 | 50 | 116 | | |
| P040413ALCS | P040413ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 58 | | ug/L | 1.0 | 0.20 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7940 | 50 | 116 | | |
| P040413ALCS | P040413ALCS | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7940 | 50 | 102 | | |
| P040413ALCS | P040413ALCS | TRG | 127-18-4 | Tetrachloroethene | 52 | | ug/L | 1.0 | 0.16 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7940 | 50 | 104 | | |
| P040413ALCS | P040413ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7940 | 50 | 104 | | |
| P040413ALCS | P040413ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7940 | 50 | 98 | | |
| P040413ALCS | P040413ALCS | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7940 | 50 | 102 | | |
| P040413ALCS | P040413ALCS | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7940 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040413ALCD | P040413ALCD | TRG | 75-01-4 | Vinyl Chloride | 58 | | ug/L | 1.0 | 0.13 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7941 | 50 | 116 | 2 | |
| P040413ALCD | P040413ALCD | TRG | 75-35-4 | 1,1-Dichloroethene | 49 | | ug/L | 1.0 | 0.18 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7941 | 50 | 98 | 6 | |
| P040413ALCD | P040413ALCD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.28 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7941 | 50 | 106 | 9 | |
| P040413ALCD | P040413ALCD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.20 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7941 | 50 | 106 | 9 | |
| P040413ALCD | P040413ALCD | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7941 | 50 | 102 | 0 | |
| P040413ALCD | P040413ALCD | TRG | 127-18-4 | Tetrachloroethene | 53 | | ug/L | 1.0 | 0.16 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7941 | 50 | 106 | 2 | |
| P040413ALCD | P040413ALCD | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7941 | 50 | 102 | 2 | |
| P040413ALCD | P040413ALCD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7941 | 50 | 96 | 2 | |
| P040413ALCD | P040413ALCD | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7941 | 50 | 102 | 0 | |
| P040413ALCD | P040413ALCD | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7941 | 50 | 98 | 2 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-327MS | CRHE-DPT0235-018.0-20130404MS | TRG | 75-01-4 | Vinyl Chloride | 63 | | ug/L | 1.0 | 0.13 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7942 | 50 | 126 | | |
| NAL13041-327MS | CRHE-DPT0235-018.0-20130404MS | TRG | 75-35-4 | 1,1-Dichloroethene | 53 | | ug/L | 1.0 | 0.18 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7942 | 50 | 106 | | 0.84 |
| NAL13041-327MS | CRHE-DPT0235-018.0-20130404MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.28 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7942 | 50 | 110 | | |
| NAL13041-327MS | CRHE-DPT0235-018.0-20130404MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 55 | | ug/L | 1.0 | 0.20 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7942 | 50 | 110 | | 0.77 |
| NAL13041-327MS | CRHE-DPT0235-018.0-20130404MS | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7942 | 50 | 102 | | |
| NAL13041-327MS | CRHE-DPT0235-018.0-20130404MS | TRG | 127-18-4 | Tetrachloroethene | 52 | | ug/L | 1.0 | 0.16 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7942 | 50 | 104 | | |
| NAL13041-327MS | CRHE-DPT0235-018.0-20130404MS | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7942 | 50 | 104 | | |
| NAL13041-327MS | CRHE-DPT0235-018.0-20130404MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 48 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7942 | 50 | 96 | | |
| NAL13041-327MS | CRHE-DPT0235-018.0-20130404MS | SUR | 2037-26-5 | Toluene d8 | 52 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7942 | 50 | 104 | | |
| NAL13041-327MS | CRHE-DPT0235-018.0-20130404MS | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7942 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-327MSD | CRHE-DPT0235-018.0-20130404MSD | TRG | 75-01-4 | Vinyl Chloride | 61 | | ug/L | 1.0 | 0.13 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7943 | 50 | 122 | 3 | |
| NAL13041-327MSD | CRHE-DPT0235-018.0-20130404MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 49 | | ug/L | 1.0 | 0.18 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7943 | 50 | 98 | 8 | 0.84 |
| NAL13041-327MSD | CRHE-DPT0235-018.0-20130404MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.28 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7943 | 50 | 104 | 6 | |
| NAL13041-327MSD | CRHE-DPT0235-018.0-20130404MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 52 | | ug/L | 1.0 | 0.20 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7943 | 50 | 104 | 6 | 0.77 |
| NAL13041-327MSD | CRHE-DPT0235-018.0-20130404MSD | TRG | 79-01-6 | Trichloroethene | 52 | | ug/L | 1.0 | 0.22 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7943 | 50 | 104 | 2 | |
| NAL13041-327MSD | CRHE-DPT0235-018.0-20130404MSD | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7943 | 50 | 108 | 4 | |
| NAL13041-327MSD | CRHE-DPT0235-018.0-20130404MSD | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7943 | 50 | 96 | 8 | |
| NAL13041-327MSD | CRHE-DPT0235-018.0-20130404MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7943 | 50 | 88 | 9 | |
| NAL13041-327MSD | CRHE-DPT0235-018.0-20130404MSD | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7943 | 50 | 100 | 4 | |
| NAL13041-327MSD | CRHE-DPT0235-018.0-20130404MSD | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/4/2013 | 4/4/2013 | 4/4/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7943 | 50 | 96 | 0 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-323 RR | CRHE-DPT0234-043.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | 800 | | ug/L | 50 | 6.5 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7952 | | | | |
| NAL13041-323 RR | CRHE-DPT0234-043.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7952 | | | | |
| NAL13041-323 RR | CRHE-DPT0234-043.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 50 | | ug/L | 50 | 14 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7952 | | | | |
| NAL13041-323 RR | CRHE-DPT0234-043.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 2400 | | ug/L | 50 | 10 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7952 | | | | |
| NAL13041-323 RR | CRHE-DPT0234-043.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 50 | 11 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7952 | | | | |
| NAL13041-323 RR | CRHE-DPT0234-043.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7952 | | | | |
| NAL13041-323 RR | CRHE-DPT0234-043.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7952 | 50 | 116 | | |
| NAL13041-323 RR | CRHE-DPT0234-043.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7952 | 50 | 116 | | |
| NAL13041-323 RR | CRHE-DPT0234-043.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7952 | 50 | 96 | | |
| NAL13041-323 RR | CRHE-DPT0234-043.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7952 | 50 | 94 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-324 RR | CRHE-DPT0234-058.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | 1.6 | | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7953 | | | | |
| NAL13041-324 RR | CRHE-DPT0234-058.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7953 | | | | |
| NAL13041-324 RR | CRHE-DPT0234-058.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7953 | | | | |
| NAL13041-324 RR | CRHE-DPT0234-058.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 4.8 | | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7953 | | | | |
| NAL13041-324 RR | CRHE-DPT0234-058.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7953 | | | | |
| NAL13041-324 RR | CRHE-DPT0234-058.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7953 | | | | |
| NAL13041-324 RR | CRHE-DPT0234-058.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 61 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7953 | 50 | 122 | | |
| NAL13041-324 RR | CRHE-DPT0234-058.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 62 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7953 | 50 | 124 | | |
| NAL13041-324 RR | CRHE-DPT0234-058.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7953 | 50 | 94 | | |
| NAL13041-324 RR | CRHE-DPT0234-058.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7953 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-325 RR | CRHE-DPT0235-010.0-20130403 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7954 | | | | |
| NAL13041-325 RR | CRHE-DPT0235-010.0-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7954 | | | | |
| NAL13041-325 RR | CRHE-DPT0235-010.0-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7954 | | | | |
| NAL13041-325 RR | CRHE-DPT0235-010.0-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7954 | | | | |
| NAL13041-325 RR | CRHE-DPT0235-010.0-20130403 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7954 | | | | |
| NAL13041-325 RR | CRHE-DPT0235-010.0-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7954 | | | | |
| NAL13041-325 RR | CRHE-DPT0235-010.0-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7954 | 50 | 120 | | |
| NAL13041-325 RR | CRHE-DPT0235-010.0-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7954 | 50 | 118 | | |
| NAL13041-325 RR | CRHE-DPT0235-010.0-20130403 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7954 | 50 | 98 | | |
| NAL13041-325 RR | CRHE-DPT0235-010.0-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7954 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-326 RR | CRHE-IDW193864-20130403 | TRG | 75-01-4 | Vinyl Chloride | 26 | | ug/L | 10 | 1.3 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7955 | | | | |
| NAL13041-326 RR | CRHE-IDW193864-20130403 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7955 | | | | |
| NAL13041-326 RR | CRHE-IDW193864-20130403 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 10 | 2.8 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7955 | | | | |
| NAL13041-326 RR | CRHE-IDW193864-20130403 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 130 | | ug/L | 10 | 2.0 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7955 | | | | |
| NAL13041-326 RR | CRHE-IDW193864-20130403 | TRG | 79-01-6 | Trichloroethene | 29 | | ug/L | 10 | 2.2 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7955 | | | | |
| NAL13041-326 RR | CRHE-IDW193864-20130403 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7955 | | | | |
| NAL13041-326 RR | CRHE-IDW193864-20130403 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7955 | 50 | 120 | | |
| NAL13041-326 RR | CRHE-IDW193864-20130403 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7955 | 50 | 116 | | |
| NAL13041-326 RR | CRHE-IDW193864-20130403 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7955 | 50 | 96 | | |
| NAL13041-326 RR | CRHE-IDW193864-20130403 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7955 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-340 RR | CRHE-DPT0236-043.0-20130404 | TRG | 75-01-4 | Vinyl Chloride | 2200 | | ug/L | 50 | 6.5 | 4/4/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7963 | | | | |
| NAL13041-340 RR | CRHE-DPT0236-043.0-20130404 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 50 | 9.0 | 4/4/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7963 | | | | |
| NAL13041-340 RR | CRHE-DPT0236-043.0-20130404 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 120 | | ug/L | 50 | 14 | 4/4/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7963 | | | | |
| NAL13041-340 RR | CRHE-DPT0236-043.0-20130404 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 5200 | | ug/L | 50 | 10 | 4/4/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7963 | | | | |
| NAL13041-340 RR | CRHE-DPT0236-043.0-20130404 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 50 | 11 | 4/4/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7963 | | | | |
| NAL13041-340 RR | CRHE-DPT0236-043.0-20130404 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 50 | 8.0 | 4/4/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7963 | | | | |
| NAL13041-340 RR | CRHE-DPT0236-043.0-20130404 | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | 4/4/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7963 | 50 | 104 | | |
| NAL13041-340 RR | CRHE-DPT0236-043.0-20130404 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 4/4/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7963 | 50 | 102 | | |
| NAL13041-340 RR | CRHE-DPT0236-043.0-20130404 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/4/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7963 | 50 | 98 | | |
| NAL13041-340 RR | CRHE-DPT0236-043.0-20130404 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/4/2013 | 4/5/2013 | 4/5/2013 | GW | 50 | 5.0 | 5.0 | NA | SW8260B | NALP7963 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-342 | CRHE-DPT0237-010.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7964 | | | | |
| NAL13041-342 | CRHE-DPT0237-010.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7964 | | | | |
| NAL13041-342 | CRHE-DPT0237-010.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7964 | | | | |
| NAL13041-342 | CRHE-DPT0237-010.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7964 | | | | |
| NAL13041-342 | CRHE-DPT0237-010.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7964 | | | | |
| NAL13041-342 | CRHE-DPT0237-010.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7964 | | | | |
| NAL13041-342 | CRHE-DPT0237-010.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7964 | 50 | 108 | | |
| NAL13041-342 | CRHE-DPT0237-010.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7964 | 50 | 102 | | |
| NAL13041-342 | CRHE-DPT0237-010.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7964 | 50 | 98 | | |
| NAL13041-342 | CRHE-DPT0237-010.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7964 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-343 | CRHE-DPT0237-018.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | 0.65 | I | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7965 | | | | |
| NAL13041-343 | CRHE-DPT0237-018.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7965 | | | | |
| NAL13041-343 | CRHE-DPT0237-018.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7965 | | | | |
| NAL13041-343 | CRHE-DPT0237-018.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7965 | | | | |
| NAL13041-343 | CRHE-DPT0237-018.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7965 | | | | |
| NAL13041-343 | CRHE-DPT0237-018.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7965 | | | | |
| NAL13041-343 | CRHE-DPT0237-018.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7965 | 50 | 106 | | |
| NAL13041-343 | CRHE-DPT0237-018.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7965 | 50 | 104 | | |
| NAL13041-343 | CRHE-DPT0237-018.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7965 | 50 | 98 | | |
| NAL13041-343 | CRHE-DPT0237-018.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7965 | 50 | 98 | | |

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# FINAL ANALYTICAL REPORT

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**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-344 | CRHE-DPT0237-023.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | 0.60 | I | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7966 | | | | |
| NAL13041-344 | CRHE-DPT0237-023.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7966 | | | | |
| NAL13041-344 | CRHE-DPT0237-023.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7966 | | | | |
| NAL13041-344 | CRHE-DPT0237-023.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 0.81 | I | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7966 | | | | |
| NAL13041-344 | CRHE-DPT0237-023.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7966 | | | | |
| NAL13041-344 | CRHE-DPT0237-023.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7966 | | | | |
| NAL13041-344 | CRHE-DPT0237-023.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7966 | 50 | 106 | | |
| NAL13041-344 | CRHE-DPT0237-023.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7966 | 50 | 102 | | |
| NAL13041-344 | CRHE-DPT0237-023.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7966 | 50 | 98 | | |
| NAL13041-344 | CRHE-DPT0237-023.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 46 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7966 | 50 | 92 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-345 | CRHE-DPT0237-028.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | 0.45 | I | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7967 | | | | |
| NAL13041-345 | CRHE-DPT0237-028.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7967 | | | | |
| NAL13041-345 | CRHE-DPT0237-028.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7967 | | | | |
| NAL13041-345 | CRHE-DPT0237-028.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 0.94 | I | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7967 | | | | |
| NAL13041-345 | CRHE-DPT0237-028.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7967 | | | | |
| NAL13041-345 | CRHE-DPT0237-028.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7967 | | | | |
| NAL13041-345 | CRHE-DPT0237-028.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7967 | 50 | 118 | | |
| NAL13041-345 | CRHE-DPT0237-028.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7967 | 50 | 114 | | |
| NAL13041-345 | CRHE-DPT0237-028.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7967 | 50 | 96 | | |
| NAL13041-345 | CRHE-DPT0237-028.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7967 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-346 | CRHE-DPT0237-033.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | 110 | | ug/L | 10 | 1.3 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7968 | | | | |
| NAL13041-346 | CRHE-DPT0237-033.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7968 | | | | |
| NAL13041-346 | CRHE-DPT0237-033.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 10 | 2.8 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7968 | | | | |
| NAL13041-346 | CRHE-DPT0237-033.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 10 | 2.0 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7968 | | | | |
| NAL13041-346 | CRHE-DPT0237-033.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 10 | 2.2 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7968 | | | | |
| NAL13041-346 | CRHE-DPT0237-033.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7968 | | | | |
| NAL13041-346 | CRHE-DPT0237-033.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7968 | 50 | 116 | | |
| NAL13041-346 | CRHE-DPT0237-033.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7968 | 50 | 114 | | |
| NAL13041-346 | CRHE-DPT0237-033.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7968 | 50 | 98 | | |
| NAL13041-346 | CRHE-DPT0237-033.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7968 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-347 | CRHE-DPT0237-038.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | 1900 | | ug/L | 10 | 1.3 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7969 | | | | |
| NAL13041-347 | CRHE-DPT0237-038.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7969 | | | | |
| NAL13041-347 | CRHE-DPT0237-038.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 16 | | ug/L | 10 | 2.8 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7969 | | | | |
| NAL13041-347 | CRHE-DPT0237-038.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 19 | | ug/L | 10 | 2.0 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7969 | | | | |
| NAL13041-347 | CRHE-DPT0237-038.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 10 | 2.2 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7969 | | | | |
| NAL13041-347 | CRHE-DPT0237-038.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7969 | | | | |
| NAL13041-347 | CRHE-DPT0237-038.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7969 | 50 | 116 | | |
| NAL13041-347 | CRHE-DPT0237-038.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7969 | 50 | 112 | | |
| NAL13041-347 | CRHE-DPT0237-038.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7969 | 50 | 96 | | |
| NAL13041-347 | CRHE-DPT0237-038.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7969 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-348 | CRHE-DPT0237-043.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | 1300 | | ug/L | 10 | 1.3 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7970 | | | | |
| NAL13041-348 | CRHE-DPT0237-043.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7970 | | | | |
| NAL13041-348 | CRHE-DPT0237-043.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 13 | | ug/L | 10 | 2.8 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7970 | | | | |
| NAL13041-348 | CRHE-DPT0237-043.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 10 | 2.0 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7970 | | | | |
| NAL13041-348 | CRHE-DPT0237-043.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 10 | 2.2 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7970 | | | | |
| NAL13041-348 | CRHE-DPT0237-043.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10.0 | 1.6 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7970 | | | | |
| NAL13041-348 | CRHE-DPT0237-043.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7970 | 50 | 112 | | |
| NAL13041-348 | CRHE-DPT0237-043.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 54 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7970 | 50 | 108 | | |
| NAL13041-348 | CRHE-DPT0237-043.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7970 | 50 | 96 | | |
| NAL13041-348 | CRHE-DPT0237-043.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7970 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-349 | CRHE-DPT0237-058.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | 0.70 | I | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7971 | | | | |
| NAL13041-349 | CRHE-DPT0237-058.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7971 | | | | |
| NAL13041-349 | CRHE-DPT0237-058.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7971 | | | | |
| NAL13041-349 | CRHE-DPT0237-058.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7971 | | | | |
| NAL13041-349 | CRHE-DPT0237-058.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7971 | | | | |
| NAL13041-349 | CRHE-DPT0237-058.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7971 | | | | |
| NAL13041-349 | CRHE-DPT0237-058.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7971 | 50 | 116 | | |
| NAL13041-349 | CRHE-DPT0237-058.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7971 | 50 | 116 | | |
| NAL13041-349 | CRHE-DPT0237-058.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7971 | 50 | 96 | | |
| NAL13041-349 | CRHE-DPT0237-058.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7971 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-350 | CRHE-DPT0238-010.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7972 | | | | |
| NAL13041-350 | CRHE-DPT0238-010.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7972 | | | | |
| NAL13041-350 | CRHE-DPT0238-010.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7972 | | | | |
| NAL13041-350 | CRHE-DPT0238-010.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7972 | | | | |
| NAL13041-350 | CRHE-DPT0238-010.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7972 | | | | |
| NAL13041-350 | CRHE-DPT0238-010.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7972 | | | | |
| NAL13041-350 | CRHE-DPT0238-010.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 47 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7972 | 50 | 94 | | |
| NAL13041-350 | CRHE-DPT0238-010.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7972 | 50 | 88 | | |
| NAL13041-350 | CRHE-DPT0238-010.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7972 | 50 | 98 | | |
| NAL13041-350 | CRHE-DPT0238-010.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 45 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7972 | 50 | 90 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-351 | CRHE-DPT0238-018.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7973 | | | | |
| NAL13041-351 | CRHE-DPT0238-018.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | 2.2 | | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7973 | | | | |
| NAL13041-351 | CRHE-DPT0238-018.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7973 | | | | |
| NAL13041-351 | CRHE-DPT0238-018.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 0.85 | I | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7973 | | | | |
| NAL13041-351 | CRHE-DPT0238-018.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7973 | | | | |
| NAL13041-351 | CRHE-DPT0238-018.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7973 | | | | |
| NAL13041-351 | CRHE-DPT0238-018.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7973 | 50 | 118 | | |
| NAL13041-351 | CRHE-DPT0238-018.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7973 | 50 | 114 | | |
| NAL13041-351 | CRHE-DPT0238-018.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7973 | 50 | 98 | | |
| NAL13041-351 | CRHE-DPT0238-018.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7973 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-352 | CRHE-DPT0238-023.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7974 | | | | |
| NAL13041-352 | CRHE-DPT0238-023.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | 2.0 | | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7974 | | | | |
| NAL13041-352 | CRHE-DPT0238-023.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7974 | | | | |
| NAL13041-352 | CRHE-DPT0238-023.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 0.90 | I | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7974 | | | | |
| NAL13041-352 | CRHE-DPT0238-023.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7974 | | | | |
| NAL13041-352 | CRHE-DPT0238-023.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7974 | | | | |
| NAL13041-352 | CRHE-DPT0238-023.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7974 | 50 | 112 | | |
| NAL13041-352 | CRHE-DPT0238-023.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 55 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7974 | 50 | 110 | | |
| NAL13041-352 | CRHE-DPT0238-023.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7974 | 50 | 98 | | |
| NAL13041-352 | CRHE-DPT0238-023.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 47 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7974 | 50 | 94 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-353 | CRHE-DPT0238-028.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | 0.41 | I | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7975 | | | | |
| NAL13041-353 | CRHE-DPT0238-028.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7975 | | | | |
| NAL13041-353 | CRHE-DPT0238-028.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7975 | | | | |
| NAL13041-353 | CRHE-DPT0238-028.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 0.76 | I | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7975 | | | | |
| NAL13041-353 | CRHE-DPT0238-028.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7975 | | | | |
| NAL13041-353 | CRHE-DPT0238-028.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7975 | | | | |
| NAL13041-353 | CRHE-DPT0238-028.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7975 | 50 | 120 | | |
| NAL13041-353 | CRHE-DPT0238-028.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 61 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7975 | 50 | 122 | | |
| NAL13041-353 | CRHE-DPT0238-028.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7975 | 50 | 98 | | |
| NAL13041-353 | CRHE-DPT0238-028.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7975 | 50 | 98 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-354 | CRHE-DPT0238-033.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | 5.2 | I | ug/L | 10 | 1.3 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7976 | | | | |
| NAL13041-354 | CRHE-DPT0238-033.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7976 | | | | |
| NAL13041-354 | CRHE-DPT0238-033.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 10 | 2.8 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7976 | | | | |
| NAL13041-354 | CRHE-DPT0238-033.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 10 | 2.0 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7976 | | | | |
| NAL13041-354 | CRHE-DPT0238-033.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 10 | 2.2 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7976 | | | | |
| NAL13041-354 | CRHE-DPT0238-033.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7976 | | | | |
| NAL13041-354 | CRHE-DPT0238-033.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 60 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7976 | 50 | 120 | | |
| NAL13041-354 | CRHE-DPT0238-033.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7976 | 50 | 118 | | |
| NAL13041-354 | CRHE-DPT0238-033.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7976 | 50 | 96 | | |
| NAL13041-354 | CRHE-DPT0238-033.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7976 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-355 | CRHE-DPT0238-038.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | 38 | | ug/L | 10 | 1.3 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7977 | | | | |
| NAL13041-355 | CRHE-DPT0238-038.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7977 | | | | |
| NAL13041-355 | CRHE-DPT0238-038.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 10 | 2.8 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7977 | | | | |
| NAL13041-355 | CRHE-DPT0238-038.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 9.7 | I | ug/L | 10 | 2.0 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7977 | | | | |
| NAL13041-355 | CRHE-DPT0238-038.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 10 | 2.2 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7977 | | | | |
| NAL13041-355 | CRHE-DPT0238-038.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7977 | | | | |
| NAL13041-355 | CRHE-DPT0238-038.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7977 | 50 | 114 | | |
| NAL13041-355 | CRHE-DPT0238-038.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 57 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7977 | 50 | 114 | | |
| NAL13041-355 | CRHE-DPT0238-038.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7977 | 50 | 96 | | |
| NAL13041-355 | CRHE-DPT0238-038.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7977 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-356 | CRHE-DPT0238-043.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | 89 | | ug/L | 10 | 1.3 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7978 | | | | |
| NAL13041-356 | CRHE-DPT0238-043.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7978 | | | | |
| NAL13041-356 | CRHE-DPT0238-043.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 10 | 2.8 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7978 | | | | |
| NAL13041-356 | CRHE-DPT0238-043.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 10 | 2.0 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7978 | | | | |
| NAL13041-356 | CRHE-DPT0238-043.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 10 | 2.2 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7978 | | | | |
| NAL13041-356 | CRHE-DPT0238-043.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7978 | | | | |
| NAL13041-356 | CRHE-DPT0238-043.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7978 | 50 | 106 | | |
| NAL13041-356 | CRHE-DPT0238-043.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 59 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7978 | 50 | 118 | | |
| NAL13041-356 | CRHE-DPT0238-043.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7978 | 50 | 96 | | |
| NAL13041-356 | CRHE-DPT0238-043.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP7978 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040413CCVC | P040413CCVC | TRG | 75-01-4 | Vinyl Chloride | 59 | | ug/L | 1.0 | 0.13 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 118 | | |
| P040413CCVC | P040413CCVC | TRG | 75-35-4 | 1,1-Dichloroethene | 46 | | ug/L | 1.0 | 0.18 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 92 | | |
| P040413CCVC | P040413CCVC | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 47 | | ug/L | 1.0 | 0.28 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 94 | | |
| P040413CCVC | P040413CCVC | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 47 | | ug/L | 1.0 | 0.20 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 94 | | |
| P040413CCVC | P040413CCVC | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 100 | | |
| P040413CCVC | P040413CCVC | TRG | 127-18-4 | Tetrachloroethene | 49 | | ug/L | 1.0 | 0.16 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 98 | | |
| P040413CCVC | P040413CCVC | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 96 | | |
| P040413CCVC | P040413CCVC | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 90 | | |
| P040413CCVC | P040413CCVC | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 100 | | |
| P040413CCVC | P040413CCVC | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7938 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040413MBKB | P040413MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | | | | |
| P040413MBKB | P040413MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | | | | |
| P040413MBKB | P040413MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | | | | |
| P040413MBKB | P040413MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | | | | |
| P040413MBKB | P040413MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | | | | |
| P040413MBKB | P040413MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | | | | |
| P040413MBKB | P040413MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | 50 | 118 | | |
| P040413MBKB | P040413MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 56 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | 50 | 112 | | |
| P040413MBKB | P040413MBKB | SUR | 2037-26-5 | Toluene d8 | 48 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | 50 | 96 | | |
| P040413MBKB | P040413MBKB | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 4/4/2013 | 4/4/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7944 | 50 | 96 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040513CCVA | P040513CCVA | TRG | 75-01-4 | Vinyl Chloride | 60 | | ug/L | 1.0 | 0.13 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7958 | 50 | 120 | | |
| P040513CCVA | P040513CCVA | TRG | 75-35-4 | 1,1-Dichloroethene | 53 | | ug/L | 1.0 | 0.18 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7958 | 50 | 106 | | |
| P040513CCVA | P040513CCVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.28 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7958 | 50 | 106 | | |
| P040513CCVA | P040513CCVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.20 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7958 | 50 | 106 | | |
| P040513CCVA | P040513CCVA | TRG | 79-01-6 | Trichloroethene | 50 | | ug/L | 1.0 | 0.22 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7958 | 50 | 100 | | |
| P040513CCVA | P040513CCVA | TRG | 127-18-4 | Tetrachloroethene | 55 | | ug/L | 1.0 | 0.16 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7958 | 50 | 110 | | |
| P040513CCVA | P040513CCVA | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7958 | 50 | 98 | | |
| P040513CCVA | P040513CCVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 44 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7958 | 50 | 88 | | |
| P040513CCVA | P040513CCVA | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7958 | 50 | 102 | | |
| P040513CCVA | P040513CCVA | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7958 | 50 | 96 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040513MBKA | P040513MBKA | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7962 | | | | |
| P040513MBKA | P040513MBKA | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7962 | | | | |
| P040513MBKA | P040513MBKA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7962 | | | | |
| P040513MBKA | P040513MBKA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7962 | | | | |
| P040513MBKA | P040513MBKA | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7962 | | | | |
| P040513MBKA | P040513MBKA | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7962 | | | | |
| P040513MBKA | P040513MBKA | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7962 | 50 | 102 | | |
| P040513MBKA | P040513MBKA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 49 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7962 | 50 | 98 | | |
| P040513MBKA | P040513MBKA | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7962 | 50 | 98 | | |
| P040513MBKA | P040513MBKA | SUR | 460-00-4 | Bromofluorobenzene | 48 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7962 | 50 | 96 | | |

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# FINAL ANALYTICAL REPORT

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**316 S Baylen Str., Suite 201**
**Pensacola, FL 32502**
**ATTN: Ms. Jill Johnson**

**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040513ALCS | P040513ALCS | TRG | 75-01-4 | Vinyl Chloride | 60 | | ug/L | 1.0 | 0.13 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7959 | 50 | 120 | | |
| P040513ALCS | P040513ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 54 | | ug/L | 1.0 | 0.18 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7959 | 50 | 108 | | |
| P040513ALCS | P040513ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.28 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7959 | 50 | 108 | | |
| P040513ALCS | P040513ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 54 | | ug/L | 1.0 | 0.20 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7959 | 50 | 108 | | |
| P040513ALCS | P040513ALCS | TRG | 79-01-6 | Trichloroethene | 49 | | ug/L | 1.0 | 0.22 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7959 | 50 | 98 | | |
| P040513ALCS | P040513ALCS | TRG | 127-18-4 | Tetrachloroethene | 52 | | ug/L | 1.0 | 0.16 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7959 | 50 | 104 | | |
| P040513ALCS | P040513ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 48 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7959 | 50 | 96 | | |
| P040513ALCS | P040513ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 45 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7959 | 50 | 90 | | |
| P040513ALCS | P040513ALCS | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7959 | 50 | 98 | | |
| P040513ALCS | P040513ALCS | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7959 | 50 | 100 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-325MS | CRHE-DPT0235-010.0-20130403MS | TRG | 75-01-4 | Vinyl Chloride | 63 | | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7960 | 50 | 126 | | |
| NAL13041-325MS | CRHE-DPT0235-010.0-20130403MS | TRG | 75-35-4 | 1,1-Dichloroethene | 51 | | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7960 | 50 | 102 | | |
| NAL13041-325MS | CRHE-DPT0235-010.0-20130403MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 50 | | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7960 | 50 | 100 | | |
| NAL13041-325MS | CRHE-DPT0235-010.0-20130403MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7960 | 50 | 102 | | |
| NAL13041-325MS | CRHE-DPT0235-010.0-20130403MS | TRG | 79-01-6 | Trichloroethene | 48 | | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7960 | 50 | 96 | | |
| NAL13041-325MS | CRHE-DPT0235-010.0-20130403MS | TRG | 127-18-4 | Tetrachloroethene | 54 | | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7960 | 50 | 108 | | |
| NAL13041-325MS | CRHE-DPT0235-010.0-20130403MS | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7960 | 50 | 98 | | |
| NAL13041-325MS | CRHE-DPT0235-010.0-20130403MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 46 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7960 | 50 | 92 | | |
| NAL13041-325MS | CRHE-DPT0235-010.0-20130403MS | SUR | 2037-26-5 | Toluene d8 | 52 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7960 | 50 | 104 | | |
| NAL13041-325MS | CRHE-DPT0235-010.0-20130403MS | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7960 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-325MSD | CRHE-DPT0235-010.0-20130403MSD | TRG | 75-01-4 | Vinyl Chloride | 62 | | ug/L | 1.0 | 0.13 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7961 | 50 | 124 | 2 | |
| NAL13041-325MSD | CRHE-DPT0235-010.0-20130403MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 51 | | ug/L | 1.0 | 0.18 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7961 | 50 | 102 | 0 | |
| NAL13041-325MSD | CRHE-DPT0235-010.0-20130403MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.28 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7961 | 50 | 106 | 6 | |
| NAL13041-325MSD | CRHE-DPT0235-010.0-20130403MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.20 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7961 | 50 | 106 | 4 | |
| NAL13041-325MSD | CRHE-DPT0235-010.0-20130403MSD | TRG | 79-01-6 | Trichloroethene | 45 | | ug/L | 1.0 | 0.22 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7961 | 50 | 90 | 6 | |
| NAL13041-325MSD | CRHE-DPT0235-010.0-20130403MSD | TRG | 127-18-4 | Tetrachloroethene | 52 | | ug/L | 1.0 | 0.16 | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7961 | 50 | 104 | 4 | |
| NAL13041-325MSD | CRHE-DPT0235-010.0-20130403MSD | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7961 | 50 | 98 | 0 | |
| NAL13041-325MSD | CRHE-DPT0235-010.0-20130403MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7961 | 50 | 94 | 2 | |
| NAL13041-325MSD | CRHE-DPT0235-010.0-20130403MSD | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7961 | 50 | 102 | 2 | |
| NAL13041-325MSD | CRHE-DPT0235-010.0-20130403MSD | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | 4/3/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7961 | 50 | 98 | 0 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-357 | CRHE-DPT0238-058.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7987 | | | | |
| NAL13041-357 | CRHE-DPT0238-058.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7987 | | | | |
| NAL13041-357 | CRHE-DPT0238-058.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7987 | | | | |
| NAL13041-357 | CRHE-DPT0238-058.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7987 | | | | |
| NAL13041-357 | CRHE-DPT0238-058.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7987 | | | | |
| NAL13041-357 | CRHE-DPT0238-058.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7987 | | | | |
| NAL13041-357 | CRHE-DPT0238-058.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7987 | 50 | 102 | | |
| NAL13041-357 | CRHE-DPT0238-058.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 65 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7987 | 50 | 130 | | |
| NAL13041-357 | CRHE-DPT0238-058.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7987 | 50 | 100 | | |
| NAL13041-357 | CRHE-DPT0238-058.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 55 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7987 | 50 | 110 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-358 | CRHE-DPT0239-010.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7988 | | | | |
| NAL13041-358 | CRHE-DPT0239-010.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7988 | | | | |
| NAL13041-358 | CRHE-DPT0239-010.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7988 | | | | |
| NAL13041-358 | CRHE-DPT0239-010.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7988 | | | | |
| NAL13041-358 | CRHE-DPT0239-010.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7988 | | | | |
| NAL13041-358 | CRHE-DPT0239-010.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7988 | | | | |
| NAL13041-358 | CRHE-DPT0239-010.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7988 | 50 | 118 | | |
| NAL13041-358 | CRHE-DPT0239-010.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 67 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7988 | 50 | 134 | | |
| NAL13041-358 | CRHE-DPT0239-010.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7988 | 50 | 100 | | |
| NAL13041-358 | CRHE-DPT0239-010.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 53 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7988 | 50 | 106 | | |

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# FINAL ANALYTICAL REPORT

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**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-359 | CRHE-DPT0239-018.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7989 | | | | |
| NAL13041-359 | CRHE-DPT0239-018.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7989 | | | | |
| NAL13041-359 | CRHE-DPT0239-018.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7989 | | | | |
| NAL13041-359 | CRHE-DPT0239-018.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7989 | | | | |
| NAL13041-359 | CRHE-DPT0239-018.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7989 | | | | |
| NAL13041-359 | CRHE-DPT0239-018.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7989 | | | | |
| NAL13041-359 | CRHE-DPT0239-018.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 59 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7989 | 50 | 118 | | |
| NAL13041-359 | CRHE-DPT0239-018.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 65 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7989 | 50 | 130 | | |
| NAL13041-359 | CRHE-DPT0239-018.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7989 | 50 | 98 | | |
| NAL13041-359 | CRHE-DPT0239-018.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 53 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7989 | 50 | 106 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-360 | CRHE-DPT0239-0230.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7990 | | | | |
| NAL13041-360 | CRHE-DPT0239-0230.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7990 | | | | |
| NAL13041-360 | CRHE-DPT0239-0230.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7990 | | | | |
| NAL13041-360 | CRHE-DPT0239-0230.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7990 | | | | |
| NAL13041-360 | CRHE-DPT0239-0230.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7990 | | | | |
| NAL13041-360 | CRHE-DPT0239-0230.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7990 | | | | |
| NAL13041-360 | CRHE-DPT0239-0230.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 62 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7990 | 50 | 124 | | |
| NAL13041-360 | CRHE-DPT0239-0230.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 72 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7990 | 50 | 144 | | |
| NAL13041-360 | CRHE-DPT0239-0230.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7990 | 50 | 100 | | |
| NAL13041-360 | CRHE-DPT0239-0230.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 54 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7990 | 50 | 108 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-361 | CRHE-DPT0239-028.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7991 | | | | |
| NAL13041-361 | CRHE-DPT0239-028.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7991 | | | | |
| NAL13041-361 | CRHE-DPT0239-028.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7991 | | | | |
| NAL13041-361 | CRHE-DPT0239-028.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7991 | | | | |
| NAL13041-361 | CRHE-DPT0239-028.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7991 | | | | |
| NAL13041-361 | CRHE-DPT0239-028.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7991 | | | | |
| NAL13041-361 | CRHE-DPT0239-028.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 63 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7991 | 50 | 126 | | |
| NAL13041-361 | CRHE-DPT0239-028.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 71 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7991 | 50 | 142 | | |
| NAL13041-361 | CRHE-DPT0239-028.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7991 | 50 | 98 | | |
| NAL13041-361 | CRHE-DPT0239-028.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 54 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7991 | 50 | 108 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-362 | CRHE-DPT0239-033.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8003 | | | | |
| NAL13041-362 | CRHE-DPT0239-033.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8003 | | | | |
| NAL13041-362 | CRHE-DPT0239-033.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8003 | | | | |
| NAL13041-362 | CRHE-DPT0239-033.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8003 | | | | |
| NAL13041-362 | CRHE-DPT0239-033.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8003 | | | | |
| NAL13041-362 | CRHE-DPT0239-033.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8003 | | | | |
| NAL13041-362 | CRHE-DPT0239-033.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8003 | 50 | 98 | | |
| NAL13041-362 | CRHE-DPT0239-033.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8003 | 50 | 104 | | |
| NAL13041-362 | CRHE-DPT0239-033.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 46 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8003 | 50 | 92 | | |
| NAL13041-362 | CRHE-DPT0239-033.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8003 | 50 | 102 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-363 | CRHE-DPT0239-038.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | 540 | | ug/L | 10 | 1.3 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP8004 | | | | |
| NAL13041-363 | CRHE-DPT0239-038.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 10 | 1.8 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP8004 | | | | |
| NAL13041-363 | CRHE-DPT0239-038.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 10 | 2.8 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP8004 | | | | |
| NAL13041-363 | CRHE-DPT0239-038.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 10 | 2.0 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP8004 | | | | |
| NAL13041-363 | CRHE-DPT0239-038.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 10 | 2.2 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP8004 | | | | |
| NAL13041-363 | CRHE-DPT0239-038.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 10 | 1.6 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP8004 | | | | |
| NAL13041-363 | CRHE-DPT0239-038.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 56 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP8004 | 50 | 112 | | |
| NAL13041-363 | CRHE-DPT0239-038.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP8004 | 50 | 116 | | |
| NAL13041-363 | CRHE-DPT0239-038.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP8004 | 50 | 94 | | |
| NAL13041-363 | CRHE-DPT0239-038.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 10 | 5.0 | 5.0 | NA | SW8260B | NALP8004 | 50 | 104 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-364 | CRHE-DPT0239-043.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | 62 | | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8005 | | | | |
| NAL13041-364 | CRHE-DPT0239-043.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8005 | | | | |
| NAL13041-364 | CRHE-DPT0239-043.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8005 | | | | |
| NAL13041-364 | CRHE-DPT0239-043.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 3.7 | | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8005 | | | | |
| NAL13041-364 | CRHE-DPT0239-043.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8005 | | | | |
| NAL13041-364 | CRHE-DPT0239-043.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8005 | | | | |
| NAL13041-364 | CRHE-DPT0239-043.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 51 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8005 | 50 | 102 | | |
| NAL13041-364 | CRHE-DPT0239-043.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8005 | 50 | 104 | | |
| NAL13041-364 | CRHE-DPT0239-043.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8005 | 50 | 100 | | |
| NAL13041-364 | CRHE-DPT0239-043.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8005 | 50 | 100 | | |

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# FINAL ANALYTICAL REPORT

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**Project Site: NASA, Kennedy Space Center**

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-365 | CRHE-DPT0239-058.0-20130405 | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8006 | | | | |
| NAL13041-365 | CRHE-DPT0239-058.0-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8006 | | | | |
| NAL13041-365 | CRHE-DPT0239-058.0-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8006 | | | | |
| NAL13041-365 | CRHE-DPT0239-058.0-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8006 | | | | |
| NAL13041-365 | CRHE-DPT0239-058.0-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8006 | | | | |
| NAL13041-365 | CRHE-DPT0239-058.0-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8006 | | | | |
| NAL13041-365 | CRHE-DPT0239-058.0-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 57 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8006 | 50 | 114 | | |
| NAL13041-365 | CRHE-DPT0239-058.0-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8006 | 50 | 116 | | |
| NAL13041-365 | CRHE-DPT0239-058.0-20130405 | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8006 | 50 | 94 | | |
| NAL13041-365 | CRHE-DPT0239-058.0-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8006 | 50 | 102 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-366 | CRHE-IDW193865-20130405 | TRG | 75-01-4 | Vinyl Chloride | 19 | | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8007 | | | | |
| NAL13041-366 | CRHE-IDW193865-20130405 | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8007 | | | | |
| NAL13041-366 | CRHE-IDW193865-20130405 | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8007 | | | | |
| NAL13041-366 | CRHE-IDW193865-20130405 | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 23 | | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8007 | | | | |
| NAL13041-366 | CRHE-IDW193865-20130405 | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8007 | | | | |
| NAL13041-366 | CRHE-IDW193865-20130405 | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8007 | | | | |
| NAL13041-366 | CRHE-IDW193865-20130405 | SUR | 1868-53-7 | Dibromofluoromethane | 55 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8007 | 50 | 110 | | |
| NAL13041-366 | CRHE-IDW193865-20130405 | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 58 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8007 | 50 | 116 | | |
| NAL13041-366 | CRHE-IDW193865-20130405 | SUR | 2037-26-5 | Toluene d8 | 49 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8007 | 50 | 98 | | |
| NAL13041-366 | CRHE-IDW193865-20130405 | SUR | 460-00-4 | Bromofluorobenzene | 51 | | ug/L | | | 4/5/2013 | 4/6/2013 | 4/6/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP8007 | 50 | 102 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040513CCVB | P040513CCVB | TRG | 75-01-4 | Vinyl Chloride | 60 | | ug/L | 1.0 | 0.13 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7982 | 50 | 120 | | |
| P040513CCVB | P040513CCVB | TRG | 75-35-4 | 1,1-Dichloroethene | 43 | | ug/L | 1.0 | 0.18 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7982 | 50 | 86 | | |
| P040513CCVB | P040513CCVB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 43 | | ug/L | 1.0 | 0.28 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7982 | 50 | 86 | | |
| P040513CCVB | P040513CCVB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 53 | | ug/L | 1.0 | 0.20 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7982 | 50 | 106 | | |
| P040513CCVB | P040513CCVB | TRG | 79-01-6 | Trichloroethene | 53 | | ug/L | 1.0 | 0.22 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7982 | 50 | 106 | | |
| P040513CCVB | P040513CCVB | TRG | 127-18-4 | Tetrachloroethene | 53 | | ug/L | 1.0 | 0.16 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7982 | 50 | 106 | | |
| P040513CCVB | P040513CCVB | SUR | 1868-53-7 | Dibromofluoromethane | 49 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7982 | 50 | 98 | | |
| P040513CCVB | P040513CCVB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 47 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7982 | 50 | 94 | | |
| P040513CCVB | P040513CCVB | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7982 | 50 | 100 | | |
| P040513CCVB | P040513CCVB | SUR | 460-00-4 | Bromofluorobenzene | 49 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP7982 | 50 | 98 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040513MBKB | P040513MBKB | TRG | 75-01-4 | Vinyl Chloride | | U | ug/L | 1.0 | 0.13 | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7985 | | | | |
| P040513MBKB | P040513MBKB | TRG | 75-35-4 | 1,1-Dichloroethene | | U | ug/L | 1.0 | 0.18 | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7985 | | | | |
| P040513MBKB | P040513MBKB | TRG | 156-60-5 | Trans-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.28 | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7985 | | | | |
| P040513MBKB | P040513MBKB | TRG | 156-59-2 | Cis-1,2-Dichloroethene | | U | ug/L | 1.0 | 0.20 | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7985 | | | | |
| P040513MBKB | P040513MBKB | TRG | 79-01-6 | Trichloroethene | | U | ug/L | 1.0 | 0.22 | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7985 | | | | |
| P040513MBKB | P040513MBKB | TRG | 127-18-4 | Tetrachloroethene | | U | ug/L | 1.0 | 0.16 | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7985 | | | | |
| P040513MBKB | P040513MBKB | SUR | 1868-53-7 | Dibromofluoromethane | 58 | | ug/L | | | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7985 | 50 | 116 | | |
| P040513MBKB | P040513MBKB | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 64 | | ug/L | | | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7985 | 50 | 128 | | |
| P040513MBKB | P040513MBKB | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7985 | 50 | 100 | | |
| P040513MBKB | P040513MBKB | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7985 | 50 | 104 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040613ICVA | P040613ICVA | TRG | 75-01-4 | Vinyl Chloride | 48 | | ug/L | 1.0 | 0.13 | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP8002 | 50 | 96 | | |
| P040613ICVA | P040613ICVA | TRG | 75-35-4 | 1,1-Dichloroethene | 58 | | ug/L | 1.0 | 0.18 | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP8002 | 50 | 116 | | |
| P040613ICVA | P040613ICVA | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 59 | | ug/L | 1.0 | 0.28 | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP8002 | 50 | 118 | | |
| P040613ICVA | P040613ICVA | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 57 | | ug/L | 1.0 | 0.20 | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP8002 | 50 | 114 | | |
| P040613ICVA | P040613ICVA | TRG | 79-01-6 | Trichloroethene | 54 | | ug/L | 1.0 | 0.22 | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP8002 | 50 | 108 | | |
| P040613ICVA | P040613ICVA | TRG | 127-18-4 | Tetrachloroethene | 50 | | ug/L | 1.0 | 0.16 | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP8002 | 50 | 100 | | |
| P040613ICVA | P040613ICVA | SUR | 1868-53-7 | Dibromofluoromethane | 52 | | ug/L | | | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP8002 | 50 | 104 | | |
| P040613ICVA | P040613ICVA | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP8002 | 50 | 102 | | |
| P040613ICVA | P040613ICVA | SUR | 2037-26-5 | Toluene d8 | 47 | | ug/L | | | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP8002 | 50 | 94 | | |
| P040613ICVA | P040613ICVA | SUR | 460-00-4 | Bromofluorobenzene | 53 | | ug/L | | | NA | 4/6/2013 | 4/6/2013 | WQ | 1 | - | 5.0 | NA | SW8260B | NALP8002 | 50 | 106 | | |

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| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P040513ALCS | P040513ALCS | TRG | 75-01-4 | Vinyl Chloride | 65 | | ug/L | 1.0 | 0.13 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7980 | 50 | 130 | | |
| P040513ALCS | P040513ALCS | TRG | 75-35-4 | 1,1-Dichloroethene | 47 | | ug/L | 1.0 | 0.18 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7980 | 50 | 94 | | |
| P040513ALCS | P040513ALCS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 57 | | ug/L | 1.0 | 0.28 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7980 | 50 | 114 | | |
| P040513ALCS | P040513ALCS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 58 | | ug/L | 1.0 | 0.20 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7980 | 50 | 116 | | |
| P040513ALCS | P040513ALCS | TRG | 79-01-6 | Trichloroethene | 53 | | ug/L | 1.0 | 0.22 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7980 | 50 | 106 | | |
| P040513ALCS | P040513ALCS | TRG | 127-18-4 | Tetrachloroethene | 53 | | ug/L | 1.0 | 0.16 | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7980 | 50 | 106 | | |
| P040513ALCS | P040513ALCS | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7980 | 50 | 108 | | |
| P040513ALCS | P040513ALCS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 51 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7980 | 50 | 102 | | |
| P040513ALCS | P040513ALCS | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7980 | 50 | 100 | | |
| P040513ALCS | P040513ALCS | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | NA | 4/5/2013 | 4/5/2013 | WQ | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7980 | 50 | 100 | | |

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# FINAL ANALYTICAL REPORT

**Geosyntec Consultants**
**316 S Baylen Str., Suite 201**
**Pensacola, FL 32502**
**ATTN: Ms. Jill Johnson**

**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

Analytical results meet the requirements of NELAC Standards. The results reported apply solely to the sample analyzed and all results are reported on a dry weight basis unless stated otherwise. Any questions concerning this report should be directed to Scott D. Wall, President.
**V** = Analyte was detected in both the sample and the associated method blank.
**L** = Off-scale high. Actual value is known to be greater than value given.
**J** = Estimated value; value not accurate. All results with a "J" qualifier require comment.
**I** = The reported value is between the laboratory MDL and the laboratory PQL
**K** = Off-scale low. Actual value is known to be less than the value given.
**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-358MS | CRHE-DPT0239-010.0-20130405MS | TRG | 75-01-4 | Vinyl Chloride | 63 | | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7983 | 50 | 126 | | |
| NAL13041-358MS | CRHE-DPT0239-010.0-20130405MS | TRG | 75-35-4 | 1,1-Dichloroethene | 45 | | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7983 | 50 | 90 | | |
| NAL13041-358MS | CRHE-DPT0239-010.0-20130405MS | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 42 | | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7983 | 50 | 84 | | |
| NAL13041-358MS | CRHE-DPT0239-010.0-20130405MS | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 51 | | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7983 | 50 | 102 | | |
| NAL13041-358MS | CRHE-DPT0239-010.0-20130405MS | TRG | 79-01-6 | Trichloroethene | 51 | | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7983 | 50 | 102 | | |
| NAL13041-358MS | CRHE-DPT0239-010.0-20130405MS | TRG | 127-18-4 | Tetrachloroethene | 52 | | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7983 | 50 | 104 | | |
| NAL13041-358MS | CRHE-DPT0239-010.0-20130405MS | SUR | 1868-53-7 | Dibromofluoromethane | 53 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7983 | 50 | 106 | | |
| NAL13041-358MS | CRHE-DPT0239-010.0-20130405MS | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 50 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7983 | 50 | 100 | | |
| NAL13041-358MS | CRHE-DPT0239-010.0-20130405MS | SUR | 2037-26-5 | Toluene d8 | 50 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7983 | 50 | 100 | | |
| NAL13041-358MS | CRHE-DPT0239-010.0-20130405MS | SUR | 460-00-4 | Bromofluorobenzene | 52 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7983 | 50 | 104 | | |

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# FINAL ANALYTICAL REPORT

**Geosyntec Consultants**
**316 S Baylen Str., Suite 201**
**Pensacola, FL 32502**
**ATTN: Ms. Jill Johnson**

**Project #: NAL13-041**
**Project Site: NASA, Kennedy Space Center**

Analytical results meet the requirements of NELAC Standards. The results reported apply solely to the sample analyzed and all results are reported on a dry weight basis unless stated otherwise. Any questions concerning this report should be directed to Scott D. Wall, President.
**V** = Analyte was detected in both the sample and the associated method blank.
**L** = Off-scale high. Actual value is known to be greater than value given.
**J** = Estimated value; value not accurate. All results with a "J" qualifier require comment.
**I** = The reported value is between the laboratory MDL and the laboratory PQL
**K** = Off-scale low. Actual value is known to be less than the value given.
**U** = Compound was analyzed for but not detected.

| Lab ID: | Sample ID: | | CAS # | ANALYTES | Results | QC | Units | RL | MDL | Sample Date | Preparation Date | Analysis Date | Matrix | Dilution | Sample Vol. (ml) | Final Vol. (ml) | % Solid | Method | Data file | Spike | % Rec | % RPD | Parent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAL13041-358MSD | CRHE-DPT0239-010.0-20130405MSD | TRG | 75-01-4 | Vinyl Chloride | 65 | | ug/L | 1.0 | 0.13 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7984 | 50 | 130 | 3 | |
| NAL13041-358MSD | CRHE-DPT0239-010.0-20130405MSD | TRG | 75-35-4 | 1,1-Dichloroethene | 49 | | ug/L | 1.0 | 0.18 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7984 | 50 | 98 | 9 | |
| NAL13041-358MSD | CRHE-DPT0239-010.0-20130405MSD | TRG | 156-60-5 | Trans-1,2-Dichloroethene | 57 | | ug/L | 1.0 | 0.28 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7984 | 50 | 114 | 30 | |
| NAL13041-358MSD | CRHE-DPT0239-010.0-20130405MSD | TRG | 156-59-2 | Cis-1,2-Dichloroethene | 56 | | ug/L | 1.0 | 0.20 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7984 | 50 | 112 | 9 | |
| NAL13041-358MSD | CRHE-DPT0239-010.0-20130405MSD | TRG | 79-01-6 | Trichloroethene | 53 | | ug/L | 1.0 | 0.22 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7984 | 50 | 106 | 4 | |
| NAL13041-358MSD | CRHE-DPT0239-010.0-20130405MSD | TRG | 127-18-4 | Tetrachloroethene | 53 | | ug/L | 1.0 | 0.16 | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7984 | 50 | 106 | 2 | |
| NAL13041-358MSD | CRHE-DPT0239-010.0-20130405MSD | SUR | 1868-53-7 | Dibromofluoromethane | 54 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7984 | 50 | 108 | 2 | |
| NAL13041-358MSD | CRHE-DPT0239-010.0-20130405MSD | SUR | 17060-07-0 | 1,2-Dichloroethane d4 | 52 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7984 | 50 | 104 | 4 | |
| NAL13041-358MSD | CRHE-DPT0239-010.0-20130405MSD | SUR | 2037-26-5 | Toluene d8 | 51 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7984 | 50 | 102 | 2 | |
| NAL13041-358MSD | CRHE-DPT0239-010.0-20130405MSD | SUR | 460-00-4 | Bromofluorobenzene | 50 | | ug/L | | | 4/5/2013 | 4/5/2013 | 4/5/2013 | GW | 1 | 5.0 | 5.0 | NA | SW8260B | NALP7984 | 50 | 100 | 4 | |

**KB LABS, INC.**
**6821 SW Archer Road**
**Gainesville, FL 32608**
***Telephone* (352) 367-0073**
***Fax* (352) 378-6491**
www.kbmobilelabs.com

May 31, 2013

Lauren Petty
Geosyntec Consultants
316 South Baylen Street
Pensacola, FL 32502

**RE: NASA CRHE, KSC, FL - Final Data Report- KB3**
**KB Labs Project # 13-76**

Dear Ms. Petty:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

KB Labs, Inc.
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# PROJECT NARRATIVE

## Project Scope

From May 21 to 24, 2013, a total of 113 water samples were analyzed for Geosyntec Consultants at NASA CRHE, KSC FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB3: FDOH NELAP Certification Number E82816

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report and the results relate only to the actual samples received and analyzed in the laboratory. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example,

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if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0 ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

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# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. As per Client instruction, KB Labs reports all samples to the laboratory MDL. Values between the PQL and MDL are reported with an I FDEP Data Qualifier.

3. VC result for sample DPT0251-038.0 was changed from 1100 ug/L to 570 ug/L.

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 12-163 |
| **On-site Dates**: 5/21/13-5/24/13 | **Client Project Manager**: Lauren Petty | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CCS 20 | 05/20/13 | 90 | 97 | 115 | 102 | Pass | Pass | > UCL | Pass |
| LCS 20 | 05/20/13 | 90 | 97 | 104 | 104 | Pass | Pass | Pass | Pass |
| METHOD BLANK | 05/20/13 | 98 | 105 | 94 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0240-010.0 | 05/20/13 | 94 | 95 | 103 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0240-018.0 | 05/20/13 | 95 | 98 | 103 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0240-023.0 | 05/20/13 | 91 | 94 | 103 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0240-028.0 | 05/20/13 | 85 | 94 | 113 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0240-033.0 | 05/20/13 | 92 | 97 | 102 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0240-038.0 | 05/20/13 | 93 | 101 | 101 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0240-043.0 | 05/20/13 | 89 | 95 | 103 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0240-058.0 | 05/20/13 | 94 | 102 | 98 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0241-010.0 | 05/20/13 | 95 | 102 | 97 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0241-018.0 | 05/20/13 | 89 | 99 | 103 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0241-023.0 | 05/20/13 | 94 | 103 | 100 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0241-028.0 | 05/20/13 | 92 | 101 | 100 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0241-033.0 | 05/20/13 | 96 | 101 | 102 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0241-038.0 | 05/20/13 | 96 | 101 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0241-043.0 | 05/20/13 | 93 | 100 | 95 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0241-058.0 | 05/20/13 | 100 | 107 | 99 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0242-018.0 | 05/20/13 | 93 | 106 | 100 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0242-023.0 | 05/20/13 | 95 | 100 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0242-028.0 | 05/20/13 | 92 | 100 | 93 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0242-033.0 | 05/20/13 | 90 | 99 | 102 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0242-038.0 | 05/20/13 | 93 | 98 | 96 | 114 | Pass | Pass | Pass | Pass |
| CRHE-DPT0242-043.0 1:50 | 05/20/13 | 91 | 94 | 109 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0242-048.0 1:50 | 05/20/13 | 89 | 96 | 105 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0240-058.0 MS | 05/20/13 | 88 | 99 | 104 | 114 | Pass | Pass | Pass | Pass |
| CRHE-DPT0240-058.0 MSD | 05/20/13 | 88 | 90 | 105 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0241-010.0 MS | 05/20/13 | 91 | 98 | 103 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0241-010.0 MSD | 05/20/13 | 89 | 94 | 103 | 108 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/20/13 | 90 | 94 | 105 | 109 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/21/13 | 90 | 104 | 103 | 105 | Pass | Pass | Pass | Pass |
| LCS 20 | 05/21/13 | 91 | 98 | 104 | 107 | Pass | Pass | Pass | Pass |
| METHOD BLANK | 05/21/13 | 94 | 101 | 102 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0242-058.0 | 05/21/13 | 93 | 98 | 112 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0242-043.0 1:100 | 05/21/13 | 91 | 96 | 114 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0243-018.0 | 05/21/13 | 92 | 97 | 106 | 114 | Pass | Pass | Pass | Pass |
| CRHE-DPT0243-023.0 | 05/21/13 | 93 | 97 | 103 | 107 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 12-163 |
| **On-site Dates**: 5/21/13-5/24/13 | **Client Project Manager**: Lauren Petty | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0243-028.0 | 05/21/13 | 94 | 99 | 106 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0243-033.0 1:50 | 05/21/13 | 91 | 99 | 102 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0243-038.0 1:50 | 05/21/13 | 87 | 104 | 95 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0243-043.0 1:50 | 05/21/13 | 93 | 100 | 104 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0243-048.0 1:50 | 05/21/13 | 92 | 98 | 104 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0243-058.0 | 05/21/13 | 93 | 99 | 107 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0244-018.0 | 05/21/13 | 91 | 91 | 114 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0244-023.0 | 05/21/13 | 95 | 99 | 111 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0244-028.0 | 05/21/13 | 90 | 95 | 103 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0244-033.0 | 05/21/13 | 94 | 104 | 102 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0244-038.0 1:50 | 05/21/13 | 96 | 101 | 103 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0244-043.0 1:100 | 05/21/13 | 93 | 101 | 108 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0244-048.0 1:50 | 05/21/13 | 93 | 101 | 103 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0244-058.0 1:5 | 05/21/13 | 92 | 100 | 100 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0242-068.0 | 05/21/13 | 93 | 99 | 102 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0245-018.0 | 05/21/13 | 98 | 102 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0245-023.0 | 05/21/13 | 95 | 101 | 103 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0243-018.0 MS | 05/21/13 | 91 | 95 | 103 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0243-018.0 MSD | 05/21/13 | 90 | 104 | 102 | 103 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/21/13 | 93 | 101 | 100 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/22/13 | 91 | 96 | 106 | 103 | Pass | Pass | Pass | Pass |
| LCS 20 | 05/22/13 | 92 | 105 | 102 | 105 | Pass | Pass | Pass | Pass |
| METHOD BLANK | 05/22/13 | 100 | 101 | 103 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0245-028.0 | 05/22/13 | 95 | 100 | 102 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0245-033.0 | 05/22/13 | 98 | 105 | 108 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0245-038.0 | 05/22/13 | 90 | 101 | 93 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0245-043.0 | 05/22/13 | 100 | 101 | 101 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0245-048.0 | 05/22/13 | 114 | 113 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0245-058.0 | 05/22/13 | 101 | 109 | 97 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0228-048.0 | 05/22/13 | 132 | 135 | 98 | 98 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0246-010.0 | 05/22/13 | 103 | 110 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0246-018.0 | 05/22/13 | 101 | 106 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0246-023.0 | 05/22/13 | 101 | 107 | 96 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0246-028.0 | 05/22/13 | 97 | 104 | 101 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0246-033.0 | 05/22/13 | 96 | 103 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0246-038.0 | 05/22/13 | 95 | 100 | 95 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0246-043.0 | 05/22/13 | 93 | 102 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0246-058.0 | 05/22/13 | 98 | 109 | 96 | 96 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 12-163 |
| **On-site Dates**: 5/21/13-5/24/13 | **Client Project Manager**: Lauren Petty | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0245-038.0 1:50 | 05/22/13 | 95 | 109 | 95 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0245-043.0 1:50 | 05/22/13 | 99 | 110 | 98 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0245-048.0 1:50 | 05/22/13 | 101 | 110 | 99 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0228-048.0 1:100 | 05/22/13 | 100 | 111 | 100 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0246-010.0 RPT | 05/22/13 | 95 | 102 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0247-010.0 | 05/22/13 | 97 | 108 | 99 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0247-018.0 1:100 | 05/22/13 | 116 | 121 | 96 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0247-023.0 1:500 | 05/22/13 | 104 | 110 | 98 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0247-028.0 1:50 | 05/22/13 | 98 | 109 | 100 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0247-033.0 1:100 | 05/22/13 | 105 | 109 | 98 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0247-038.0 1:1000 | 05/22/13 | 103 | 108 | 100 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0247-043.0 1:100 | 05/22/13 | 98 | 107 | 101 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0247-058.0 1:10 | 05/22/13 | 101 | 110 | 101 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0248-010.0 | 05/22/13 | 97 | 105 | 100 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0248-018.0 | 05/22/13 | 96 | 103 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0248-023.0 | 05/22/13 | 101 | 109 | 100 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0248-028.0 | 05/22/13 | 96 | 104 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0248-033.0 | 05/22/13 | 97 | 104 | 101 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0248-038.0 | 05/22/13 | 100 | 103 | 103 | 113 | Pass | Pass | Pass | Pass |
| CRHE-DPT0248-043.0 | 05/22/13 | 94 | 102 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0248-058.0 | 05/22/13 | 92 | 101 | 101 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0246-043.0 MS | 05/22/13 | 94 | 100 | 104 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0246-043.0 MSD | 05/22/13 | 93 | 98 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0246-058.0 MS | 05/22/13 | 95 | 102 | 102 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0246-058.0 MSD | 05/22/13 | 100 | 104 | 109 | 104 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/22/13 | 88 | 97 | 111 | 115 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/23/13 | 96 | 101 | 102 | 105 | Pass | Pass | Pass | Pass |
| LCS 20 | 05/23/13 | 94 | 110 | 106 | 107 | Pass | Pass | Pass | Pass |
| METHOD BLANK | 05/23/13 | 97 | 101 | 102 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0247-018.0 1:200 | 05/23/13 | 99 | 109 | 107 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0247-023.0 1:1000 | 05/23/13 | 92 | 105 | 105 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0247-028.0 1:100 | 05/23/13 | 103 | 114 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0247-043.0 1:500 | 05/23/13 | 102 | 113 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0226-048.0 1:10 | 05/23/13 | 112 | 117 | 93 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0244-068.0 | 05/23/13 | 100 | 111 | 96 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0231-048.0 | 05/23/13 | 131 | 138 | 99 | 93 | > UCL | > UCL | Pass | Pass |
| CRHE-DPT0230-048.0 | 05/23/13 | 122 | 121 | 96 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0249-010.0 | 05/23/13 | 102 | 116 | 99 | 93 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 12-163 |
| **On-site Dates**: 5/21/13-5/24/13 | **Client Project Manager**: Lauren Petty | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0249-018.0 | 05/23/13 | 101 | 117 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0249-023.0 | 05/23/13 | 108 | 117 | 97 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0249-028.0 | 05/23/13 | 107 | 117 | 98 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0226-048.0 1:100 | 05/23/13 | 100 | 118 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0231-048.0 1:100 | 05/23/13 | 105 | 120 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0230-048.0 1:50 | 05/23/13 | 99 | 114 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0249-010.0 RPT | 05/23/13 | 111 | 119 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0249-033.0 | 05/23/13 | 106 | 116 | 98 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0249-038.0 | 05/23/13 | 110 | 114 | 96 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0249-043.0 | 05/23/13 | 103 | 115 | 98 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0249-058.0 | 05/23/13 | 103 | 112 | 97 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0247-068.0 | 05/23/13 | 104 | 117 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0250-010.0 | 05/23/13 | 106 | 114 | 96 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0250-018.0 | 05/23/13 | 108 | 114 | 96 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0250-023.0 | 05/23/13 | 103 | 109 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0250-028.0 | 05/23/13 | 100 | 114 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0250-033.0 | 05/23/13 | 105 | 115 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0250-038.0 | 05/23/13 | 102 | 112 | 95 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0250-043.0 | 05/23/13 | 125 | 125 | 97 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0250-058.0 | 05/23/13 | 100 | 109 | 97 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0251-010.0 | 05/23/13 | 98 | 112 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0251-018.0 | 05/23/13 | 100 | 112 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0251-023.0 | 05/23/13 | 99 | 108 | 102 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0251-028.0 | 05/23/13 | 99 | 108 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0251-033.0 | 05/23/13 | 96 | 104 | 101 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0251-038.0 | 05/23/13 | 99 | 105 | 100 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0251-043.0 | 05/23/13 | 97 | 102 | 102 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0251-058.0 | 05/23/13 | 95 | 102 | 104 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0249-043.0 MS | 05/23/13 | 95 | 98 | 104 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0249-043.0 MSD | 05/23/13 | 96 | 109 | 96 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0249-058.0 MS | 05/23/13 | 96 | 111 | 104 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0249-058.0 MSD | 05/23/13 | 94 | 102 | 105 | 107 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/23/13 | 97 | 104 | 102 | 106 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/24/13 | 102 | 108 | 109 | 103 | Pass | Pass | Pass | Pass |
| LCS 20 | 05/24/13 | 98 | 105 | 98 | 106 | Pass | Pass | Pass | Pass |
| METHOD BLANK | 05/24/13 | 97 | 104 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0250-058.0 RPT | 05/24/13 | 101 | 105 | 96 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0250-043.0 1:100 | 05/24/13 | 100 | 108 | 106 | 106 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 12-163 |
| **On-site Dates**: 5/21/13-5/24/13 | **Client Project Manager**: Lauren Petty | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0252-058.0 | 05/24/13 | 100 | 109 | 106 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0252-043.0 | 05/24/13 | 102 | 112 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0251-038.0 1:20 | 05/24/13 | 104 | 110 | 98 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0252-010.0 | 05/24/13 | 102 | 115 | 104 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0252-018.0 | 05/24/13 | 101 | 109 | 105 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0252-023.0 | 05/24/13 | 106 | 120 | 93 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0252-028.0 | 05/24/13 | 107 | 119 | 96 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0252-033.0 | 05/24/13 | 106 | 116 | 91 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0252-038.0 | 05/24/13 | 108 | 124 | 93 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0252-058.0 MS | 05/24/13 | 109 | 127 | 95 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0252-058.0 MSD | 05/24/13 | 113 | 124 | 94 | 95 | Pass | Pass | Pass | Pass |
| CRHE-IDW190492 1:10 | 05/24/13 | 106 | 125 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-IDW190491 1:10 | 05/24/13 | 110 | 124 | 93 | 95 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/24/13 | 124 | 127 | 94 | 94 | Pass | Pass | Pass | Pass |

**Comments:** Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data.

***Surrogate Compounds:**
S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 12-163 |
| **Onsite Dates:** 5/21/13-5/24/13 | **Client Project Manager:** Lauren Petty | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0240-058.0 **Date of Analysis:** 5/20/2013

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 84 | 81 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 137 | 122 | 12 | > UCL | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 116 | 109 | 7 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 107 | 105 | 2 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 130 | 127 | 2 | > UCL | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 142 | 146 | 3 | > UCL | > UCL | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0241-010.0 **Date of Analysis:** 5/20/2013

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 79 | 79 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 137 | 115 | 17 | > UCL | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 111 | 103 | 7 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 107 | 106 | 1 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 127 | 125 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 145 | 140 | 3 | > UCL | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0243-018.0 **Date of Analysis:** 5/21/2013

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 76 | 70 | 8 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 128 | 121 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 110 | 100 | 9 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 109 | 99 | 9 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 131 | 118 | 10 | > UCL | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 146 | 134 | 9 | > UCL | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0246-043.0 **Date of Analysis:** 5/22/2013

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 78 | 72 | 8 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 134 | 127 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 119 | 100 | 17 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 112 | 104 | 8 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 142 | 126 | 12 | > UCL | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 150 | 141 | 6 | > UCL | > UCL | Pass |

**Note:**

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 12-163 |
| **Onsite Dates:** 5/21/13-5/24/13 | **Client Project Manager:** Lauren Petty | **Matrix**: Water |

**Samples:** CRHE-DPT0246-058.0 **Date of Analysis:** 5/22/2013

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 74 | 85 | 13 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 130 | 145 | 11 | Pass | > UCL | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 111 | 110 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 103 | 114 | 9 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 123 | 131 | 6 | Pass | > UCL | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 145 | 142 | 2 | > UCL | > UCL | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0249-043.0 **Date of Analysis:** 5/23/2013

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 84 | 86 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 143 | 149 | 5 | > UCL | > UCL | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 113 | 117 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 112 | 111 | 1 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 134 | 134 | 1 | > UCL | > UCL | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 163 | 153 | 6 | > UCL | > UCL | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0249-058.0 **Date of Analysis:** 5/23/2013

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 88 | 84 | 5 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 143 | 145 | 2 | > UCL | > UCL | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 119 | 115 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 114 | 108 | 5 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 138 | 133 | 4 | > UCL | > UCL | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 157 | 161 | 3 | > UCL | > UCL | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0252-058.0 **Date of Analysis:** 5/24/2013

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 74 | 85 | 13 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 91 | 112 | 21 | Pass | Pass | > RPDL |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 120 | 113 | 6 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 114 | 121 | 6 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 121 | 129 | 7 | Pass | > UCL | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 130 | 136 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 12-163 |
| **Onsite Dates:** 5/21/13-5/24/13 | **Client Project Manager:** Lauren Petty | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 — **Date of Analysis:** 5/20/2013
LCS 2 — 5/21/2013
LCS 3 — 5/22/2013

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS 1 | LCS 2 | LCS 3 | LCS 1 | LCS 2 | LCS 3 |
| Vinyl Chloride | 58 | to | 135 | 87 | 80 | 82 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 60 | to | 141 | 132 | 126 | 116 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 108 | 97 | 93 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 103 | 102 | 96 | Pass | Pass | Pass |
| Trichloroethene | 68 | to | 128 | 131 | 117 | 111 | > UCL | Pass | Pass |
| Tetrachloroethene | 67 | to | 135 | 142 | 137 | 128 | > UCL | > UCL | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 — **Date of Analysis:** 5/23/2013
LCS 5 — 5/24/2013

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS 4 | LCS 5 | | LCS 4 | LCS 5 | |
| Vinyl Chloride | 58 | to | 135 | 68 | 80 | | Pass | Pass | |
| 1,1-Dichloroethene | 60 | to | 141 | 126 | 138 | | Pass | Pass | |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 96 | 111 | | Pass | Pass | |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 99 | 109 | | Pass | Pass | |
| Trichloroethene | 68 | to | 128 | 114 | 125 | | Pass | Pass | |
| Tetrachloroethene | 67 | to | 135 | 143 | 143 | | > UCL | > UCL | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Field Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0240-010.0-20130520 | 5/20/2013 | 09:36 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0240-018.0-20130520 | 5/20/2013 | 09:50 | Water | 1 | **0.45 I** | 0.30 U | 0.29 U | **0.41 I** | 0.19 U | 0.23 U |
| CRHE-DPT0240-023.0-20130520 | 5/20/2013 | 10:02 | Water | 1 | **1.0** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0240-028.0-20130520 | 5/20/2013 | 10:12 | Water | 1 | **0.31 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0240-033.0-20130520 | 5/20/2013 | 10:26 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0240-038.0-20130520 | 5/20/2013 | 10:36 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0240-043.0-20130520 | 5/20/2013 | 10:46 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0240-058.0-20130520 | 5/20/2013 | 10:56 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0241-010.0-20130520 | 5/20/2013 | 11:40 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0241-018.0-20130520 | 5/20/2013 | 11:50 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0241-023.0-20130520 | 5/20/2013 | 12:45 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0241-028.0-20130520 | 5/20/2013 | 12:56 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0241-033.0-20130520 | 5/20/2013 | 13:06 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0241-038.0-20130520 | 5/20/2013 | 13:16 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0241-043.0-20130520 | 5/20/2013 | 13:26 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0241-058.0-20130520 | 5/20/2013 | 13:46 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Field Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0242-018.0-20130520 | 5/20/2013 | 14:40 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0242-023.0-20130520 | 5/20/2013 | 14:50 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0242-028.0-20130520 | 5/20/2013 | 15:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0242-033.0-20130520 | 5/20/2013 | 15:10 | Water | 1 | **0.28 I** | 0.30 U | 0.29 U | **2.6** | 0.19 U | 0.23 U |
| CRHE-DPT0242-038.0-20130520 | 5/20/2013 | 15:42 | Water | 1 | **8.9** | 0.30 U | **1.6** | **3.6** | 0.19 U | 0.23 U |
| CRHE-DPT0242-043.0-20130520 | 5/20/2013 | 15:52 | Water | 50, 100 | **3400** | **16 I** | **310** | **3300** | **18 I** | 12 U |
| CRHE-DPT0242-048.0-20130520 | 5/20/2013 | 16:02 | Water | 50 | **420** | 15 U | **190** | **5200** | **1800** | 12 U |
| CRHE-DPT0242-058.0-20130520 | 5/21/2013 | 16:30 | Water | 1 | **1.9** | 0.30 U | **0.88 I** | **30.8** | **9.5** | 0.23 U |
| CRHE-DPT0242-068.0-20130521 | 5/21/2013 | 14:35 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **3.2** | **1.0** | 0.23 U |
| CRHE-DPT0243-018.0-20130521 | 5/21/2013 | 08:15 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.44 I** | 0.19 U | 0.23 U |
| CRHE-DPT0243-023.0-20130521 | 5/21/2013 | 08:26 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0243-028.0-20130521 | 5/21/2013 | 08:36 | Water | 1 | **0.92 I** | 0.30 U | **1.3** | **1.4** | **1.5** | 0.23 U |
| CRHE-DPT0243-033.0-20130521 | 5/21/2013 | 08:46 | Water | 50 | **1100** | 15 U | **63** | **560** | 9.5 U | 12 U |
| CRHE-DPT0243-038.0-20130521 | 5/21/2013 | 08:56 | Water | 50 | **510** | 15 U | **86** | **2600** | 9.5 U | 12 U |
| CRHE-DPT0243-043.0-20130521 | 5/21/2013 | 09:06 | Water | 50 | **330** | 15 U | **140** | **4900** | **130** | 12 U |
| CRHE-DPT0243-048.0-20130521 | 5/21/2013 | 09:16 | Water | 50 | **270** | 15 U | **110** | **3700** | **480** | 12 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Field Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0243-058.0-20130521 | 5/21/2013 | 09:56 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **2.3** | 0.19 U | 0.23 U |
| CRHE-DPT0244-018.0-20130521 | 5/21/2013 | 12:15 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0244-023.0-20130521 | 5/21/2013 | 12:26 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0244-028.0-20130521 | 5/21/2013 | 12:36 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0244-033.0-20130521 | 5/21/2013 | 12:50 | Water | 1 | 0.26 U | 0.30 U | **0.62 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0244-038.0-20130521 | 5/21/2013 | 13:02 | Water | 50 | **990** | 15 U | **120** | **5000** | **25 I** | 12 U |
| CRHE-DPT0244-043.0-20130521 | 5/21/2013 | 13:12 | Water | 100 | **840** | 30 U | **240** | **9000** | **1100** | 23 U |
| CRHE-DPT0244-048.0-20130521 | 5/21/2013 | 13:26 | Water | 50 | **590** | 15 U | **180** | **5700** | **1100** | 12 U |
| CRHE-DPT0244-058.0-20130521 | 5/21/2013 | 13:36 | Water | 5 | **10** | 1.5 U | **3.0 I** | **110** | **11** | 1.2 U |
| CRHE-DPT0245-018.0-20130521 | 5/21/2013 | 15:15 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0245-023.0-20130521 | 5/21/2013 | 15:26 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0245-028.0-20130522 | 5/22/2013 | 07:30 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0245-033.0-20130522 | 5/22/2013 | 07:42 | Water | 1 | **1.5** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0245-038.0-20130522 | 5/22/2013 | 07:56 | Water | 1, 50 | **2400** | 0.30 U | **11.0** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0245-043.0-20130522 | 5/22/2013 | 08:10 | Water | 1, 50 | **1300** | **5.4** | **31.2** | **760** | **110** | 0.23 U |
| CRHE-DPT0245-048.0-20130522 | 5/22/2013 | 08:24 | Water | 1, 50 | **940** | **5.1** | **44.2** | **1300** | **110** | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Field Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0245-058.0-20130522 | 5/22/2013 | 08:34 | Water | 1 | **6.5** | 0.30 U | **0.33 I** | **12.4** | 0.19 U | 0.23 U |
| CRHE-DPT0228-048.0-20130522 | 5/22/2013 | 09:10 | Water | 1, 100 | **760** | **12.2** | **300** | **8100** | **2600** | 0.23 U |
| CRHE-DPT0246-010.0-20130522 | 5/22/2013 | 09:36 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **1.1** | 0.19 U | 0.23 U |
| CRHE-DPT0246-018.0-20130522 | 5/22/2013 | 09:46 | Water | 1 | **0.33 I** | 0.30 U | 0.29 U | **4.9** | **1.4** | 0.23 U |
| CRHE-DPT0246-023.0-20130522 | 5/22/2013 | 09:58 | Water | 1 | **0.41 I** | 0.30 U | 0.29 U | **1.8** | **0.45 I** | 0.23 U |
| CRHE-DPT0246-028.0-20130522 | 5/22/2013 | 10:10 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.80 I** | 0.19 U | 0.23 U |
| CRHE-DPT0246-033.0-20130522 | 5/22/2013 | 10:20 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.51 I** | 0.19 U | 0.23 U |
| CRHE-DPT0246-038.0-20130522 | 5/22/2013 | 10:30 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.45 I** | 0.19 U | 0.23 U |
| CRHE-DPT0246-043.0-20130522 | 5/22/2013 | 10:40 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.35 I** | 0.19 U | 0.23 U |
| CRHE-DPT0246-058.0-20130522 | 5/22/2013 | 10:50 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0247-010.0-20130522 | 5/22/2013 | 11:16 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0247-018.0-20130522 | 5/22/2013 | 11:26 | Water | 100, 200 | **1200** | 30 U | **430** | **12000** | 19 U | 23 U |
| CRHE-DPT0247-023.0-20130522 | 5/22/2013 | 11:36 | Water | 500, 1000 | **3200** | 150 U | **2300** | **53000** | **450 I** | 120 U |
| CRHE-DPT0247-028.0-20130522 | 5/22/2013 | 11:46 | Water | 50, 100 | **2600** | 15 U | **250** | **2800** | **16 I** | 12 U |
| CRHE-DPT0247-033.0-20130522 | 5/22/2013 | 11:56 | Water | 100 | **580** | 30 U | **170** | **10000** | **5100** | 23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Field Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0247-038.0-20130522 | 5/22/2013 | 12:06 | Water | 1000 | **5800** | 300 U | **580 I** | **55000** | **81000** | 230 U |
| CRHE-DPT0247-043.0-20130522 | 5/22/2013 | 12:16 | Water | 100, 500 | **1500** | 30 U | **110** | **15000** | **19000** | 23 U |
| CRHE-DPT0247-058.0-20130522 | 5/22/2013 | 12:26 | Water | 10 | **34** | 3.0 U | **9.0 I** | **920** | **750** | 2.3 U |
| CRHE-DPT0248-010.0-20130522 | 5/22/2013 | 14:16 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.64 I** | **0.41 I** | 0.23 U |
| CRHE-DPT0248-018.0-20130522 | 5/22/2013 | 14:28 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0248-023.0-20130522 | 5/22/2013 | 14:39 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **1.5** | **1.2** | 0.23 U |
| CRHE-DPT0248-028.0-20130522 | 5/22/2013 | 14:50 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **6.3** | **9.2** | 0.23 U |
| CRHE-DPT0248-033.0-20130522 | 5/22/2013 | 15:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.31 I** | **0.47 I** | 0.23 U |
| CRHE-DPT0248-038.0-20130522 | 5/22/2013 | 15:10 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **3.0** | 0.19 U | 0.23 U |
| CRHE-DPT0248-043.0-20130522 | 5/22/2013 | 15:20 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0248-058.0-20130522 | 5/22/2013 | 15:32 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **1.5** | **2.3** | 0.23 U |
| CRHE-DPT0226-048.0-20130523 | 5/23/2013 | 08:00 | Water | 10, 100 | **140** | 3.0 U | **37** | **1700** | **32** | 2.3 U |
| CRHE-DPT0244-068.0-20130523 | 5/23/2013 | 08:40 | Water | 1 | **0.58 I** | 0.30 U | 0.29 U | **7.4** | **0.74 I** | 0.23 U |
| CRHE-DPT0231-048.0-20130523 | 5/23/2013 | 09:10 | Water | 1, 100 | **590** | **6.3** | **200** | **6100** | **990** | 0.23 U |
| CRHE-DPT0230-048.0-20130523 | 5/23/2013 | 10:02 | Water | 1, 50 | **94.5** | **1.0** | **28.6** | **810** | **10.2** | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Field Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0249-010.0-20130523 | 5/23/2013 | 10:38 | Water | 1 | **0.45 I** | 0.30 U | 0.29 U | **0.63 I** | 0.19 U | 0.23 U |
| CRHE-DPT0249-018.0-20130523 | 5/23/2013 | 10:48 | Water | 1 | **23.5** | 0.30 U | 0.29 U | **3.4** | **0.55 I** | 0.23 U |
| CRHE-DPT0249-023.0-20130523 | 5/23/2013 | 11:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **2.3** | **0.53 I** | 0.23 U |
| CRHE-DPT0249-028.0-20130523 | 5/23/2013 | 11:08 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | **0.66 I** | 0.23 U |
| CRHE-DPT0249-033.0-20130523 | 5/23/2013 | 11:24 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0249-038.0-20130523 | 5/23/2013 | 11:36 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0249-043.0-20130523 | 5/23/2013 | 11:48 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0249-058.0-20130523 | 5/23/2013 | 12:04 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0247-068.0-20130523 | 5/23/2013 | 13:20 | Water | 1 | **1.0** | 0.30 U | 0.29 U | **20.4** | **28.2** | 0.23 U |
| CRHE-DPT0250-010.0-20130523 | 5/23/2013 | 13:52 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.40 I** | 0.19 U | 0.23 U |
| CRHE-DPT0250-018.0-20130523 | 5/23/2013 | 14:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0250-023.0-20130523 | 5/23/2013 | 14:08 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0250-028.0-20130523 | 5/23/2013 | 14:18 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0250-033.0-20130523 | 5/23/2013 | 14:30 | Water | 1 | **2.3** | 0.30 U | 0.29 U | **0.64 I** | 0.19 U | 0.23 U |
| CRHE-DPT0250-038.0-20130523 | 5/23/2013 | 14:44 | Water | 1 | **23.8** | 0.30 U | **0.47 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0250-043.0-20130523 | 5/23/2013 | 14:56 | Water | 1, 100 | **1200** | **3.7** | **58.8** | **2100** | **1.1** | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Field Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0250-058.0-20130523 | 5/23/2013 | 15:12 | Water | 1 | **3.4** | 0.30 U | 0.29 U | **6.8** | 0.19 U | 0.23 U |
| CRHE-DPT0251-010.0-20130523 | 5/23/2013 | 15:51 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **1.0** | 0.19 U | 0.23 U |
| CRHE-DPT0251-018.0-20130523 | 5/23/2013 | 16:01 | Water | 1 | **1.9** | 0.30 U | 0.29 U | **2.4** | **0.54 I** | 0.23 U |
| CRHE-DPT0251-023.0-20130523 | 5/23/2013 | 16:10 | Water | 1 | **1.2** | 0.30 U | 0.29 U | **0.54 I** | 0.19 U | 0.23 U |
| CRHE-DPT0251-028.0-20130523 | 5/23/2013 | 16:20 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0251-033.0-20130523 | 5/23/2013 | 16:28 | Water | 1 | **97.5** | 0.30 U | **7.7** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0251-038.0-20130523 | 5/23/2013 | 16:35 | Water | 1, 20 | **570** | 0.30 U | **33.9** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0251-043.0-20130523 | 5/23/2013 | 16:52 | Water | 1 | **7.2** | 0.30 U | **0.59 I** | **1.5** | 0.19 U | 0.23 U |
| CRHE-DPT0251-058.0-20130523 | 5/23/2013 | 17:04 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0252-010.0-20130524 | 5/24/2013 | 07:49 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0252-018.0-20130524 | 5/24/2013 | 07:59 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0252-023.0-20130524 | 5/24/2013 | 08:08 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0252-028.0-20130524 | 5/24/2013 | 08:18 | Water | 1 | **0.48 I** | 0.30 U | 0.29 U | **0.92 I** | 0.19 U | 0.23 U |
| CRHE-DPT0252-033.0-20130524 | 5/24/2013 | 08:31 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0252-038.0-20130524 | 5/24/2013 | 08:44 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0252-043.0-20130524 | 5/24/2013 | 08:57 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Field Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0252-058.0-20130524 | 5/24/2013 | 09:12 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-IDW190492-20130524 | 5/24/2013 | 13:10 | Water | 10 | **16** | 3.0 U | **3.8 I** | **100** | **7.6 I** | 2.3 U |
| CRHE-IDW190491-20130524 | 5/24/2013 | 13:15 | Water | 10 | **53** | 3.0 U | **17** | **850** | **320** | 2.3 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB 3

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | CRHE KSC, FL | |
| SAMPLERS | CONTACT PERSON: Claire | BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER 20130520 | DATE SAMPLED | TIME SAMPLED | COMP | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: surf. los | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| RHE DPT0240 - 010.0 | 5/20/13 | 0436 | | ✓ | 5/20/13 | 1018 | | W | 2 | ✓ | |
| -018.0 | | 0450 | | | | | | | | | |
| -023.0 | | 1002 | | | | | | | | | |
| -028.0 | | 1012 | | | | ↓ | | | | | |
| -033.0 | | 1026 | | | | 1135 | | | | | |
| -038.0 | | 1036 | | | | | | | | | |
| -043.0 | | 1046 | | | | | | | | | |
| -058.0 | | 1056 | | | | ↓ | | | | | |
| DPT0241- 010.0 | | 1140 | | | | 1330 | | | | | |
| -018 | | 1150 | | | | | | | | | |
| -023 | | 1245 | | | | | | | | | |
| -028 | | 1256 | | | | | | | | | |
| -033 | | 1306 | | | | | | | | | |
| -038 | | 1316 | | | | | | | | | |
| -043 | ↓ | 1326 | | ↓ | ↓ | 1510 | | ↓ | ↓ | ↓ | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time: 5/20/13 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE KSC, FL

SAMPLERS

CONTACT PERSON: Claire

BATCH # (Lab Use Only)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: Jar Tot Ks

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|
| CRTE DPT0241-058 | 5/20/13 | 1346 | | ✓ | 5/20/13 | 1510 | | W | 2 | ✓ |
| DPT0242-018 | | 1440 | | | | ~~1510~~ | | | | |
| -023 | | 1450 | | | | | | | | |
| -028 | | 1500 | | | | | | | | |
| -033 | | 1510 | | | | 1605 | | | | |
| -038 | | 1542 | | | | | | | | |
| -043 | | 1552 | | | | | | | | |
| -048 | | 1602 | | | | | | | | |
| -058 | | 1630 | | | | | | | | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | | |
| Relinquished by: (Signature) | | Received by: (Signature) | 5/20/13 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Raleigh, NC 27607
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**MOBILE UNIT #**

| CLIENT NAME | PROJECT NAME & ADDRESS | | BATCH # (Lab Use Only) |
|---|---|---|---|
| Coosyntec | CRHE KSC, FL | | |
| SAMPLERS | CONTACT PERSON | | |
| | Claire | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: U0 1of1 105

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| | SAMPLE FIELD ID.\ NUMBER 20130521 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | | | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE | DPT0243-018 | 5/21/13 | 0815 | | ✓ | 5/24/13 | 0910 | | W | 2 | ✓ | | | | | |
| | -023 | | 0826 | | | | | | | | | | | | | |
| | -028 | | 0836 | | | | | | | | | | | | | |
| | -033 | | 0846 | | | | | | | | | | | | | |
| | -039 | | 0856 | | | | 1050 | | | | | | | | | |
| | -043 | | 0906 | | | | | | | | | | | | | |
| | -048 | | 0916 | | | | | | | | | | | | | |
| | -058 | | 0956 | | | | | | | | | | | | | |
| | DPT0244-018 | | 1215 | | | | 1320 | | | | | | | | | |
| | -023 | | 1226 | | | | | | | | | | | | | |
| | -028 | | 1236 | | | | | | | | | | | | | |
| | -033 | | 1250 | | | | | | | | | | | | | |
| | -038 | | 1302 | | | | | | | | | | | | | |
| | -043 | | 1312 | | | | | | | | | | | | | |
| | -048 | | 1326 | | | | 1535 | | | | | | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 5/24/13 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Gainesville, FL 32608
TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | CRHE | KSC, FL |
| **SAMPLERS** | **CONTACT PERSON** | **BATCH # (Lab Use Only)** |
| | Claire | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: Volatiles | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20130521 | | | | | | | | | | | |
| CRHE | DPT0244-058 | 5/21/13 | 1336 | | - | 5/21/13 | 1535 | | W | 2 | ✓ | |
| | DPT0242-068 | | 1435 | | | | | | | | | |
| | DPT0245-018 | | 1515 | | | | | | | | | |
| | -023 | | 1526 | | | | | | | | | |
| | -028 | 5/22/13 | 0730 | | | 5/22/13 | 0830 | | | | | |
| | -033 | | 0742 | | | | | | | | | |
| | -038 | | 0756 | | | | | | | | | |
| | -043 | | 0810 | | | | | | | | | |
| | -048 | | 0824 | | | | | | | | | |
| | -058 | | 0834 | | | | 1010 | | | | | |
| | DPT0228-048 | | 0910 | | | | | | | | | |
| | DPT0246-010 | | 0936 | | | | | | | | | |
| | -018 | | 0946 | | | | | | | | | |
| | -023 | | 0958 | | | | | | | | | |
| | -028 | | 1010 | | | | | | | | | |

| | | | |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time: 5/22/13 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (352) 367-0073 · FAX (352) 378-6491

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TEL (352) 538-6507

**MOBILE UNIT #** K83

| CLIENT NAME | PROJECT NAME & ADDRESS | | SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |
|---|---|---|---|---|---|
| Geosyntec | CRHE | KSC, FL | | Claire | |

**PRESERVATION**: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: V. Lt. Ice | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20130522 | | | | | | | | | | | |
| CRHE DPT0246 -033 | 5/22/13 | 1020 | | ✓ | 5/22/13 | 1010 | | W | 2 | ✓ | |
| -038 | | 1030 | | | | 1140 | | | | | |
| -043 | | 1040 | | | | | | | | | |
| -058 | | 1050 | | | | | | | | | |
| DPT0247-010 | | 1116 | | | | | | | | | |
| -018 | | 1126 | | | | | | | | | |
| -023 | | 1136 | | | | | | | | | |
| -028 | | 1146 | | | | 1320 | | | | | |
| -033 | | 1156 | | | | | | | | | |
| -038 | | 1206 | | | | | | | | | |
| -043 | | 1216 | | | | | | | | | |
| -058 | | 1226 | | | | | | | | | |
| DPT0248-010 | | 1416 | | | | 1540 | | | | | |
| -018 | | 1428 | | | | | | | | | |
| -023 | | 1439 | | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>5/22/13 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE KSC, FL

SAMPLERS

CONTACT PERSON: Claire

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 1/4 1/4 1/4 1/4

| SAMPLE FIELD ID.\ NUMBER L0130522 | DATE SAMPLED | TIME SAMPLED | COMP | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|
| CRTE DPT0248 -028 | 5/22/13 | 1450 | | ✓ | 5/22/13 | 1540 | | W | 2 | |
| -033 | | 1500 | | | | | | | | |
| -039 | | 1510 | | | | | | | | |
| -043 | | 1520 | | | | | | | | |
| -058 | | 1532 | | | | | | | | |
| DPT0226 -048 | 5/23/13 | 0800 | | | 5/23/13 | 1030 | | | | |
| 0244 -068 | | 0840 | | | | | | | | |
| 0231 -048 | | 0910 | | | | | | | | |
| 0230 -048 | | 1002 | | | | | | | | |
| DPT0249 -010 | | 1038 | | | | 1115 | | | | |
| -018 | | 1048 | | | | | | | | |
| -023 | | 1100 | | | | | | | | |
| -028 | | 1108 | | | | | | | | |
| -033 | | 1124 | | | | 1410 | | | | |
| -038 | | 1136 | | | | 1410 | | | | |

| | | | |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time: 5/23/13 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB 3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON: Claire

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| | SAMPLE FIELD ID.\ NUMBER 20130523 | DATE SAMPLED | TIME SAMPLED | COMP | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOCs | 1,4-dioxane | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE | DPT0249-043 | 5/23/13 | 1140 | | ✓ | 5/23/13 | 1410 | | W | 2 | ✓ | | | | | |
| | -058 | | 1204 | | | | | | | | | | | | | |
| | DPT0247-068 | | 1320 | | | | | | | | | | | | | |
| | DPT0250-010 | | 1352 | | | | | | | | | | | | | |
| | -018 | | 1400 | | | | | | | | | | | | | |
| | -023 | | 1409 | | | | 1500 | | | | | | | | | |
| | -028 | | 1418 | | | | | | | | | | | | | |
| | -033 | | 1430 | | | | | | | | | | | | | |
| | -038 | | 1444 | | | | | | | | | | | | | |
| | -043 | | 1456 | | | | | | | | | | | | | |
| | -058 | | 1512 | | | | 1630 | | | | | | | | | |
| | DPT0251-010 | | 1551 | | | | | | | | | | | | | |
| | -018 | | 1601 | | | | | | | | | | | | | |
| | -023 | | 1610 | | | | | | | | | | | | | |
| | -028 | | 1620 | | | | | | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time: 5/23/13 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (352) 538-6507

**MOBILE UNIT #**

| CLIENT NAME | PROJECT NAME & ADDRESS | | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS | PRESERVATION |
|---|---|---|---|---|---|---|
| Geosyntec | CRTE KSC, FL | | | | | C Chilled<br>H HCL<br>Ot Other (see Remarks) |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) | | | | |
| | Claire | | | | | |

| | SAMPLE FIELD ID.\ NUMBER 20130523 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOC's | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRTE | DPT0251-033 | 5/23/13 | 1628 | | ✓ | 5/23/13 | 1630 | | W | 2 | ✓ | |
| | -038 | | 1635 | | | | 1705 | | | | | |
| | -043 | | 1652 | | | | ↓ | | | | | |
| | -058 | | 1704 | | | | | | | | | |
| | DPT0252-010 | 5/24/13 | 0749 | | | 5/24/13 | 0835 | | | | | |
| | -018 | | 0759 | | | | | | | | | |
| | -023 | | 0808 | | | | | | | | | |
| | -028 | | 0818 | | | | | | | | | |
| | -033 | | 0831 | | | | ↓ | | | | | |
| | -039 | | 0844 | | | | 0915 | | | | | |
| | -043 | | 0857 | | | | ↓ | | | | | |
| | -058 | | 0912 | | | | | | | | | |
| | IDW190492 | | 1310 | | | | 1345 | | | | | |
| | IDW190491 | | 1315 | | | | 1345 | | | | | |
| | | ↓ | | | | ↓ | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>5/24/13 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**6821 SW Archer Road**
**Gainesville, FL 32608**
***Telephone* (352) 367-0073**
***Fax* (352) 378-6491**
www.kbmobilelabs.com

June 6, 2013

Lauren Petty
Geosyntec Consultants
316 South Baylen Street
Pensacola, FL 32502

**RE: NASA CRHE, KSC, FL - Final Data Report- KB3**
**KB Labs Project # 13-83**

Dear Ms. Petty:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

*KB Labs, Inc.*
*6821 SW Archer Road*
*Gainesville, FL 32608*
*Phone: 352-367-0073*
*Fax: 352-378-6491*
*www.kbmobilelabs.com*

# PROJECT NARRATIVE

## Project Scope

From June 3 to 6, 2013, a total of 59 water samples were analyzed for Geosyntec Consultants at NASA CRHE, KSC FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB3: FDOH NELAP Certification Number E82816

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report and the results relate only to the actual samples received and analyzed in the laboratory. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example,

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*6821 SW Archer Road*
*Gainesville, FL 32608*
*Phone: 352-367-0073*
*Fax: 352-378-6491*
*www.kbmobilelabs.com*

if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0 ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

---

# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. As per Client instruction, KB Labs reports all samples to the laboratory MDL. Values between the PQL and MDL are reported with an I FDEP Data Qualifier.

3. Vinyl chloride result for sample ID DPT059-043.0 was changed from 2600 ug/L to 1800 ug/L after 50X dilution on 6/6/13.

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 13-83 |
| **On-site Dates**: 6/3/13-6/6/13 | **Client Project Manager**: Lauren Petty | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| BLANK | 06/03/13 | 91 | 90 | 100 | 104 | Pass | Pass | Pass | Pass |
| VSTD 1 | 06/03/13 | 94 | 97 | 101 | 99 | Pass | Pass | Pass | Pass |
| VSTD 5 | 06/03/13 | 95 | 100 | 100 | 98 | Pass | Pass | Pass | Pass |
| VSTD 10 | 06/03/13 | 93 | 90 | 101 | 100 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/03/13 | 99 | 100 | 99 | 101 | Pass | Pass | Pass | Pass |
| VSTD 50 | 06/03/13 | 101 | 93 | 100 | 99 | Pass | Pass | Pass | Pass |
| VSTD 100 | 06/03/13 | 118 | 113 | 100 | 102 | Pass | Pass | Pass | Pass |
| BLANK | 06/03/13 | 97 | 90 | 101 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0253-038.0 1:100 | 06/03/13 | 101 | 101 | 97 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0253-018.0 | 06/03/13 | 95 | 97 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0253-023.0 | 06/03/13 | 102 | 105 | 96 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0253-028.0 | 06/03/13 | 108 | 101 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0253-033.0 | 06/03/13 | 102 | 99 | 95 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0253-043.0 1:100 | 06/03/13 | 100 | 95 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0253-048.0 1:100 | 06/03/13 | 99 | 101 | 99 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0253-058.0 | 06/03/13 | 97 | 96 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0229-048.0 1:100 | 06/03/13 | 94 | 92 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0236-048.0 1:100 | 06/03/13 | 97 | 96 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0254-018.0 | 06/03/13 | 89 | 93 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0254-023.0 | 06/03/13 | 95 | 90 | 97 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0254-028.0 | 06/03/13 | 91 | 91 | 93 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0254-033.0 | 06/03/13 | 86 | 86 | 96 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0254-038.0 | 06/03/13 | 90 | 88 | 96 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0254-043.0 | 06/03/13 | 93 | 90 | 91 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0254-048.0 1:10 | 06/03/13 | 96 | 89 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0254-058.0 | 06/03/13 | 87 | 85 | 96 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0255-018.0 | 06/03/13 | 87 | 84 | 99 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0255-023.0 | 06/03/13 | 86 | 82 | 98 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0253-018.0 MS | 06/04/13 | 86 | 84 | 103 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0253-018.0 MSD | 06/04/13 | 88 | 87 | 104 | 101 | Pass | Pass | Pass | Pass |
| LCS | 06/04/13 | 91 | 89 | 99 | 103 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/04/13 | 90 | 86 | 100 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/04/13 | 93 | 101 | 96 | 104 | Pass | Pass | Pass | Pass |
| RSTD | 06/04/13 | 90 | 90 | 96 | 106 | Pass | Pass | Pass | Pass |
| BLANK | 06/04/13 | 91 | 89 | 106 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0255-028.0 | 06/04/13 | 88 | 85 | 104 | 113 | Pass | Pass | Pass | Pass |
| CRHE-DPT0255-033.0 | 06/04/13 | 94 | 87 | 95 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0255-038.0 | 06/04/13 | 88 | 84 | 117 | 107 | Pass | Pass | > UCL | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 13-83 |
| **On-site Dates**: 6/3/13-6/6/13 | **Client Project Manager**: Lauren Petty | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0255-043.0 | 06/04/13 | 87 | 86 | 132 | 109 | Pass | Pass | > UCL | Pass |
| CRHE-DPT0253-033.0 1:5 | 06/04/13 | 88 | 85 | 108 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0254-043.0 1:20 | 06/04/13 | 59 | 50 | 108 | 109 | < LCL | < LCL | Pass | Pass |
| CRHE-DPT0254-048.0 1:50 | 06/04/13 | 91 | 90 | 102 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0255-048.0 | 06/04/13 | 95 | 98 | 99 | 161 | Pass | Pass | Pass | > UCL |
| CRHE-DPT0255-058.0 | 06/04/13 | 93 | 89 | 100 | 113 | Pass | Pass | Pass | Pass |
| CRHE-DPT0256-018.0 | 06/04/13 | 94 | 42 | 95 | 108 | Pass | < LCL | Pass | Pass |
| CRHE-DPT0256-023.0 | 06/04/13 | 107 | 107 | 95 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0256-028.0 | 06/04/13 | 101 | 109 | 89 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0256-033.0 | 06/04/13 | 103 | 104 | 93 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0256-038.0 | 06/04/13 | 97 | 105 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0256-043.0 | 06/04/13 | 100 | 102 | 92 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0256-048.0 | 06/04/13 | 100 | 106 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0256-058.0 | 06/04/13 | 102 | 106 | 93 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0257-018.0 | 06/04/13 | 99 | 104 | 102 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0257-023.0 | 06/04/13 | 95 | 102 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0257-028.0 | 06/04/13 | 95 | 104 | 103 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0257-033.0 | 06/04/13 | 98 | 99 | 104 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0257-038.0 | 06/04/13 | 100 | 104 | 54 | 100 | Pass | Pass | < LCL | Pass |
| CRHE-DPT0257-043.0 | 06/04/13 | 96 | 104 | 102 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0257-048.0 | 06/04/13 | 97 | 109 | 94 | 117 | Pass | Pass | Pass | Pass |
| CRHE-DPT0256-028.0 MS | 06/04/13 | 90 | 108 | 105 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0256-028.0 MSD | 06/04/13 | 98 | 115 | 99 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0256-058.0 MS | 06/04/13 | 96 | 101 | 103 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0256-058.0 MSD | 06/04/13 | 97 | 99 | 106 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0258-033.0 | 06/04/13 | 103 | 114 | 91 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0258-038.0 1:10 | 06/04/13 | 98 | 103 | 97 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0258-043.0 1:100 | 06/04/13 | 94 | 105 | 102 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0258-048.0 1:50 | 06/04/13 | 95 | 96 | 103 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0258-058.0 | 06/04/13 | 97 | 102 | 105 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0259-033.0 | 06/04/13 | 91 | 103 | 98 | 105 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/04/13 | 91 | 100 | 100 | 107 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/05/13 | 101 | 106 | 88 | 113 | Pass | Pass | Pass | Pass |
| RSTD 20 | 06/05/13 | 98 | 108 | 92 | 109 | Pass | Pass | Pass | Pass |
| BLANK | 06/05/13 | 96 | 103 | 96 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0258-038.0 | 06/05/13 | 95 | 100 | 103 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0258-058.0 MS | 06/05/13 | 92 | 100 | 96 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0258-058.0 MSD | 06/05/13 | 95 | 100 | 98 | 110 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 13-83 |
| **On-site Dates**: 6/3/13-6/6/13 | **Client Project Manager**: Lauren Petty | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0259-038.0 | 06/05/13 | 102 | 106 | 96 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0259-043.0 1:10 | 06/05/13 | 152 | 161 | 102 | 183 | > UCL | > UCL | Pass | > UCL |
| CRHE-DPT0259-048.0 1:20 | 06/05/13 | 97 | 104 | 100 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0259-058.0 | 06/05/13 | 98 | 102 | 95 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0259-038.0 1:20 | 06/05/13 | 95 | 102 | 102 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0260-018.0 | 06/05/13 | 100 | 111 | 100 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0260-023.0 | 06/05/13 | 97 | 106 | 98 | 112 | Pass | Pass | Pass | Pass |
| CRHE-DPT0260-028.0 | 06/05/13 | 103 | 115 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0260-033.0 | 06/05/13 | 47 | 107 | 105 | 101 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0260-038.0 | 06/05/13 | 102 | 113 | 97 | 106 | Pass | Pass | Pass | Pass |
| BLANK | 06/05/13 | 99 | 97 | 101 | 102 | Pass | Pass | Pass | Pass |
| VSTD 1 | 06/05/13 | 100 | 96 | 101 | 101 | Pass | Pass | Pass | Pass |
| VSTD 5 | 06/05/13 | 100 | 100 | 99 | 102 | Pass | Pass | Pass | Pass |
| VSTD 10 | 06/05/13 | 100 | 98 | 99 | 100 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/05/13 | 101 | 102 | 100 | 100 | Pass | Pass | Pass | Pass |
| VSTD 50 | 06/05/13 | 100 | 102 | 100 | 97 | Pass | Pass | Pass | Pass |
| VSTD 100 | 06/05/13 | 99 | 102 | 100 | 101 | Pass | Pass | Pass | Pass |
| BLANK | 06/05/13 | 99 | 99 | 101 | 107 | Pass | Pass | Pass | Pass |
| RSTD 20 | 06/05/13 | 97 | 99 | 101 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0260-043.0 | 06/06/13 | 97 | 96 | 103 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0260-058.0 | 06/06/13 | 95 | 93 | 104 | 108 | Pass | Pass | Pass | Pass |
| CRHE-IDW195117 1:10 | 06/06/13 | 97 | 98 | 103 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0259-043.0 1:50 | 06/06/13 | 99 | 96 | 103 | 105 | Pass | Pass | Pass | Pass |
| CCS 20 | 06/06/13 | 99 | 100 | 102 | 98 | Pass | Pass | Pass | Pass |

**Comments:** Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data.

***Surrogate Compounds:**
S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 13-83 |
| **Onsite Dates:** 6/3/13-6/6/13 | **Client Project Manager:** Lauren Petty | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPTt0253-018.0 **Date of Analysis:** 6/3/2013

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 89 | 96 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 115 | 125 | 9 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 88 | 97 | 11 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 81 | 90 | 10 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 91 | 97 | 7 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 98 | 101 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0256-028.0 **Date of Analysis:** 6/4/2013

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 94 | 88 | 6 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 124 | 130 | 4 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 98 | 101 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 96 | 95 | 1 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 108 | 106 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 113 | 108 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0256-058.0 **Date of Analysis:** 6/4/2013

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 61 | 15 | 122 | Pass | < LCL | > RPDL |
| 1,1-Dichloroethene | 62 | 136 | 20 | 133 | 138 | 4 | Pass | > UCL | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 104 | 101 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 104 | 100 | 5 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 104 | 106 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 110 | 116 | 6 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines. Interference for early compounds including VC.

**Samples:** CRHE-DPT0258-058.0 **Date of Analysis:** 6/4/2013

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 129 | 119 | 8 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 132 | 134 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 107 | 103 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 103 | 100 | 3 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 111 | 110 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 112 | 116 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Glenn Jackson |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 13-83 |
| **Onsite Dates:** 6/3/13-6/6/13 | **Client Project Manager:** Lauren Petty | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 — **Date of Analysis:** 6/4/2013
LCS 2 — 6/4/2013
LCS 3 — 6/5/2013

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS 1 | LCS 2 | LCS 3 | LCS 1 | LCS 2 | LCS 3 |
| Vinyl Chloride | 58 | to | 135 | 98 | 118 | 116 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 60 | to | 141 | 125 | 129 | 132 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 96 | 98 | 106 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 90 | 92 | 102 | Pass | Pass | Pass |
| Trichloroethene | 68 | to | 128 | 96 | 102 | 107 | Pass | Pass | Pass |
| Tetrachloroethene | 67 | to | 135 | 102 | 102 | 114 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 — **Date of Analysis:** 6/6/2013

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS 4 | | | LCS 4 | | |
| Vinyl Chloride | 58 | to | 135 | 110 | | | Pass | | |
| 1,1-Dichloroethene | 60 | to | 141 | 105 | | | Pass | | |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 100 | | | Pass | | |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 98 | | | Pass | | |
| Trichloroethene | 68 | to | 128 | 98 | | | Pass | | |
| Tetrachloroethene | 67 | to | 135 | 101 | | | Pass | | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0253-038.0-20130603 | 6/3/2013 | 09:54 | Water | 100 | **2000** | 30 U | **100** | **3200** | 19 U | 23 U |
| CRHE-DPT0253-018.0-20130603 | 6/3/2013 | 09:05 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0253-023.0-20130603 | 6/3/2013 | 09:17 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0253-028.0-20130603 | 6/3/2013 | 09:29 | Water | 1 | **0.30** I | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0253-033.0-20130603 | 6/3/2013 | 09:40 | Water | 1,5 | **160** | 0.30 U | **3.9** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0253-043.0-20130603 | 6/3/2013 | 10:11 | Water | 100 | **1000** | 30 U | **190** | **7300** | **200** | 23 U |
| CRHE-DPT0253-048.0-20130603 | 6/3/2013 | 10:29 | Water | 100 | **640** | 30 U | **150** | **4400** | **630** | 23 U |
| CRHE-DPT0253-058.0-20130603 | 6/3/2013 | 10:47 | Water | 1 | **0.30** I | 0.30 U | 0.29 U | **2.4** | 0.19 U | 0.23 U |
| CRHE-DPT0229-048.0-20130603 | 6/3/2013 | 11:53 | Water | 100 | **420** | 30 U | **150** | **3900** | **540** | 23 U |
| CRHE-DPT0236-048.0-20130603 | 6/3/2013 | 12:18 | Water | 100 | **1200** | 30 U | **120** | **7000** | **490** | 23 U |
| CRHE-DPT0254-018.0-20130603 | 6/3/2013 | 13:55 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **1.1** | 0.19 U | 0.23 U |
| CRHE-DPT0254-023.0-20130603 | 6/3/2013 | 14:06 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0254-028.0-20130603 | 6/3/2013 | 14:17 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0254-033.0-20130603 | 6/3/2013 | 14:24 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0254-038.0-20130603 | 6/3/2013 | 14:44 | Water | 1 | **58.2** | 0.30 U | **5.2** | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0254-043.0-20130603 | 6/3/2013 | 14:59 | Water | 1,20 | **660** | 0.30 U | **12.7** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0254-048.0-20130603 | 6/3/2013 | 15:14 | Water | 10,50 | **1200** | 3.0 U | **40** | **1400** | **2.3** I | 2.3 U |
| CRHE-DPT0254-058.0-20130603 | 6/3/2013 | 15:34 | Water | 1 | **1.5** | 0.30 U | 0.29 U | **0.62** I | 0.19 U | 0.23 U |
| CRHE-DPT0255-018.0-20130603 | 6/3/2013 | 16:09 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.23** I | 0.19 U | 0.23 U |
| CRHE-DPT0255-023.0-20130603 | 6/3/2013 | 16:19 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0255-028.0-20130603 | 6/4/2013 | 16:29 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0255-033.0-20130603 | 6/4/2013 | 16:55 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0255-038.0-20130603 | 6/4/2013 | 17:09 | Water | 1 | **0.45** I | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0255-043.0-20130603 | 6/4/2013 | 17:24 | Water | 1 | **16.0** | 0.30 U | 0.29 U | **0.36** I | 0.19 U | 0.23 U |
| CRHE-DPT0255-048.0-20130604 | 6/4/2013 | 07:33 | Water | 1 | **13.5** | 0.30 U | 0.29 U | **1.5** | 0.19 U | 0.23 U |
| CRHE-DPT0255-058.0-20130604 | 6/4/2013 | 07:51 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0256-018.0-20130604 | 6/4/2013 | 08:41 | Water | 1 | 0.26 U | **2.5** | 0.29 U | **0.64** I | 0.19 U | 0.23 U |
| CRHE-DPT0256-023.0-20130604 | 6/4/2013 | 08:56 | Water | 1 | **0.29** I | **0.63** I | 0.29 U | **1.4** | 0.19 U | 0.23 U |
| CRHE-DPT0256-028.0-20130604 | 6/4/2013 | 09:07 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.43** I | 0.19 U | 0.23 U |
| CRHE-DPT0256-033.0-20130604 | 6/4/2013 | 09:21 | Water | 1 | **5.0** | 0.30 U | 0.29 U | **18.1** | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

## Final Data Report

## CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0256-038.0-20130604 | 6/4/2013 | 09:36 | Water | 1 | **3.1** | 0.30 U | 0.29 U | **12.7** | 0.19 U | 0.23 U |
| CRHE-DPT0256-043.0-20130604 | 6/4/2013 | 09:52 | Water | 1 | **13.0** | 0.30 U | 0.29 U | **14.1** | 0.19 U | 0.23 U |
| CRHE-DPT0256-048.0-20130604 | 6/4/2013 | 10:39 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **4.0** | 0.19 U | 0.23 U |
| CRHE-DPT0256-058.0-20130604 | 6/4/2013 | 11:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0257-018.0-20130604 | 6/4/2013 | 11:28 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0257-023.0-20130604 | 6/4/2013 | 11:39 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0257-028.0-20130604 | 6/4/2013 | 11:51 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0257-033.0-20130604 | 6/4/2013 | 12:03 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0257-038.0-20130604 | 6/4/2013 | 12:17 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0257-043.0-20130604 | 6/4/2013 | 13:06 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0257-048.0-20130604 | 6/4/2013 | 13:27 | Water | 1 | **0.88** I | 0.30 U | 0.29 U | **7.0** | **0.29** I | 0.23 U |
| CRHE-DPT0258-033.0-20130604 | 6/4/2013 | 13:58 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0258-038.0-20130604 | 6/4/2013 | 15:29 | Water | 1,10 | **76.4** | 0.30 U | **5.7** | **93** | **2.2** | 0.23 U |
| CRHE-DPT0258-043.0-20130604 | 6/4/2013 | 15:59 | Water | 100 | **500** | 30 U | **95** I | **2100** | 19 U | 23 U |
| CRHE-DPT0258-048.0-20130604 | 6/4/2013 | 16:14 | Water | 50 | **76** | 15 U | **68** | **900** | **66** | 12 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0258-058.0-20130604 | 6/4/2013 | 16:31 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0259-033.0-20130604 | 6/4/2013 | 17:02 | Water | 1 | **3.4** | 0.30 U | **0.42** I | **0.66** I | 0.19 U | 0.23 U |
| CRHE-DPT0259-038.0-20130605 | 6/5/2013 | 07:16 | Water | 1,20 | **600** | 0.30 U | **6.2** | **1.4** | 0.19 U | 0.23 U |
| CRHE-DPT0259-043.0-20130605 | 6/5/2013 | 07:29 | Water | 10,50 | **1800** | 3.0 U | **29** | **690** | **31** | 2.3 U |
| CRHE-DPT0259-048.0-20130605 | 6/5/2013 | 07:43 | Water | 20 | **930** | 6.0 U | **37** | **1400** | **160** | 4.6 U |
| CRHE-DPT0259-058.0-20130605 | 6/5/2013 | 07:58 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.31** I | 0.19 U | 0.23 U |
| CRHE-DPT0260-018.0-20130605 | 6/5/2013 | 08:38 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0260-023.0-20130605 | 6/5/2013 | 08:48 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0260-028.0-20130605 | 6/5/2013 | 08:58 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0260-033.0-20130605 | 6/5/2013 | 10:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0260-038.0-20130605 | 6/5/2013 | 10:13 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0260-043.0-20130605 | 6/6/2013 | 10:29 | Water | 1 | **1.9** | 0.30 U | 0.29 U | **0.44** I | 0.19 U | 0.23 U |
| CRHE-DPT0260-058.0-20130605 | 6/6/2013 | 10:49 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-IDW195117-20130605 | 6/6/2013 | 11:55 | Water | 10 | **12** | 3.0 U | 2.9 U | **74** | **2.1 I** | 2.3 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

☐ 25132 SW 1st Avenue
Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CRHE |
| **SAMPLERS** | **CONTACT PERSON** |
| Geosyntec | Crystal Burns |

**BATCH # (Lab Use Only)**

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0253-18.0_20130603 | | 0905 | | ✓ | 0603 | 1230 | 306031300~~1~~A/B | W | 2 | ✓ | |
| 023.0 | | 0917 | | | | | 306031300 2 A/B | | | | |
| 028.0 | | 0929 | | | | | 306031300 3 A/B | | | | |
| 033.0 | | 0940 | | | | | 306031300 4 A/B | | | | |
| 038.0 | | 0954 | | | | | 306031300 5 A/B | | | | |
| 043.0 | | 104 | | | | | 306031300 6 A/B | | | | |
| 048.0 | | 1029 | | | | | 306031300 7 A/B | | | | |
| 018.0 DPT0229-048.0 | | 1047 | | | | | 306031300 8 A/B | | | | |
| ~~DPT0229-048.0~~ 043.0 | | 1153 | | | | | 306031300 9 A/B | | | | 018 should be DPT0229-048.0 |
| 048.0 | | 1218 | | | | | 306031301 0 A/B | | | | 018 should be DPT0236-048.0 |
| ~~DPT0254-018.0~~ | | 1318 | | | | 1730 | 306031301 1 A/B | | | | DO NOT Run as per J.J. |
| 018.0 | | 1355 | | | | | 306031301 2 A/B | | | | |
| 023.0 | | 1406 | | | | | 306031301 3 A/B | | | | |
| 028.0 | | 1417 | | | | | 306031301 4 A/B | | | | |
| 033.0 | | 1424 | | | | | 306031301 5 A/B | | | | |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 06/03/13 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** 1483

CLIENT NAME: GeoSynTec

PROJECT NAME & ADDRESS: CRITE

SAMPLERS

CONTACT PERSON: Crystal Towns

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRITE | | | | | | | | | | | |
| DPT054-038.0-20130603 | | 1444 | | ✓ | 06/03/13 | 1730 | 306031301 6 A/B | GW | 2 | ✓ | |
| 043.0 | | 1459 | | | | | 017 A/B | | | | |
| 048.0 | | 1514 | | | | | 018 A/B | | | | |
| 053.0 | | 1534 | | | | | 019 A/B | | | | |
| DPT055-018.0 | | 1609 | | | | | 020 A/B | | | | |
| -023.0 | | 1619 | | | | | 021 A/B | | | | |
| 028.0 | | 1629 | | | | | 022 A/B | | | | |
| 033.0 | | 1655 | | | | | 023 A/B | | | | |
| 038.0 | | 1709 | | | | | 024 A/B | | | | |
| 043.0 | | 1724 | | | | 1755 | 025 A/B | | | | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | 6/3/13 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DT 0255 - 048.0 | 6/4/13 | 0733 | | | 6/4/13 | 1000 | | GW | 2 | ✓ | |
| 058.0 | | 0757 | | | | | | | | | |
| DT 0252 - 018.0 | | 0841 | | | | | | | | | |
| 023.0 | | 0856 | | | | | | | | | |
| 028.0 | | 0907 | | | | | | | | | |
| 033.0 | | 0921 | | | | | | | | | |
| 038.0 | | 0936 | | | | | | | | | |
| 043.0 | | 0952 | | | | | | | | | |
| 048.0 | | 1039 | | | | 1230 | | | | | |
| 058.0 | | 1100 | | | | | | | | | |
| DT 0257 - 018.0 | | 1118 | | | | | | | | | |
| 023.0 | | 1139 | | | | | | | | | |
| 028.0 | | 1151 | | | | | | | | | |
| 033.0 | | 1203 | | | | | | | | | |
| 038.0 | | 1217 | | | | | | | | | |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 6/4/13 | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

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Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


**MOBILE UNIT #** 483

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE KSCFL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPTO257-043.0 | 6/4/13 | 1306 | | | 6/4/13 | 1430 | | GW | 2 | ✓ | |
| -048.0 | | 1327 | | | | 1430 | | | | | |
| DPTO258-033.0 | | 1358 | | | | 1745 | | | | | |
| 038.0 | | 1529 | | | | | | | | | |
| 043.0 | | 1559 | | | | | | | | | |
| 048.0 | | 1614 | | | | | | | | | |
| 058.0 | | 1631 | | | | | | | | | |
| DPTO259-033.0 | | 1702 | | | | | | | | | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | 6/4/13 | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


Mobile Laboratory Services

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Newberry, FL 32669
TEL (352) 472-5830
FAX (352) 472-5832

☐ 200 Quade Drive
Cary, NC 27513
TEL (919) 678-0030


MOBILE UNIT # 1C83

CLIENT NAME: Geosyntec
PROJECT NAME & ADDRESS: CCHE ICSC, FL
SAMPLERS
CONTACT PERSON
BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOLATILES | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0259-038.0 | 6/5/13 | 0716 | | | 6/5/13 | 0830 | | GW | 2 | ✓ | |
| 043.0 | | 0729 | | | | | | | | | |
| 048.0 | | 0743 | | | | | | | | | |
| 053.0 | | 0758 | | | | ✓ | | | | | |
| DPT0260-018.0 | | 0838 | | | | 1000 | | | | | |
| 023.0 | | 0848 | | | | | | | | | |
| 028.0 | | 0858 | | | | | | | | | |
| 033.0 | | 1000 | | | | | | | | | |
| 038.0 | | 1013 | | | | 1100 | | | | | |
| 043.0 | | 1029 | | | | | | | | | |
| 048.0 | | 1049 | | | | ✓ | | | | | |
| DW 6/5/13 | | 1155 | | | | 1200 | | GW | 2 | ✓ | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | 6/5/13 | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**6821 SW Archer Road**
**Gainesville, FL 32608**
***Telephone* (352) 367-0073**
***Fax* (352) 378-6491**
www.kbmobilelabs.com

June 26, 2013

Lauren Petty
Geosyntec Consultants
316 South Baylen Street
Pensacola, FL 32502

**RE: NASA CRHE, KSC, FL - Final Data Report- KB3**
**KB Labs Project # 13-83**

Dear Ms. Petty:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

*KB Labs, Inc.*
*6821 SW Archer Road*
*Gainesville, FL 32608*
*Phone: 352-367-0073*
*Fax: 352-378-6491*
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# PROJECT NARRATIVE

## Project Scope

From June 19 to 21, 2013, a total of 48 water samples were analyzed for Geosyntec Consultants at NASA CRHE, KSC FL. The samples were analyzed for vinyl chloride, 1,1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB3: FDOH NELAP Certification Number E82816

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report and the results relate only to the actual samples received and analyzed in the laboratory. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example,

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if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0 ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

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# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. As per Client instruction, KB Labs reports all samples to the laboratory MDL. Values between the PQL and MDL are reported with an I FDEP Data Qualifier.

3. Samples with multiple dilutions were updated to be reported at lowest dilution level for non-detects and hits within the calibration range at lowest level. These samples include:

   DPT0261-038.0, -043.0
   DPT0267-018.0

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob Schock |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 13-83 |
| **On-site Dates**: 6/19/13-6/21/13 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| 20 VSTD | 06/19/13 | 106 | 108 | 98 | 97 | Pass | Pass | Pass | Pass |
| RSTD 20 | 06/19/13 | 104 | 106 | 100 | 95 | Pass | Pass | Pass | Pass |
| BLANK | 06/19/13 | 106 | 109 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT261-010.0 | 06/19/13 | 100 | 93 | 104 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT261-018.0 | 06/19/13 | 102 | 99 | 101 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT261-023.0 | 06/19/13 | 102 | 98 | 100 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT261-028.0 | 06/19/13 | 105 | 101 | 101 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT261-033.0 | 06/19/13 | 110 | 107 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT261-038.0 1:50 | 06/19/13 | 108 | 108 | 96 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT261-043.0 1:5 | 06/19/13 | 114 | 112 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT261-058.0 | 06/19/13 | 106 | 102 | 101 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT261-038.0 1:100 | 06/19/13 | 101 | 104 | 101 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT261-043.0 1:50 | 06/19/13 | 108 | 108 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT262-010.0 | 06/19/13 | 106 | 104 | 100 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT262-018.0 | 06/19/13 | 107 | 112 | 100 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT262-023.0 | 06/19/13 | 103 | 102 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT262-028.0 | 06/19/13 | 103 | 104 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT262-033.0 1:5 | 06/19/13 | 109 | 109 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT262-038.0 1:5 | 06/19/13 | 107 | 105 | 102 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT262-043.0 1:50 | 06/19/13 | 104 | 107 | 99 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT262-058.0 1:10 | 06/19/13 | 107 | 108 | 100 | 101 | Pass | Pass | Pass | Pass |
| STD 1 | 06/19/13 | 106 | 118 | 102 | 97 | Pass | Pass | Pass | Pass |
| STD 5 | 06/19/13 | 111 | 117 | 102 | 100 | Pass | Pass | Pass | Pass |
| STD 10 | 06/19/13 | 106 | 110 | 104 | 103 | Pass | Pass | Pass | Pass |
| STD 20 | 06/19/13 | 106 | 114 | 104 | 94 | Pass | Pass | Pass | Pass |
| STD 50 | 06/19/13 | 105 | 123 | 105 | 104 | Pass | Pass | Pass | Pass |
| STD 100 | 06/19/13 | 107 | 127 | 104 | 89 | Pass | Pass | Pass | Pass |
| REF 20 | 06/19/13 | 98 | 94 | 104 | 109 | Pass | Pass | Pass | Pass |
| BLANK | 06/19/13 | 96 | 87 | 100 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT263-033.0 | 06/19/13 | 97 | 87 | 98 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT262-038.0 | 06/19/13 | 98 | 87 | 98 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT262-043.0 | 06/19/13 | 96 | 89 | 101 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT262-058.0 | 06/19/13 | 97 | 89 | 99 | 109 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/20/13 | 98 | 97 | 97 | 113 | Pass | Pass | Pass | Pass |
| REF 20 | 06/20/13 | 98 | 104 | 100 | 115 | Pass | Pass | Pass | Pass |
| BLANK | 06/20/13 | 96 | 89 | 99 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT263-038.0 | 06/20/13 | 99 | 95 | 100 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT263-043.0 | 06/20/13 | 100 | 90 | 99 | 112 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob Schock |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 13-83 |
| **On-site Dates**: 6/19/13-6/21/13 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT263-048.0 1:5 | 06/20/13 | 101 | 95 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT263-053.0 | 06/20/13 | 99 | 90 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT265-010.0 | 06/20/13 | 100 | 96 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT265-018.0 | 06/20/13 | 100 | 97 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT265-023.0 | 06/20/13 | 108 | 116 | 99 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT265-028.0 1:2 | 06/20/13 | 110 | 111 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT265-033.0 1:10 | 06/20/13 | 98 | 86 | 97 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT265-038.0 | 06/20/13 | 109 | 113 | 100 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT265-043.0 | 06/20/13 | 108 | 108 | 100 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT265-058.0 | 06/20/13 | 105 | 111 | 104 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT266-010.0 1:5 | 06/20/13 | 109 | 109 | 103 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT266-010.0 | 06/20/13 | 109 | 110 | 103 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT266-018.0 | 06/20/13 | 107 | 109 | 103 | 113 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/20/13 | 102 | 97 | 99 | 99 | Pass | Pass | Pass | Pass |
| REF 20 | 06/20/13 | 99 | 93 | 98 | 102 | Pass | Pass | Pass | Pass |
| BLANK | 06/20/13 | 102 | 93 | 101 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT265-033.0 | 06/20/13 | 100 | 97 | 101 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT265-033.0 MS | 06/20/13 | 97 | 96 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT265-033.0 MSD | 06/20/13 | 102 | 95 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT266-023.0 | 06/20/13 | 100 | 91 | 101 | 112 | Pass | Pass | Pass | Pass |
| CRHE-DPT266-028.0 1:5 | 06/20/13 | 97 | 94 | 100 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT264-033.0 1:5 | 06/20/13 | 99 | 90 | 98 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT264-038.0 1:5 | 06/20/13 | 97 | 90 | 99 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT264-043.0 1:5 | 06/20/13 | 99 | 91 | 100 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT264-048.0 1:5 | 06/20/13 | 97 | 93 | 98 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT264-058.0 | 06/20/13 | 101 | 93 | 100 | 103 | Pass | Pass | Pass | Pass |
| VSTD 20 | 06/21/13 | 100 | 97 | 99 | 101 | Pass | Pass | Pass | Pass |
| REF 20 | 06/21/13 | 97 | 95 | 97 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 06/21/13 | 99 | 91 | 99 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT264-033.0 | 06/21/13 | 99 | 90 | 97 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT264-033.0 MS | 06/21/13 | 101 | 97 | 96 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT264-033.0 MSD | 06/21/13 | 100 | 98 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT264-038.0 | 06/21/13 | 102 | 94 | 98 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT264-043.0 | 06/21/13 | 100 | 91 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT264-048.0 | 06/21/13 | 99 | 92 | 96 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT266-033.0 1:5 | 06/21/13 | 103 | 94 | 95 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT266-033.0 | 06/21/13 | 106 | 95 | 96 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT266-038.0 | 06/21/13 | 103 | 93 | 96 | 105 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob Schock |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 13-83 |
| **On-site Dates**: 6/19/13-6/21/13 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT266-043.0 | 06/21/13 | 103 | 95 | 95 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT266-058.0 | 06/21/13 | 104 | 95 | 100 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT267-018.0 | 06/21/13 | 102 | 93 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT267-023.0 1:20 | 06/21/13 | 101 | 90 | 98 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT267-018.0 1:10 | 06/21/13 | 100 | 94 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT267-023.0 | 06/21/13 | 103 | 94 | 101 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT267-028.0 | 06/21/13 | 96 | 89 | 97 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT267-033.0 | 06/21/13 | 101 | 91 | 98 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT267-038.0 | 06/21/13 | 100 | 94 | 99 | 107 | Pass | Pass | Pass | Pass |
| CRHE-IDW195118 1:10 | 06/21/13 | 103 | 98 | 98 | 108 | Pass | Pass | Pass | Pass |

**Comments:** Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data.

***Surrogate Compounds:**
S1 = Dibromofluoromethane (83% - 125%)
S2 = 1,2- Dichloroethane-D4 (74% - 130%)
S3 = Toluene-D8 (87% - 114%)
S4 = 4-Bromofluorobenzene (71% - 131%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob Schock |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 13-83 |
| **Onsite Dates:** 6/19/13-6/21/13 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT265-033.0 **Date of Analysis:** 6/20/2013

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 99 | 107 | 8 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 91 | 109 | 18 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 85 | 90 | 5 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 96 | 102 | 6 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 93 | 102 | 9 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 95 | 102 | 6 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT264-033.0 **Date of Analysis:** 6/21/2013

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 51 | 144 | 20 | 98 | 99 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 62 | 136 | 20 | 94 | 109 | 15 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 63 | 131 | 20 | 84 | 91 | 8 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 67 | 131 | 20 | 96 | 100 | 5 | Pass | Pass | Pass |
| Trichloroethene | 67 | 128 | 20 | 95 | 97 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 60 | 140 | 20 | 91 | 95 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob Schock |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 13-83 |
| **Onsite Dates:** 6/19/13-6/21/13 | **Client Project Manager:** Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 — **Date of Analysis:** 6/19/2013
LCS 2 — 6/19/2013
LCS 3 — 6/20/2013

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS 1 | LCS 2 | LCS 3 | LCS 1 | LCS 2 | LCS 3 |
| Vinyl Chloride | 58 | to | 135 | 161 | 154 | 77 | > UCL | > UCL | Pass |
| 1,1-Dichloroethene | 60 | to | 141 | 155 | 187 | 90 | > UCL | > UCL | Pass |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 140 | 171 | 87 | > UCL | > UCL | Pass |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 134 | 156 | 96 | Pass | > UCL | Pass |
| Trichloroethene | 68 | to | 128 | 144 | 166 | 92 | > UCL | > UCL | Pass |
| Tetrachloroethene | 67 | to | 135 | 154 | 180 | 95 | > UCL | > UCL | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 — **Date of Analysis:** 6/20/2013
LCS 5 — 6/21/2013

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS 4 | LCS 5 | | LCS 4 | LCS 5 | |
| Vinyl Chloride | 58 | to | 135 | 98 | 94 | | Pass | Pass | |
| 1,1-Dichloroethene | 60 | to | 141 | 99 | 79 | | Pass | Pass | |
| Trans-1,2-Dichloroethene | 62 | to | 133 | 86 | 87 | | Pass | Pass | |
| Cis-1,2-Dichloroethene | 62 | to | 140 | 102 | 103 | | Pass | Pass | |
| Trichloroethene | 68 | to | 128 | 99 | 99 | | Pass | Pass | |
| Tetrachloroethene | 67 | to | 135 | 99 | 98 | | Pass | Pass | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0261-010.0-20130619 | 6/19/2013 | 07:55 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0261-018.0-20130619 | 6/19/2013 | 08:16 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0261-023.0-20130619 | 6/19/2013 | 08:30 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0261-028.0-20130619 | 6/19/2013 | 08:45 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0261-033.0-20130619 | 6/19/2013 | 09:00 | Water | 1 | **60.3** | 0.30 U | **0.73** I | **13.2** | **1.2** | 0.23 U |
| CRHE-DPT0261-038.0-20130619 | 6/19/2013 | 09:15 | Water | 50, 100 | **4600** | 15 U | 15 U | **1000** | 9.5 U | 12 U |
| CRHE-DPT0261-043.0-20130619 | 6/19/2013 | 09:35 | Water | 5, 50 | **1400** | 1.5 U | **2.4** I | **180** | 0.95 U | 1.2 U |
| CRHE-DPT0261-058.0-20130619 | 6/19/2013 | 09:55 | Water | 1 | **5.0** | 0.30 U | 0.29 U | **1.6** | 0.19 U | 0.23 U |
| CRHE-DPT0262-010.0-20130619 | 6/19/2013 | 14:15 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.70** I | 0.19 U | 0.23 U |
| CRHE-DPT0262-018.0-20130619 | 6/19/2013 | 14:25 | Water | 1 | **1.7** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0262-023.0-20130619 | 6/19/2013 | 14:35 | Water | 1 | **11.5** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0262-028.0-20130619 | 6/19/2013 | 14:45 | Water | 1 | **97.1** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0262-033.0-20130619 | 6/19/2013 | 15:05 | Water | 5 | **120** | 1.5 U | 1.5 U | 1.1 U | 0.95 U | 1.2 U |
| CRHE-DPT0262-038.0-20130619 | 6/19/2013 | 15:20 | Water | 1 | **2.1** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0262-043.0-20130619 | 6/19/2013 | 15:35 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0262-058.0-20130619 | 6/19/2013 | 15:50 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0263-033.0-20130619 | 6/19/2013 | 17:45 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0263-038.0-20130620 | 6/20/2013 | 07:05 | Water | 1 | 0.26 U | 0.30 U | **0.43** I | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0263-043.0-20130620 | 6/20/2013 | 07:25 | Water | 1 | **5.6** | 0.30 U | **1.6** | **0.49** I | 0.19 U | 0.23 U |
| CRHE-DPT0263-048.0-20130620 | 6/20/2013 | 07:45 | Water | 5 | **170** | 1.5 U | **4.5** I | **53** | 0.95 U | 1.2 U |
| CRHE-DPT0263-058.0-20130620 | 6/20/2013 | 08:05 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0265-010.0-20130620 | 6/20/2013 | 11:05 | Water | 1 | **1.8** | 0.30 U | 0.29 U | **0.66** I | 0.19 U | 0.23 U |
| CRHE-DPT0265-018.0-20130620 | 6/20/2013 | 11:20 | Water | 1 | **7.0** | 0.30 U | 0.29 U | **1.6** | 0.19 U | 0.23 U |
| CRHE-DPT0265-023.0-20130620 | 6/20/2013 | 11:30 | Water | 1 | **11.2** | 0.30 U | 0.29 U | **0.49** I | 0.19 U | 0.23 U |
| CRHE-DPT0265-028.0-20130620 | 6/20/2013 | 11:40 | Water | 2 | **110** | 0.60 U | 0.58 U | 0.44 U | 0.38 U | 0.46 U |
| CRHE-DPT0265-033.0-20130620 | 6/20/2013 | 11:58 | Water | 1 | **4.8** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0265-038.0-20130620 | 6/20/2013 | 13:00 | Water | 1 | **26.8** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0265-043.0-20130620 | 6/20/2013 | 13:16 | Water | 1 | **3.6** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0265-058.0-20130620 | 6/20/2013 | 13:33 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0266-010.0-20130620 | 6/20/2013 | 14:15 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0266-018.0-20130620 | 6/20/2013 | 14:25 | Water | 1 | **1.0** | 0.30 U | 0.29 U | **1.0** | 0.19 U | 0.23 U |
| CRHE-DPT0266-023.0-20130620 | 6/20/2013 | 14:40 | Water | 1 | **12.2** | 0.30 U | 0.29 U | **0.31** I | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0266-028.0-20130620 | 6/20/2013 | 14:50 | Water | 5 | **18** | 1.5 U | 1.5 U | 1.1 U | 0.95 U | 1.2 U |
| CRHE-DPT0264-033.0-20130620 | 6/21/2013 | 08:35 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0264-038.0-20130620 | 6/21/2013 | 08:50 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0264-043.0-20130620 | 6/21/2013 | 09:10 | Water | 1 | 0.26 U | 0.30 U | **0.48** I | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0264-048.0-20130620 | 6/21/2013 | 09:10 | Water | 1 | **2.8** | 0.30 U | **0.74** I | **0.25** I | 0.19 U | 0.23 U |
| CRHE-DPT0264-058.0-20130620 | 6/21/2013 | 09:50 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0266-033.0-20130621 | 6/21/2013 | 08:20 | Water | 1 | **29.2** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0266-038.0-20130621 | 6/21/2013 | 08:35 | Water | 1 | **14.1** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0266-043.0-20130621 | 6/21/2013 | 08:50 | Water | 1 | **5.6** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0266-058.0-20130621 | 6/21/2013 | 09:10 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0267-018.0-20130621 | 6/21/2013 | 09:45 | Water | 1, 10 | **140** | 0.30 U | 0.29 U | **8.9** | 0.19 U | 0.23 U |
| CRHE-DPT0267-023.0-20130621 | 6/21/2013 | 10:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0267-028.0-20130621 | 6/21/2013 | 10:10 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0267-033.0-20130621 | 6/21/2013 | 10:20 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0267-038.0-20130621 | 6/21/2013 | 10:35 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-IDW195118-20130621 | 6/21/2013 | 11:20 | Water | 10 | 2.6 U | 3.0 U | 2.9 U | 2.2 U | 1.9 U | 2.3 U |

Reporting units for waters are ug/L and for soils are mg/kg.

Mobile Laboratory Services

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# CHAIN-OF-CUSTODY RECORD



**MOBILE UNIT #** KB-3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRETE

SAMPLERS: Lauren Kelly

CONTACT PERSON: Lauren Kelly

BATCH # (Lab Use Only)

| | SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 (with TCL) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BPT | 221-010.020130619 | 6/19/13 | 0735 | | ✓ | 6/19/13 | 0806 | | (w) | 2 | ✓ | |
| | -018.0 | | 0816 | | | | | | | | | |
| | -023.0 | | 0830 | | | | | | | | | |
| | -028.0 | | 0845 | | | | | | | | | |
| | -033.0 | | 0900 | | | | | | | | | |
| | -038.0 | | 0915 | | | | | | | | | |
| | -043.0 | | 0935 | | | | | | | | | |
| | -048.0 | | 0955 | | | | | | | | | |
| WBZ | -010.0 | | 1415 | | | | | | | | | |
| | -018.0 | | 1425 | | | | | | | | | |
| | -023.0 | | 1435 | | | | | | | | | |
| | -028.0 | | 1445 | | | | | | | | | |
| | -033.0 | | 1505 | | | | | | | | | |
| | -038.0 | | 1520 | | | | | | | | | |
| | -043.0 | | 1535 | | | | | | | | | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | 6/19/13 1205 |
| Relinquished by: (Signature) | 6/19/13 1540 | | |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

282

**MOBILE UNIT #**


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Raleigh, NC 27607
TEL (352) 538-6507


| CLIENT NAME | PROJECT NAME & ADDRESS | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Groundtech | CAPITZ | | | | | | | | | | | | | | | | | |
| SAMPLERS | CONTACT PERSON | | | | | | BATCH # (Lab Use Only) | | | | | | | | | | | |
| V. Roth | L. Roth | | | | | | | | | | | | | | | | | |
| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS | | | | | | | | COMMENT / SAMPLE PRE FIX |
| DPT0463-059.0 2013-06-19 | 6/19/13 | 1550 | | ✓ | 6/19/13 | | | GW | 2 | ✓ | | | | | | | | |
| DPT0463-033.0 | 6/19/13 | 1745 | | ✓ | ↓ | | | ↓ | ↓ | ✓ | | | | | | | | |
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**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| | | | 6/19/13 1700 | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

1 of 2

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Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB-3

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CCHE |
| **SAMPLERS** | **CONTACT PERSON** / **BATCH # (Lab Use Only)** |
| L. Petty | L. Petty |

**PRESERVATION**: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS (TCL VOCs, TCL SVOCs, TAL Metals) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CCHE-DPT0263-038.0 | 6/13/2013 | 0705 | | ✓ | 6/20/13 | | | SW | 2 | ✓ | |
| -043.0 | | 0725 | | | | | | | | | |
| -049.0 | | 0745 | | | | | | | | | |
| -056.0 | | 0905 | | | | | | | | | |
| CCHE-DPT0264-033.0 | | illegible | | | | | | | | | |
| -038.0 | 0857 | illegible | | | | | | | | | |
| -043.0 | | 0910 | | | | | | | | | |
| -048.0 | | " | | | | | | | | | |
| -059.0 | | | | | | | | | | | |
| CCHE-DPT0265-018.0 | | 1135 | | | | | | | | | |
| -018.0 | | 1120 | | | | | | | | | |
| -023.0 | | 1130 | | | | | | | | | |
| -029.0 | | 1140 | | | | | | | | | |
| -033.0 | | 1158 | | | | | | | | | |
| -038.0 | ↓ | 1300 | | ↓ | ↓ | | | ↓ | ↓ | ↓ | |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| [signature] | 6/20/13 | [signature] | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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# CHAIN-OF-CUSTODY RECORD

2 of 2

**MOBILE UNIT #**

| CLIENT NAME | PROJECT NAME & ADDRESS | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Geosyntec | CCHE | | | | | | | | | | | | | | | | | |
| SAMPLERS | CONTACT PERSON | | | | | | BATCH # (Lab Use Only) | | | | | | | | | | | |
| L. Reth | L. Reth | | | | | | | | | | | | | | | | | |
| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS | | | | | | | | COMMENT / SAMPLE PRE FIX |
| CCHE-INT0205-043.0 | 6-20-13 | 316 | | ✓ | | | | SW | 2 | ✓ | | | | | | | | KB-3 |
| -058.0 | ↓ | 1335 | | ↓ | | | | ↓ | ↓ | ↓ | | | | | | | | |
| CCHE-INT0206-010.0 | | 1415 | | | | | | | | | | | | | | | | |
| -018.0 | | 1425 | | | | | | | | | | | | | | | | |
| -023.0 | | 1440 | | | | | | | | | | | | | | | | |
| -028.6 | ↓ | 1450 | | ↓ | | | | ↓ | ↓ | ↓ | | | | | | | | |

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time<br>6/20/13 | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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# CHAIN-OF-CUSTODY RECORD

1 of 1

**MOBILE UNIT #** 1153

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | CRTTE | |
| **SAMPLERS** | **CONTACT PERSON** | **BATCH # (Lab Use Only)** |
| C. Petty | C. Petty | |

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS (VOCs 1624/8260 (MH)) | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRTTE-DPT0266-033.0 | 6-24-13 | 0820 | | ✓ | | | | GW | 2 | ✓ | |
| -038.0 | | 0835 | | | | | | | | | |
| -043.0 | | 0850 | | | | | | | | | |
| -058.0 | | 0910 | | | | | | | | | |
| CRTTE-DPT0267-018.0 | | 0945 | | | | | | | | | |
| -023.0 | | 1000 | | | | | | | | | |
| -028.0 | | 1010 | | | | | | | | | |
| -034.0 | | 1020 | | | | | | | | | |
| -040.0 | | 1035 | | | | | | | | | |
| IDW-195118 | | 1120 | | | | | | | | | |

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**6821 SW Archer Road**
**Gainesville, Florida 32608**
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***Fax* (352) 378-6491**
Email: info@kbmobilelabs.com

June 18, 2014

Crystal Towns
Geosyntec Consultants
316 South Baylen Street, Suite 201
Pensacola, FL 32502

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 14-13**

Dear Ms. Towns:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from May 28 to June 13, 2014. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 472-5830.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

# PROJECT NARRATIVE

## Project Scope

From May 28 to June 13, 2014, a total of 227 water samples were analyzed for Geosyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1, 1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene.

## NELAP Certification

KB Mobile Labs Unit KB3: FDOH NELAP Certification Number E82816

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report and the results relate only to the actual samples received and analyzed in the laboratory. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## FDEP Data Qualifiers:

U Analyte was not detected or below the laboratory MDL.
I The result is below the PQL but larger than the laboratory MDL.
L Result exceeded Upper Calibration Range.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the

uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as ± 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0 ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

---

# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. Sample ID CRHE-DPT0277-048.0-20140530 reported cis-1, 2-dichloroethene at 3.1I ug/L. Changed to 3.1ug/L with no DQ.

3. Sample ID CRHE-DPT0301-058.0-20140610 reported cis-1, 2-dichloroethene at 1.7 ug/L. Changed to 1.2 ug/L.

4. Sample ID CRHE-IDW197035 reported dilution 1x should have been 10x. MDL limits updated.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 14-13 |
| **On-site Dates**: 5/28/14-6/13/14 | **Client Project Manager**: Crystal Towns | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| BLANK/TUNE | 05/28/14 | 103 | 103 | 98 | 97 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/28/14 | 100 | 105 | 99 | 100 | Pass | Pass | Pass | Pass |
| LCS 20 | 05/28/14 | 106 | 107 | 95 | 99 | Pass | Pass | Pass | Pass |
| BLANK | 05/28/14 | 99 | 93 | 95 | 92 | Pass | Pass | Pass | Pass |
| ICAL 100 | 05/28/14 | 105 | 100 | 99 | 102 | Pass | Pass | Pass | Pass |
| BLANK | 05/28/14 | 100 | 97 | 96 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0268-033.0 | 05/28/14 | 100 | 98 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0268-038.0 | 05/28/14 | 100 | 96 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0268-038.0 1:500 | 05/28/14 | 100 | 97 | 95 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0268-043.0 | 05/28/14 | 99 | 96 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0268-043.0 1:200 | 05/28/14 | 96 | 97 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0268-048.0 | 05/28/14 | 102 | 103 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0268-048.0 1:100 | 05/28/14 | 99 | 100 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0268-058.0 | 05/28/14 | 100 | 102 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0268-033.0 1:5 | 05/28/14 | 100 | 102 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0269-038.0 1:200 | 05/28/14 | 98 | 98 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0269-043.0 1:100 | 05/28/14 | 102 | 99 | 97 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0269-04.08 1:50 | 05/28/14 | 99 | 96 | 97 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0269-058.0 1:10 | 05/28/14 | 98 | 91 | 98 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0269-058.0 | 05/28/14 | 99 | 96 | 98 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0270-038.0 | 05/28/14 | 108 | 101 | 95 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0270-04.03 1:100 | 05/28/14 | 101 | 98 | 98 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0270-048.0 1:100 | 05/28/14 | 103 | 101 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0270-058.0 | 05/28/14 | 99 | 100 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0271-038.0 | 05/28/14 | 103 | 101 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0271-043.0 | 05/28/14 | 100 | 98 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0271-048.0 1:50 | 05/28/14 | 98 | 97 | 96 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0271-058.0 | 05/28/14 | 102 | 99 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0268-058.0 MS | 05/28/14 | 104 | 104 | 96 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0268-058.0 MSD | 05/28/14 | 100 | 101 | 97 | 100 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/28/14 | 103 | 104 | 95 | 97 | Pass | Pass | Pass | Pass |
| LCS 20 | 05/28/14 | 101 | 101 | 97 | 97 | Pass | Pass | Pass | Pass |
| BLANK | 05/28/14 | 98 | 97 | 98 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT272-038.0 | 05/28/14 | 99 | 94 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT272-043.0 | 05/28/14 | 105 | 101 | 97 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT272-048.0 1:100 | 05/28/14 | 97 | 94 | 97 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT272-058.0 | 05/28/14 | 101 | 102 | 97 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT272-058.0 MS | 05/28/14 | 98 | 92 | 96 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT272-058.0 MSD | 05/28/14 | 98 | 96 | 97 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT270-038.0 1:20 | 05/28/14 | 98 | 97 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT271-038.0 1:10 | 05/28/14 | 96 | 95 | 98 | 93 | Pass | Pass | Pass | Pass |

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 14-13 |
| **On-site Dates**: 5/28/14-6/13/14 | **Client Project Manager**: Crystal Towns | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT271-043.0 1:500 | 05/28/14 | 96 | 93 | 100 | 95 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/28/14 | 96 | 93 | 100 | 95 | Pass | Pass | Pass | Pass |
| ICAL 200 | 05/28/14 | 112 | 110 | 100 | 103 | Pass | Pass | Pass | Pass |
| BLANK | 05/29/14 | 97 | 95 | 99 | 92 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 05/29/14 | 100 | 105 | 94 | 92 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/29/14 | 107 | 107 | 94 | 96 | Pass | Pass | Pass | Pass |
| LCS 20 | 05/29/14 | 103 | 97 | 96 | 99 | Pass | Pass | Pass | Pass |
| BLANK | 05/29/14 | 98 | 98 | 96 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0272-038.0 1:20 | 05/29/14 | 98 | 94 | 96 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0272-043.0 1:20 | 05/29/14 | 101 | 102 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0273-038.0 | 05/29/14 | 100 | 98 | 95 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0273-043.0 | 05/29/14 | 100 | 99 | 95 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0273-048.0 | 05/29/14 | 101 | 102 | 94 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0273-058.0 | 05/29/14 | 103 | 101 | 95 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0227-048.0 1:50 | 05/29/14 | 102 | 98 | 96 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0274-033.0 | 05/29/14 | 101 | 101 | 94 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0274-038.0 | 05/29/14 | 102 | 98 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0274-043.0 | 05/29/14 | 101 | 102 | 94 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0274-048.0 1:20 | 05/29/14 | 101 | 97 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0274-058.0 | 05/29/14 | 100 | 98 | 95 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0274-043.0 1:20 | 05/29/14 | 99 | 97 | 96 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0274-058.0 MS | 05/29/14 | 105 | 108 | 93 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0274-058.0 MSD | 05/29/14 | 105 | 105 | 95 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0275-038.0 | 05/29/14 | 100 | 101 | 94 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0275-043.0 | 05/29/14 | 100 | 100 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0275-048.0 | 05/29/14 | 99 | 99 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0275-058.0 | 05/29/14 | 103 | 98 | 94 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0276-033.0 | 05/29/14 | 99 | 94 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0276-038.0 | 05/29/14 | 103 | 97 | 95 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0276-043.0 | 05/29/14 | 101 | 98 | 95 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT02760-48.0 | 05/29/14 | 105 | 98 | 95 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0276-058.0 | 05/29/14 | 102 | 96 | 94 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0276-048.0 1:2 | 05/29/14 | 104 | 98 | 99 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/29/14 | 99 | 91 | 97 | 96 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 05/30/14 | 104 | 104 | 91 | 91 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/30/14 | 104 | 100 | 94 | 94 | Pass | Pass | Pass | Pass |
| LCS 20 | 05/30/14 | 101 | 94 | 94 | 95 | Pass | Pass | Pass | Pass |
| BLANK | 05/30/14 | 101 | 94 | 95 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0277-038.0 | 05/30/14 | 102 | 96 | 93 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0277-043.0 | 05/30/14 | 100 | 93 | 93 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0277-048.0 | 05/30/14 | 102 | 95 | 95 | 92 | Pass | Pass | Pass | Pass |

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 14-13 |
| **On-site Dates**: 5/28/14-6/13/14 | **Client Project Manager**: Crystal Towns | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0277-058.0 | 05/30/14 | 100 | 94 | 93 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0277-058.0 MS | 05/30/14 | 106 | 99 | 95 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0277-058.0 MSD | 05/30/14 | 104 | 97 | 95 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0278-028.0 | 05/30/14 | 99 | 94 | 94 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0278-033.0 | 05/30/14 | 104 | 100 | 92 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0278-038.0 | 05/30/14 | 103 | 96 | 96 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0278-043.0 | 05/30/14 | 102 | 96 | 94 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0278-048.0 | 05/30/14 | 102 | 95 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0279-028.0 | 05/30/14 | 102 | 98 | 93 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0279-033.0 | 05/30/14 | 101 | 97 | 94 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0279-038.0 | 05/30/14 | 104 | 99 | 94 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0279-043.0 | 05/30/14 | 100 | 94 | 93 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0279-038.0 1:2 | 05/30/14 | 98 | 93 | 94 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0279-048.0 | 05/30/14 | 105 | 101 | 94 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0280-023.0 | 05/30/14 | 103 | 98 | 93 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0280-028.0 | 05/30/14 | 102 | 96 | 93 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0280-033.0 | 05/30/14 | 104 | 100 | 94 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0280-038.0 | 05/30/14 | 101 | 97 | 93 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0280-043.0 | 05/30/14 | 100 | 98 | 93 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0280-048.0 | 05/30/14 | 106 | 98 | 93 | 90 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/30/14 | 102 | 95 | 95 | 95 | Pass | Pass | Pass | Pass |
| LCS 20 | 05/30/14 | 103 | 95 | 96 | 93 | Pass | Pass | Pass | Pass |
| BLANK | 05/30/14 | 102 | 95 | 96 | 90 | Pass | Pass | Pass | Pass |
| CRHE-IDW193876 1:10 | 05/30/14 | 103 | 99 | 95 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0280-043.0 MS | 05/30/14 | 104 | 97 | 95 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0280-043.0 MSD | 05/30/14 | 104 | 94 | 93 | 92 | Pass | Pass | Pass | Pass |
| CCS 20 | 05/30/14 | 102 | 92 | 97 | 99 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 06/02/14 | 105 | 101 | 94 | 102 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/02/14 | 102 | 97 | 95 | 111 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/02/14 | 102 | 95 | 94 | 108 | Pass | Pass | Pass | Pass |
| BLANK | 06/02/14 | 101 | 95 | 96 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0281-028.0 | 06/02/14 | 104 | 97 | 94 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0281-033.0 | 06/02/14 | 105 | 99 | 94 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0281-038.0 | 06/02/14 | 104 | 98 | 96 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0281-043.0 | 06/02/14 | 105 | 97 | 94 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0281-043.0 MS | 06/02/14 | 108 | 99 | 92 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0281-043.0 MSD | 06/02/14 | 103 | 93 | 95 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0281-048.0 | 06/02/14 | 105 | 98 | 95 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0282-023.0 | 06/02/14 | 105 | 97 | 95 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0282-028.0 | 06/02/14 | 104 | 100 | 94 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0282-033.0 | 06/02/14 | 105 | 97 | 95 | 103 | Pass | Pass | Pass | Pass |

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 14-13 |
| **On-site Dates**: 5/28/14-6/13/14 | **Client Project Manager**: Crystal Towns | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0282-038.0 | 06/02/14 | 107 | 101 | 93 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0282-043.0 | 06/02/14 | 105 | 98 | 94 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0282-048.0 | 06/02/14 | 104 | 96 | 95 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0282-058.0 | 06/02/14 | 104 | 96 | 95 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0283-028.0 | 06/02/14 | 107 | 102 | 93 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0283-033.0 | 06/02/14 | 104 | 100 | 94 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0283-038.0 | 06/02/14 | 105 | 96 | 94 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0283-043.0 | 06/02/14 | 102 | 92 | 95 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0283-048.0 | 06/02/14 | 106 | 98 | 95 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0284-028.0 | 06/02/14 | 106 | 104 | 93 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0284-033.0 | 06/02/14 | 105 | 96 | 94 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0284-038.0 | 06/02/14 | 106 | 102 | 93 | 101 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/02/14 | 112 | 113 | 91 | 104 | Pass | Pass | Pass | Pass |
| BLANK | 06/02/14 | 104 | 97 | 94 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0284-043.0 | 06/02/14 | 105 | 103 | 94 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0284-048.0 | 06/02/14 | 104 | 98 | 94 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0284-058.0 | 06/02/14 | 107 | 97 | 93 | 103 | Pass | Pass | Pass | Pass |
| CRHE-IDW195127 1:10 | 06/02/14 | 105 | 97 | 94 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0284-058.0 MS | 06/02/14 | 106 | 99 | 94 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0284-058.0 MSD | 06/02/14 | 108 | 104 | 94 | 105 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/02/14 | 103 | 94 | 96 | 107 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 06/03/14 | 103 | 109 | 96 | 97 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/03/14 | 96 | 96 | 96 | 104 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/03/14 | 97 | 96 | 99 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 06/03/14 | 99 | 100 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0285-033.0 | 06/03/14 | 94 | 99 | 105 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0285-038.0 | 06/03/14 | 98 | 98 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0285-043.0 | 06/03/14 | 93 | 97 | 105 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0285-048.0 | 06/03/14 | 95 | 101 | 105 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0285-058.0 | 06/03/14 | 98 | 101 | 95 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0285-058.0 MS | 06/03/14 | 99 | 101 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0285-058.0 MSD | 06/03/14 | 96 | 96 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0286-028.0 | 06/03/14 | 99 | 99 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0286-033.0 | 06/03/14 | 97 | 100 | 100 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0286-038.0 | 06/03/14 | 96 | 99 | 99 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0286-043.0 | 06/03/14 | 98 | 99 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0286-048.0 | 06/03/14 | 94 | 100 | 106 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0286-058.0 | 06/03/14 | 100 | 102 | 99 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0286-058.0 MS | 06/03/14 | 99 | 103 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0286-058.0 MSD | 06/03/14 | 102 | 107 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0287-028.0 | 06/03/14 | 101 | 104 | 97 | 98 | Pass | Pass | Pass | Pass |

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 14-13 |
| **On-site Dates**: 5/28/14-6/13/14 | **Client Project Manager**: Crystal Towns | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0287-033.0 | 06/03/14 | 98 | 100 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0287-038.0 | 06/03/14 | 98 | 98 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0287-043.0 | 06/03/14 | 98 | 102 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0288-028.0 | 06/03/14 | 98 | 100 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0288-033.0 | 06/03/14 | 99 | 100 | 101 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0288-038.0 | 06/03/14 | 101 | 104 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0288-043.0 | 06/03/14 | 98 | 98 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-IDW195128 1:10 | 06/03/14 | 98 | 99 | 99 | 99 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/03/14 | 98 | 98 | 100 | 99 | Pass | Pass | Pass | Pass |
| BLANK | 06/03/14 | 98 | 102 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0289-010.0 | 06/03/14 | 99 | 99 | 101 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0289-018.0 | 06/03/14 | 92 | 93 | 106 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0289-018.0 MS | 06/03/14 | 98 | 100 | 100 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0289-018.0 MSD | 06/03/14 | 101 | 102 | 98 | 100 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/03/14 | 95 | 90 | 101 | 106 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 06/04/14 | 99 | 97 | 98 | 100 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/04/14 | 97 | 97 | 99 | 105 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/04/14 | 96 | 94 | 99 | 109 | Pass | Pass | Pass | Pass |
| BLANK | 06/04/14 | 96 | 96 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0289-023.0 | 06/04/14 | 93 | 94 | 105 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0289-023.0 MS | 06/04/14 | 99 | 95 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0289-023.0 MSD | 06/04/14 | 98 | 95 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0289-028.0 | 06/04/14 | 101 | 102 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0289-033.0 | 06/04/14 | 97 | 99 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0289-038.0 1:50 | 06/04/14 | 92 | 97 | 106 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0289-043.0 1:100 | 06/04/14 | 90 | 92 | 107 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0289-048.0 1:50 | 06/04/14 | 92 | 95 | 105 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0289-058.0 | 06/04/14 | 92 | 97 | 105 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0290-033.0 | 06/04/14 | 94 | 99 | 104 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0290-038.0 | 06/04/14 | 99 | 100 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0290-043.0 | 06/04/14 | 99 | 95 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0290-048.0 1:20 | 06/04/14 | 97 | 97 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0290-058.0 | 06/04/14 | 99 | 98 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0290-058.0 MS | 06/04/14 | 101 | 104 | 97 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0290-058.0 MSD | 06/04/14 | 100 | 102 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0291-033.0 1:20 | 06/04/14 | 98 | 96 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0291-038.0 1:100 | 06/04/14 | 98 | 95 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0291-043.0 1:50 | 06/04/14 | 98 | 97 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0291-048.0 | 06/04/14 | 99 | 100 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0291-058.0 | 06/04/14 | 97 | 95 | 99 | 98 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/04/14 | 104 | 111 | 95 | 100 | Pass | Pass | Pass | Pass |

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 14-13 |
| **On-site Dates**: 5/28/14-6/13/14 | **Client Project Manager**: Crystal Towns | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| BLANK | 06/04/14 | 103 | 107 | 96 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0292-033.0 1:20 | 06/04/14 | 98 | 96 | 100 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0292-038.0 1:20 | 06/05/14 | 91 | 89 | 98 | 98 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 06/05/14 | 100 | 100 | 97 | 98 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/05/14 | 98 | 99 | 98 | 105 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/05/14 | 100 | 100 | 97 | 101 | Pass | Pass | Pass | Pass |
| BLANK | 06/05/14 | 97 | 95 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0292-43 1:20 | 06/05/14 | 96 | 92 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0292-048.0 | 06/05/14 | 100 | 98 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0292-058.0 | 06/05/14 | 98 | 97 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0292-058.0 MS | 06/05/14 | 100 | 98 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0292-058.0 MSD | 06/05/14 | 100 | 99 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0293-033.0 | 06/05/14 | 99 | 100 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0293-038.0 | 06/05/14 | 100 | 100 | 98 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0293-043.0 1:10 | 06/05/14 | 98 | 94 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0293-048.0 1:10 | 06/05/14 | 98 | 97 | 99 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0293-058.0 | 06/05/14 | 98 | 96 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-IDW195129 1:10 | 06/05/14 | 102 | 106 | 97 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0294-018.0 | 06/05/14 | 101 | 102 | 97 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0294-023.0 | 06/05/14 | 103 | 101 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0294-028.0 | 06/05/14 | 101 | 104 | 97 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0294-033.0 1:200 | 06/05/14 | 98 | 98 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0294-038.0 | 06/05/14 | 100 | 107 | 97 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0294-043.0 | 06/05/14 | 100 | 98 | 96 | 100 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/05/14 | 95 | 90 | 101 | 102 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 06/06/14 | 101 | 101 | 98 | 100 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/06/14 | 99 | 96 | 98 | 103 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/06/14 | 102 | 102 | 95 | 111 | Pass | Pass | Pass | Pass |
| BLANK | 06/06/14 | 100 | 97 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0295-018.0 | 06/06/14 | 102 | 102 | 97 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0295-023.0 | 06/06/14 | 102 | 98 | 96 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0295-023.0 MS | 06/06/14 | 101 | 100 | 97 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0295-023.0 MSD | 06/06/14 | 101 | 96 | 97 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0295-028.0 | 06/06/14 | 104 | 107 | 96 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0295-033.0 1:200 | 06/06/14 | 100 | 102 | 96 | 99 | Pass | Pass | Pass | Pass |
| BLANK | 06/06/14 | 107 | 109 | 94 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0295-038.0 1:10 | 06/06/14 | 100 | 100 | 96 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0295-043.0 | 06/06/14 | 101 | 104 | 96 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0296-033.0 | 06/06/14 | 104 | 106 | 95 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0296-038.0 1:10 | 06/06/14 | 100 | 96 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0296-043.0 1:10 | 06/06/14 | 102 | 102 | 97 | 98 | Pass | Pass | Pass | Pass |

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 14-13 |
| **On-site Dates**: 5/28/14-6/13/14 | **Client Project Manager**: Crystal Towns | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0296-048.0 1:20 | 06/06/14 | 102 | 98 | 96 | 99 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/06/14 | 100 | 95 | 98 | 103 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 06/09/14 | 111 | 117 | 90 | 100 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/09/14 | 103 | 97 | 94 | 105 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/09/14 | 105 | 100 | 93 | 112 | Pass | Pass | Pass | Pass |
| BLANK | 06/09/14 | 104 | 102 | 93 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0296-058.0 | 06/09/14 | 106 | 101 | 93 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0296-058.0 MS | 06/09/14 | 105 | 101 | 94 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0296-058.0 MSD | 06/09/14 | 104 | 98 | 94 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0297-033.0 | 06/09/14 | 105 | 100 | 93 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0297-038.0 | 06/09/14 | 105 | 99 | 93 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0297-043.0 1:10 | 06/09/14 | 105 | 103 | 94 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0297-048.0 1:10 | 06/09/14 | 106 | 103 | 94 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0298-033.0 1:10 | 06/09/14 | 106 | 104 | 94 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0298-038.0 1;10 | 06/09/14 | 107 | 106 | 93 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0298-043.0 1;20 | 06/09/14 | 104 | 99 | 94 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0298-048.0 1:10 | 06/09/14 | 106 | 102 | 93 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0298-058.0 | 06/09/14 | 109 | 109 | 92 | 99 | Pass | Pass | Pass | Pass |
| CRHE-IDW195130 1:10 | 06/09/14 | 105 | 104 | 94 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0299-033.0 | 06/09/14 | 107 | 106 | 93 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0299-038.0 | 06/09/14 | 106 | 106 | 92 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0299-043.0 | 06/09/14 | 108 | 106 | 92 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0299-048.0 | 06/09/14 | 108 | 104 | 91 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0300-038.0 | 06/09/14 | 107 | 106 | 93 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0300-043.0 | 06/09/14 | 108 | 104 | 91 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0300-048.0 | 06/09/14 | 108 | 104 | 93 | 98 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/09/14 | 105 | 96 | 96 | 103 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 06/10/14 | 97 | 99 | 98 | 100 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/10/14 | 96 | 96 | 99 | 104 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/10/14 | 99 | 102 | 99 | 105 | Pass | Pass | Pass | Pass |
| BLANK | 06/10/14 | 97 | 98 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0300-058.0 | 06/10/14 | 98 | 100 | 99 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0300-058.0 MS | 06/10/14 | 97 | 100 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0300-058.0 MSD | 06/10/14 | 97 | 99 | 100 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0301-038.0 1:20 | 06/10/14 | 99 | 98 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0301-043.0 1:20 | 06/10/14 | 100 | 100 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0301-048.0 1:10 | 06/10/14 | 96 | 97 | 101 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0301-058.0 | 06/10/14 | 100 | 101 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0302-043.0 1:20 | 06/10/14 | 98 | 97 | 102 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0302-048.0 1:10 | 06/10/14 | 97 | 98 | 100 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0303-038.0 | 06/10/14 | 100 | 110 | 99 | 102 | Pass | Pass | Pass | Pass |

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 14-13 |
| **On-site Dates**: 5/28/14-6/13/14 | **Client Project Manager**: Crystal Towns | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0303-043.0 | 06/10/14 | 98 | 103 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0303-048.0 | 06/10/14 | 97 | 99 | 100 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0304-033.0 | 06/10/14 | 100 | 107 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0304-038.0 | 06/10/14 | 99 | 98 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0304-043.0 | 06/10/14 | 98 | 102 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0304-048.0 | 06/10/14 | 99 | 104 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0304-058.0 | 06/10/14 | 100 | 102 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-IDW197034 1:10 | 06/10/14 | 100 | 103 | 99 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0305-038.0 | 06/10/14 | 100 | 104 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0305-043.0 | 06/10/14 | 100 | 102 | 98 | 99 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/10/14 | 94 | 92 | 102 | 104 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 06/11/14 | 100 | 107 | 98 | 99 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/11/14 | 99 | 97 | 100 | 104 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/11/14 | 98 | 97 | 98 | 103 | Pass | Pass | Pass | Pass |
| BLANK | 06/11/14 | 97 | 100 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0306-033.0 1:5 | 06/11/14 | 98 | 99 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0306-038.0 | 06/11/14 | 102 | 108 | 97 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0306-043.0 | 06/11/14 | 99 | 99 | 99 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0306-043.0 MS | 06/11/14 | 100 | 101 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0306-043.0 MSD | 06/11/14 | 97 | 98 | 100 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0307-028.0 | 06/11/14 | 99 | 100 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0307-033.0 | 06/11/14 | 99 | 103 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0307-038.0 | 06/11/14 | 99 | 100 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0307-043.0 | 06/11/14 | 100 | 103 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0307-048.0 | 06/11/14 | 102 | 107 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0307-058.0 | 06/11/14 | 100 | 99 | 102 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0308-028.0 | 06/11/14 | 102 | 109 | 97 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0308-033.0 | 06/11/14 | 99 | 99 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0308-038.0 | 06/11/14 | 99 | 100 | 98 | 98 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/11/14 | 96 | 94 | 101 | 104 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/11/14 | 99 | 104 | 97 | 114 | Pass | Pass | Pass | Pass |
| BLANK | 06/11/14 | 99 | 101 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0308-043.0 | 06/11/14 | 100 | 104 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0308-048.0 | 06/11/14 | 102 | 103 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0308-058.0 | 06/11/14 | 99 | 102 | 97 | 98 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/11/14 | 95 | 92 | 101 | 106 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 06/12/14 | 99 | 98 | 99 | 99 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/12/14 | 97 | 92 | 100 | 106 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/12/14 | 98 | 98 | 98 | 104 | Pass | Pass | Pass | Pass |
| BLANK | 06/12/14 | 99 | 98 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0309-033.0 | 06/12/14 | 101 | 100 | 99 | 100 | Pass | Pass | Pass | Pass |

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 14-13 |
| **On-site Dates**: 5/28/14-6/13/14 | **Client Project Manager**: Crystal Towns | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0309-038.0 1:10 | 06/12/14 | 101 | 101 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0309-043.0 1:10 | 06/12/14 | 98 | 97 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0309-048.0 | 06/12/14 | 103 | 108 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0309-058.0 | 06/12/14 | 99 | 100 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0309-058.0 MS | 06/12/14 | 100 | 100 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0309-058.0 MSD | 06/12/14 | 99 | 98 | 99 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0310-033.0 | 06/12/14 | 102 | 103 | 99 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0310-038.0 | 06/12/14 | 100 | 101 | 96 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0310-043.0 | 06/12/14 | 99 | 101 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0310-048.0 | 06/12/14 | 99 | 100 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0310-058.0 | 06/12/14 | 99 | 98 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0311-033.0 1:10 | 06/12/14 | 101 | 102 | 97 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0311-038.0 1:20 | 06/12/14 | 98 | 97 | 99 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0311-043.0 1:50 | 06/12/14 | 99 | 104 | 98 | 98 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/12/14 | 97 | 99 | 101 | 105 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 06/13/14 | 102 | 107 | 96 | 100 | Pass | Pass | Pass | Pass |
| CCS 50 | 06/13/14 | 99 | 100 | 99 | 104 | Pass | Pass | Pass | Pass |
| LCS 20 | 06/13/14 | 97 | 96 | 98 | 105 | Pass | Pass | Pass | Pass |
| BLANK | 06/13/14 | 101 | 103 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0311-048.0 | 06/13/14 | 104 | 104 | 97 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0311-058.0 | 06/13/14 | 102 | 99 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0311-048.0 1:20 | 06/13/14 | 100 | 98 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0312-033.0 | 06/13/14 | 101 | 105 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0312-038.0 | 06/13/14 | 99 | 96 | 100 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0312-043.0 1:10 | 06/13/14 | 100 | 100 | 100 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0312-048.0 1:10 | 06/13/14 | 101 | 100 | 98 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0312-058.0 | 06/13/14 | 100 | 100 | 98 | 97 | Pass | Pass | Pass | Pass |
| CRHE-IDW197035 1:10 | 06/13/14 | 101 | 102 | 97 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0311-058.0 MS | 06/13/14 | 101 | 99 | 99 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0311-058.0 MSD | 06/13/14 | 99 | 95 | 98 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0313-033.0 | 06/13/14 | 100 | 101 | 98 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0313-038.0 | 06/13/14 | 100 | 97 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0313-043.0 | 06/13/14 | 101 | 97 | 99 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0313-048.0 | 06/13/14 | 99 | 98 | 98 | 101 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

# Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-13 |
| **Onsite Dates:** 5/28/14-6/13/14 | **Client Project Manager:** Crystal Towns | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0268-058.0 **Date of Analysis:** 5/28/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 84 | 94 | 12 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 116 | 115 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 103 | 106 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 106 | 105 | 1 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 101 | 104 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 98 | 101 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT272-058.0 **Date of Analysis:** 5/28/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 86 | 90 | 5 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 98 | 102 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 91 | 94 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 92 | 94 | 2 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 90 | 93 | 4 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 89 | 91 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0274-058.0 **Date of Analysis:** 5/29/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 100 | 87 | 13 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 119 | 113 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 109 | 102 | 7 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 111 | 103 | 7 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 108 | 99 | 8 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 102 | 94 | 8 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0277-058.0 **Date of Analysis:** 5/30/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 80 | 86 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 73 | 95 | 26 | Pass | Pass | > RPDL |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 105 | 94 | 11 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 111 | 97 | 13 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 104 | 95 | 10 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 103 | 90 | 14 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-13 |
| **Onsite Dates:** 5/28/14-6/13/14 | **Client Project Manager:** Crystal Towns | **Matrix**: Water |

**Samples:** CRHE-DPT0280-043.0 **Date of Analysis:** 5/30/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 61 | 83 | 32 | Pass | Pass | > RPDL |
| 1,1-Dichloroethene | 30 | 165 | 20 | 58 | 67 | 13 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 92 | 100 | 8 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 97 | 102 | 5 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 90 | 101 | 12 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 89 | 95 | 7 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0281-043.0 **Date of Analysis:**

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 84 | 63 | 29 | Pass | Pass | > RPDL |
| 1,1-Dichloroethene | 30 | 165 | 20 | 106 | 146 | 31 | Pass | Pass | > RPDL |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 59 | 87 | 38 | Pass | Pass | > RPDL |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 107 | 90 | 17 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 104 | 96 | 7 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 100 | 98 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0284-058.0 **Date of Analysis:** 6/2/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 84 | NA | NA | Pass | NA | NA |
| 1,1-Dichloroethene | 30 | 165 | 20 | 157 | NA | NA | Pass | NA | NA |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 98 | NA | NA | Pass | NA | NA |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 103 | NA | NA | Pass | NA | NA |
| Trichloroethene | 52 | 143 | 20 | 105 | NA | NA | Pass | NA | NA |
| Tetrachloroethene | 50 | 144 | 20 | 102 | NA | NA | Pass | NA | NA |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines. MSD not spiked.

**Samples:** CRHE-DPT0285-058.0 **Date of Analysis:** 6/3/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 111 | 100 | 10 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 110 | 96 | 14 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 97 | 85 | 13 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 96 | 87 | 10 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 97 | 88 | 10 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 99 | 91 | 8 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-13 |
| **Onsite Dates:** 5/28/14-6/13/14 | **Client Project Manager:** Crystal Towns | **Matrix**: Water |

**Samples:** CRHE-DPT0286-058.0 **Date of Analysis:** 6/3/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 108 | 105 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 105 | 105 | 0 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 94 | 93 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 94 | 93 | 1 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 95 | 94 | 2 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 96 | 96 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0289-018.0 **Date of Analysis:** 6/3/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 108 | NA | NA | Pass | NA | NA |
| 1,1-Dichloroethene | 30 | 165 | 20 | 107 | NA | NA | Pass | NA | NA |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 95 | NA | NA | Pass | NA | NA |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 92 | NA | NA | Pass | NA | NA |
| Trichloroethene | 52 | 143 | 20 | 97 | NA | NA | Pass | NA | NA |
| Tetrachloroethene | 50 | 144 | 20 | 100 | NA | NA | Pass | NA | NA |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines. MSD not spiked.

**Samples:** CRHE-DPT0289-023.0 **Date of Analysis:** 6/4/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 108 | 105 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 109 | 105 | 4 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 95 | 93 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 94 | 94 | 0 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 96 | 96 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 99 | 99 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0290-058.0 **Date of Analysis:** 6/4/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 124 | 115 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 126 | 113 | 11 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 110 | 102 | 7 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 108 | 100 | 7 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 112 | 102 | 9 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 113 | 105 | 7 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-13 |
| **Onsite Dates:** 5/28/14-6/13/14 | **Client Project Manager:** Crystal Towns | **Matrix**: Water |

**Samples:** CRHE-DPT0292-058.0 **Date of Analysis:** 6/5/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 97 | 103 | 6 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 104 | 107 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 93 | 95 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 91 | 96 | 5 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 93 | 97 | 5 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 96 | 100 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0295-023.0 **Date of Analysis:** 6/6/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 88 | 90 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 101 | 101 | 0 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 88 | 88 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 91 | 90 | 2 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 91 | 88 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 91 | 88 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0296-058.0 **Date of Analysis:** 6/9/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 102 | 94 | 8 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 109 | 97 | 11 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 96 | 87 | 10 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 99 | 90 | 10 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 100 | 92 | 8 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 97 | 89 | 9 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0300-058.0 **Date of Analysis:** 6/10/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 102 | 97 | 6 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 104 | 98 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 92 | 88 | 4 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 91 | 86 | 5 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 93 | 87 | 6 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 95 | 90 | 6 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-13 |
| **Onsite Dates:** 5/28/14-6/13/14 | **Client Project Manager:** Crystal Towns | **Matrix**: Water |

**Samples:** CRHE-DPT0306-043.0 **Date of Analysis:** 6/11/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 99 | 89 | 10 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 106 | 100 | 6 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 94 | 87 | 7 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 94 | 89 | 5 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 94 | 88 | 7 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 95 | 91 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0309-058.0 **Date of Analysis:** 6/12/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 102 | 95 | 8 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 108 | 98 | 10 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 92 | 88 | 5 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 95 | 87 | 9 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 98 | 88 | 11 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 97 | 90 | 8 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0311-058.0 **Date of Analysis:** 6/13/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 94 | 92 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 107 | 106 | 0 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 94 | 94 | 0 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 44 | 43 | 1 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 98 | 96 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 97 | 97 | 0 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-13 |
| **Onsite Dates:** 5/28/14-6/13/14 | **Client Project Manager:** Crystal Towns | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 — **Date of Analysis:** 5/28/2014
LCS 2 — 5/28/2014
LCS 3 — 5/29/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 23 | to | 168 | 116 | 106 | 86 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 39 | to | 161 | 124 | 123 | 109 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 120 | 110 | 96 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 122 | 109 | 101 | Pass | Pass | Pass |
| Trichloroethene | 55 | to | 145 | 115 | 110 | 95 | Pass | Pass | Pass |
| Tetrachloroethene | 53 | to | 147 | 109 | 105 | 94 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 — **Date of Analysis:** 5/30/2014
LCS 5 — 5/30/2014
LCS 6 — 6/2/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | LCS#6 | LCS#4 | LCS#5 | LCS#6 |
| Vinyl Chloride | 23 | to | 168 | 91 | 75 | 77 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 39 | to | 161 | 100 | 64 | 143 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 100 | 94 | 88 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 102 | 96 | 90 | Pass | Pass | Pass |
| Trichloroethene | 55 | to | 145 | 100 | 95 | 98 | Pass | Pass | Pass |
| Tetrachloroethene | 53 | to | 147 | 95 | 91 | 99 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 7 — **Date of Analysis:** 6/2/2014
LCS 8 — 6/3/2014
LCS 9 — 6/3/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#7 | LCS#8 | LCS#9 | LCS#7 | LCS#8 | LCS#9 |
| Vinyl Chloride | 23 | to | 168 | 110 | 99 | 108 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 39 | to | 161 | 177 | 97 | 107 | > UCL | Pass | Pass |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 118 | 87 | 95 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 123 | 85 | 93 | Pass | Pass | Pass |
| Trichloroethene | 55 | to | 145 | 135 | 88 | 96 | Pass | Pass | Pass |
| Tetrachloroethene | 53 | to | 147 | 123 | 91 | 100 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-13 |
| **Onsite Dates:** 5/28/14-6/13/14 | **Client Project Manager:** Crystal Towns | **Matrix**: Water |

**Samples:** LCS 10 **Date of Analysis:** 6/4/2014
LCS 11 6/4/2014
LCS 12 6/5/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#10 | LCS#11 | LCS#12 | LCS#10 | LCS#11 | LCS#12 |
| Vinyl Chloride | 23 | to | 168 | 101 | 132 | 110 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 39 | to | 161 | 102 | 133 | 113 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 90 | 118 | 99 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 87 | 117 | 99 | Pass | Pass | Pass |
| Trichloroethene | 55 | to | 145 | 91 | 120 | 103 | Pass | Pass | Pass |
| Tetrachloroethene | 53 | to | 147 | 94 | 118 | 106 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 13 **Date of Analysis:** 6/6/2014
LCS 14 6/9/2014
LCS 15 6/10/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#13 | LCS#14 | LCS#15 | LCS#13 | LCS#14 | LCS#15 |
| Vinyl Chloride | 23 | to | 168 | 114 | 107 | 106 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 39 | to | 161 | 117 | 111 | 109 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 101 | 97 | 97 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 103 | 103 | 95 | Pass | Pass | Pass |
| Trichloroethene | 55 | to | 145 | 105 | 105 | 97 | Pass | Pass | Pass |
| Tetrachloroethene | 53 | to | 147 | 106 | 102 | 99 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 16 **Date of Analysis:** 6/11/2014
LCS 17 6/11/2014
LCS 18 6/12/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#16 | LCS#17 | LCS#18 | LCS#16 | LCS#17 | LCS#18 |
| Vinyl Chloride | 23 | to | 168 | 102 | 115 | 94 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 39 | to | 161 | 102 | 114 | 97 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 92 | 100 | 85 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 90 | 100 | 85 | Pass | Pass | Pass |
| Trichloroethene | 55 | to | 145 | 93 | 101 | 89 | Pass | Pass | Pass |
| Tetrachloroethene | 53 | to | 147 | 95 | 103 | 87 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-13 |
| **Onsite Dates:** 5/28/14-6/13/14 | **Client Project Manager:** Crystal Towns | **Matrix**: Water |

**Samples:** LCS 19 **Date of Analysis:** 6/13/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#19 | | | LCS#19 | | |
| Vinyl Chloride | 23 | to | 168 | 100 | | | Pass | | |
| 1,1-Dichloroethene | 39 | to | 161 | 103 | | | Pass | | |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 92 | | | Pass | | |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 92 | | | Pass | | |
| Trichloroethene | 55 | to | 145 | 93 | | | Pass | | |
| Tetrachloroethene | 53 | to | 147 | 95 | | | Pass | | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0268-033.0-20140528 | 5/28/2014 | 09:01 | Water | 1, 5 | **68** | 0.30 U | **2.9** | **0.64 I** | 0.19 U | 0.23 U |
| CRHE-DPT0268-038.0-20140528 | 5/28/2014 | 09:21 | Water | 1, 500 | **2100** | 0.30 U | **19.9** | **5.4** | 0.19 U | 0.23 U |
| CRHE-DPT0268-043.0-20140528 | 5/28/2014 | 09:39 | Water | 1, 200 | **1800** | 0.30 U | **22.1** | **34.2** | 0.19 U | 0.23 U |
| CRHE-DPT0268-048.0-20140528 | 5/28/2014 | 09:56 | Water | 1, 100 | **370** | 0.30 U | **5.5** | **20.3** | 0.19 U | 0.23 U |
| CRHE-DPT0268-058.0-20140528 | 5/28/2014 | 10:17 | Water | 1 | **1.2** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0269-038.0-20140528 | 5/28/2014 | 10:51 | Water | 200 | **920** | 60 U | **190 I** | **5700** | 38 U | 46 U |
| CRHE-DPT0269-043.0-20140528 | 5/28/2014 | 11:08 | Water | 100 | **610** | 30 U | **280** | **8100** | **1200** | 23 U |
| CRHE-DPT0269-048.0-20140528 | 5/28/2014 | 11:22 | Water | 50 | **160** | 15 U | **70** | **2000** | 9.5 U | 12 U |
| CRHE-DPT0269-058.0-20140528 | 5/28/2014 | 11:41 | Water | 1 | **2.1** | 0.30 U | **0.36 I** | **19.3** | **0.28 I** | 0.23 U |
| CRHE-DPT0270-038.0-20140528 | 5/28/2014 | 12:56 | Water | 1, 20 | **450** | **1.4** | **24.6** | **860** | **4.1** | 0.23 U |
| CRHE-DPT0270-043.0-20140528 | 5/28/2014 | 13:45 | Water | 100 | **1100** | 30 U | **180** | **7100** | **100** | 23 U |
| CRHE-DPT0270-048.0-20140528 | 5/28/2014 | 14:05 | Water | 100 | **280** | 30 U | **140** | **4300** | **270** | 23 U |
| CRHE-DPT0270-058.0-20140528 | 5/28/2014 | 14:27 | Water | 1 | **0.67 I** | 0.30 U | 0.29 U | **2.2** | 0.19 U | 0.23 U |
| CRHE-DPT0271-038.0-20140528 | 5/28/2014 | 14:51 | Water | 1, 10 | **160** | 0.30 U | **6.4** | **0.35 I** | 0.19 U | 0.23 U |
| CRHE-DPT0271-043.0-20140528 | 5/28/2014 | 15:09 | Water | 1, 500 | **4500** | 0.30 U | **19.9** | 0.22 U | 0.19 U | 0.23 U |

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0271-048.0-20140528 | 5/28/2014 | 15:28 | Water | 50 | **2500** | 15 U | **51** | **2400** | 9.5 U | 12 U |
| CRHE-DPT0271-058.0-20140528 | 5/28/2014 | 15:49 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0272-038.0-20140528 | 5/28/2014 | 16:23 | Water | 1, 20 | **1300** | 0.30 U | **13.2** | **54.1** | 0.19 U | 0.23 U |
| CRHE-DPT0272-043.0-20140528 | 5/28/2014 | 16:42 | Water | 1, 20 | **1400** | **1.3** | **22.3** | **690** | **0.68 I** | 0.23 U |
| CRHE-DPT0272-048.0-20140528 | 5/28/2014 | 17:01 | Water | 100 | **1200** | 30 U | **140** | **4800** | **340** | 23 U |
| CRHE-DPT0272-058.0-20140528 | 5/28/2014 | 17:45 | Water | 1 | **1.4** | 0.30 U | 0.29 U | **0.54 I** | 0.19 U | 0.23 U |
| CRHE-DPT0273-038.0-20140529 | 5/29/2014 | 07:29 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0273-043.0-20140529 | 5/29/2014 | 07:48 | Water | 1 | 0.26 U | 0.30 U | **0.56 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0273-048.0-20140529 | 5/29/2014 | 08:09 | Water | 1 | **67.8** | 0.30 U | **2.6** | **12.0** | 0.19 U | 0.23 U |
| CRHE-DPT0273-058.0-20140529 | 5/29/2014 | 08:28 | Water | 1 | **0.59 I** | 0.30 U | 0.29 U | **0.24 I** | 0.19 U | 0.23 U |
| CRHE-DPT0227-048.0-20140529 | 5/29/2014 | 09:06 | Water | 50 | **1300** | 15 U | **37 I** | **1900** | 9.5 U | 12 U |
| CRHE-DPT0274-033.0-20140529 | 5/29/2014 | 09:44 | Water | 1 | **0.64 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0274-038.0-20140529 | 5/29/2014 | 10:02 | Water | 1 | **7.8** | 0.30 U | **1.9** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0274-043.0-20140529 | 5/29/2014 | 10:22 | Water | 1, 20 | **530** | 0.30 U | **5.5** | **2.1** | 0.19 U | 0.23 U |
| CRHE-DPT0274-048.0-20140529 | 5/29/2014 | 10:42 | Water | 20 | **870** | 6.0 U | **38** | **1400** | 3.8 U | 4.6 U |

# KB LABS, INC.

## Final Data Report

## CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0274-058.0-20140529 | 5/29/2014 | 11:32 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0275-038.0-20140529 | 5/29/2014 | 12:39 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0275-043.0-20140529 | 5/29/2014 | 13:02 | Water | 1 | 0.26 U | 0.30 U | **0.43 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0275-048.0-20140529 | 5/29/2014 | 13:20 | Water | 1 | 0.26 U | 0.30 U | **0.30 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0275-058.0-20140529 | 5/29/2014 | 13:42 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0276-033.0-20140529 | 5/29/2014 | 14:15 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0276-038.0-20140529 | 5/29/2014 | 14:32 | Water | 1 | 0.26 U | 0.30 U | **0.34 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0276-043.0-20140529 | 5/29/2014 | 14:53 | Water | 1 | **25.7** | 0.30 U | **2.8** | **2.5** | 0.19 U | 0.23 U |
| CRHE-DPT0276-048.0-20140529 | 5/29/2014 | 15:12 | Water | 1 | **100** | 0.30 U | **7.1** | **110** | **0.81 I** | 0.23 U |
| CRHE-DPT0276-058.0-20140529 | 5/29/2014 | 15:40 | Water | 1 | **0.75 I** | 0.30 U | 0.29 U | **1.1** | 0.19 U | 0.23 U |
| CRHE-DPT0277-038.0-20140530 | 5/30/2014 | 07:29 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.90 I** | 0.19 U | 0.23 U |
| CRHE-DPT0277-043.0-20140530 | 5/30/2014 | 07:46 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.85 I** | 0.19 U | 0.23 U |
| CRHE-DPT0277-048.0-20140530 | 5/30/2014 | 08:05 | Water | 1 | **1.0** | **1.0** | 0.29 U | **3.1** | 0.19 U | 0.23 U |
| CRHE-DPT0277-058.0-20140530 | 5/30/2014 | 08:25 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0278-028.0-20140530 | 5/30/2014 | 08:59 | Water | 1 | **3.0** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0278-033.0-20140530 | 5/30/2014 | 09:15 | Water | 1 | **17.3** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0278-038.0-20140530 | 5/30/2014 | 09:33 | Water | 1 | **1.8** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0278-043.0-20140530 | 5/30/2014 | 09:49 | Water | 1 | **1.7** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0278-048.0-20140530 | 5/30/2014 | 10:07 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0279-028.0-20140530 | 5/30/2014 | 10:38 | Water | 1 | **32.4** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0279-033.0-20140530 | 5/30/2014 | 11:21 | Water | 1 | **29.8** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0279-038.0-20140530 | 5/30/2014 | 11:38 | Water | 1, 2 | **110** | 0.30 U | **1.1** | **0.40 I** | 0.19 U | 0.23 U |
| CRHE-DPT0279-043.0-20140530 | 5/30/2014 | 11:57 | Water | 1 | **100** | 0.30 U | **1.3** | **1.7** | 0.19 U | 0.23 U |
| CRHE-DPT0279-048.0-20140530 | 5/30/2014 | 13:46 | Water | 1 | **2.6** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0280-023.0-20140530 | 5/30/2014 | 14:22 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0280-028.0-20140530 | 5/30/2014 | 14:39 | Water | 1 | **1.6** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0280-033.0-20140530 | 5/30/2014 | 15:37 | Water | 1 | **74.9** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0280-038.0-20140530 | 5/30/2014 | 15:58 | Water | 1 | **31.9** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0280-043.0-20140530 | 5/30/2014 | 16:16 | Water | 1 | **7.4** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0280-048.0-20140530 | 5/30/2014 | 16:35 | Water | 1 | **0.93 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0281-028.0-20140602 | 6/2/2014 | 07:30 | Water | 1 | **0.35 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0281-033.0-20140602 | 6/2/2014 | 07:47 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0281-038.0-20140602 | 6/2/2014 | 08:32 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0281-043.0-20140602 | 6/2/2014 | 08:50 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0281-048.0-20140602 | 6/2/2014 | 09:09 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0282-023.0-20140602 | 6/2/2014 | 09:39 | Water | 1 | **10.7** | 0.30 U | 0.29 U | **0.30 I** | 0.19 U | 0.23 U |
| CRHE-DPT0282-028.0-20140602 | 6/2/2014 | 09:54 | Water | 1 | **7.2** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0282-033.0-20140602 | 6/2/2014 | 10:09 | Water | 1 | **49.6** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0282-038.0-20140602 | 6/2/2014 | 10:25 | Water | 1 | **26.5** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0282-043.0-20140602 | 6/2/2014 | 10:41 | Water | 1 | **16.5** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0282-048.0-20140602 | 6/2/2014 | 11:17 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0282-058.0-20140602 | 6/2/2014 | 11:37 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0283-028.0-20140602 | 6/2/2014 | 12:36 | Water | 1 | **6.1** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0283-033.0-20140602 | 6/2/2014 | 12:53 | Water | 1 | **29.6** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0283-038.0-20140602 | 6/2/2014 | 13:09 | Water | 1 | **58.2** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0283-043.0-20140602 | 6/2/2014 | 13:28 | Water | 1 | **33.5** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0283-048.0-20140602 | 6/2/2014 | 13:49 | Water | 1 | **2.8** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0284-028.0-20140602 | 6/2/2014 | 14:25 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0284-033.0-20140602 | 6/2/2014 | 14:39 | Water | 1 | **10.2** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0284-038.0-20140602 | 6/2/2014 | 14:57 | Water | 1 | **75.0** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0284-043.0-20140602 | 6/2/2014 | 15:46 | Water | 1 | **35.5** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0284-048.0-20140602 | 6/2/2014 | 16:09 | Water | 1 | **4.1** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0284-058.0-20140602 | 6/2/2014 | 16:33 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0285-033.0-20140603 | 6/3/2014 | 07:33 | Water | 1 | **48.0** | 0.30 U | 0.29 U | **7.0** | 0.19 U | 0.23 U |
| CRHE-DPT0285-038.0-20140603 | 6/3/2014 | 07:59 | Water | 1 | **170** | 0.30 U | **1.1** | **49.5** | 0.19 U | 0.23 U |
| CRHE-DPT0285-043.0-20140603 | 6/3/2014 | 08:17 | Water | 1 | **100** | 0.30 U | **0.74 I** | **5.3** | 0.19 U | 0.23 U |
| CRHE-DPT0285-048.0-20140603 | 6/3/2014 | 08:35 | Water | 1 | **22.6** | 0.30 U | 0.29 U | **0.93 I** | 0.19 U | 0.23 U |
| CRHE-DPT0285-058.0-20140603 | 6/3/2014 | 08:45 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0286-028.0-20140603 | 6/3/2014 | 09:32 | Water | 1 | **33.1** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0286-033.0-20140603 | 6/3/2014 | 09:48 | Water | 1 | **36.8** | 0.30 U | 0.29 U | **0.62 I** | 0.19 U | 0.23 U |

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0286-038.0-20140603 | 6/3/2014 | 10:29 | Water | 1 | **63.2** | 0.30 U | 0.29 U | **0.83 I** | 0.19 U | 0.23 U |
| CRHE-DPT0286-043.0-20140603 | 6/3/2014 | 10:47 | Water | 1 | **5.7** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0286-048.0-20140603 | 6/3/2014 | 11:06 | Water | 1 | **1.2** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0286-058.0-20140603 | 6/3/2014 | 11:34 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0287-028.0-20140603 | 6/3/2014 | 12:46 | Water | 1 | **0.89 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0287-033.0-20140603 | 6/3/2014 | 13:04 | Water | 1 | **9.6** | 0.30 U | 0.29 U | **0.28 I** | 0.19 U | 0.23 U |
| CRHE-DPT0287-038.0-20140603 | 6/3/2014 | 13:25 | Water | 1 | **65.4** | 0.30 U | 0.29 U | **2.3** | 0.19 U | 0.23 U |
| CRHE-DPT0287-043.0-20140603 | 6/3/2014 | 13:45 | Water | 1 | **71.1** | 0.30 U | 0.29 U | **0.83 I** | 0.19 U | 0.23 U |
| CRHE-DPT0288-028.0-20140603 | 6/3/2014 | 14:43 | Water | 1 | **1.7** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0288-033.0-20140603 | 6/3/2014 | 15:01 | Water | 1 | **2.2** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0288-038.0-20140603 | 6/3/2014 | 15:49 | Water | 1 | **24.5** | 0.30 U | **0.34 I** | **12.1** | 0.19 U | 0.23 U |
| CRHE-DPT0288-043.0-20140603 | 6/3/2014 | 16:07 | Water | 1 | **40.6** | 0.30 U | **1.3** | **140** | 0.19 U | 0.23 U |
| CRHE-DPT0289-010.0-20140603 | 6/3/2014 | 16:59 | Water | 1 | **1.2** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0289-018.0-20140603 | 6/3/2014 | 17:12 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0289-023.0-20140604 | 6/4/2014 | 07:28 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0289-028.0-20140604 | 6/4/2014 | 07:43 | Water | 1 | 0.26 U | 0.30 U | **0.58 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0289-033.0-20140604 | 6/4/2014 | 08:00 | Water | 1 | **110** | 0.30 U | **3.5** | **40.8** | 0.19 U | 0.23 U |
| CRHE-DPT0289-038.0-20140604 | 6/4/2014 | 08:18 | Water | 50 | **550** | 15 U | **80** | **2600** | 9.5 U | 12 U |
| CRHE-DPT0289-043.0-20140604 | 6/4/2014 | 08:35 | Water | 100 | **540** | 30 U | **180** | **5600** | **220** | 23 U |
| CRHE-DPT0289-048.0-20140604 | 6/4/2014 | 08:54 | Water | 50 | **320** | 15 U | **110** | **2700** | **190** | 12 U |
| CRHE-DPT0289-058.0-20140604 | 6/4/2014 | 09:43 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.28 I** | 0.19 U | 0.23 U |
| CRHE-DPT0290-033.0-20140604 | 6/4/2014 | 10:45 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0290-038.0-20140604 | 6/4/2014 | 11:04 | Water | 1 | **4.3** | 0.30 U | **0.34 I** | **0.51 I** | 0.19 U | 0.23 U |
| CRHE-DPT0290-043.0-20140604 | 6/4/2014 | 11:23 | Water | 1 | **58.1** | 0.30 U | **3.4** | **120** | 0.19 U | 0.23 U |
| CRHE-DPT0290-048.0-20140604 | 6/4/2014 | 11:43 | Water | 20 | **230** | 6.0 U | **51** | **1500** | 3.8 U | 4.6 U |
| CRHE-DPT0290-058.0-20140604 | 6/4/2014 | 12:04 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.29 I** | 0.19 U | 0.23 U |
| CRHE-DPT0291-033.0-20140604 | 6/4/2014 | 14:04 | Water | 20 | **1600** | 6.0 U | **45** | **1200** | 3.8 U | 4.6 U |
| CRHE-DPT0291-038.0-20140604 | 6/4/2014 | 14:28 | Water | 100 | **1100** | 30 U | **140** | **4900** | **37 I** | 23 U |
| CRHE-DPT0291-043.0-20140604 | 6/4/2014 | 14:41 | Water | 50 | **560** | 15 U | **92** | **2500** | **180** | 12 U |
| CRHE-DPT0291-048.0-20140604 | 6/4/2014 | 15:02 | Water | 1 | **63.3** | 0.30 U | **7.2** | **210** | **0.77 I** | 0.23 U |

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0291-058.0-20140604 | 6/4/2014 | 15:58 | Water | 1 | **0.28 I** | 0.30 U | 0.29 U | **1.0** | 0.19 U | 0.23 U |
| CRHE-DPT0292-033.0-20140604 | 6/4/2014 | 16:47 | Water | 20 | **1700** | 6.0 U | **23** | **20 I** | 3.8 U | 4.6 U |
| CRHE-DPT0292-038.0-20140604 | 6/4/2014 | 17:05 | Water | 20 | **1400** | 6.0 U | **28** | **25** | 3.8 U | 4.6 U |
| CRHE-DPT0292-043.0-20140604 | 6/5/2014 | 17:25 | Water | 20 | **1100** | 6.0 U | **13 I** | **14 I** | 3.8 U | 4.6 U |
| CRHE-DPT0292-048.0-20140605 | 6/5/2014 | 08:06 | Water | 1 | **25.4** | 0.30 U | **1.0** | **5.8** | 0.19 U | 0.23 U |
| CRHE-DPT0292-058.0-20140605 | 6/5/2014 | 08:26 | Water | 1 | **4.3** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0293-033.0-20140605 | 6/5/2014 | 09;12 | Water | 1 | **0.53 I** | 0.30 U | **0.47 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0293-038.0-20140605 | 6/5/2014 | 09:28 | Water | 1 | **37.6** | 0.30 U | **2.9** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0293-043.0-20140605 | 6/5/2014 | 09:46 | Water | 10 | **260** | 3.0 U | **3.6 I** | **27** | 1.9 U | 2.3 U |
| CRHE-DPT0293-048.0-20140605 | 6/5/2014 | 10:02 | Water | 10 | **100** | 3.0 U | **3.4 I** | **100** | 1.9 U | 2.3 U |
| CRHE-DPT0293-058.0-20140605 | 6/5/2014 | 11:02 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0294-018.0-20140605 | 6/5/2014 | 14:07 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0294-023.0-20140605 | 6/5/2014 | 14:29 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0294-028.0-20140605 | 6/5/2014 | 14:57 | Water | 1 | **38.6** | 0.30 U | **0.66 I** | **34.8** | 0.19 U | 0.23 U |
| CRHE-DPT0294-033.0-20140605 | 6/5/2014 | 15:53 | Water | 200 | **2200** | 60 U | **110 I** | **8400** | **190 I** | 46 U |

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0294-038.0-20140605 | 6/5/2014 | 16:27 | Water | 1 | **17.5** | 0.30 U | **0.74 I** | **58.6** | 0.19 U | 0.23 U |
| CRHE-DPT0294-043.0-20140605 | 6/5/2014 | 16:56 | Water | 1 | **1.8** | 0.30 U | 0.29 U | **7.7** | 0.19 U | 0.23 U |
| CRHE-DPT0295-018.0-20140606 | 6/6/2014 | 09:45 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0295-023.0-20140606 | 6/6/2014 | 10:11 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0295-028.0-20140606 | 6/6/2014 | 10:40 | Water | 1 | **8.3** | 0.30 U | **2.7** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0295-033.0-20140606 | 6/6/2014 | 11:51 | Water | 200 | **4300** | 60 U | **540** | **20000** | **17000** | 46 U |
| CRHE-DPT0295-038.0-20140606 | 6/6/2014 | 13:15 | Water | 10 | **150** | 3.0 U | **7.0 I** | **370** | **2.4 I** | 2.3 U |
| CRHE-DPT0295-043.0-20140606 | 6/6/2014 | 13:54 | Water | 1 | **8.7** | 0.30 U | **3.0** | **146** | **27.8** | 0.23 U |
| CRHE-DPT0296-033.0-20140606 | 6/6/2014 | 15:35 | Water | 1 | **21.3** | 0.30 U | **1.8** | **0.23 I** | 0.19 U | 0.23 U |
| CRHE-DPT0296-038.0-20140606 | 6/6/2014 | 15:55 | Water | 10 | **530** | 3.0 U | **10** | **31** | 1.9 U | 2.3 U |
| CRHE-DPT0296-043.0-20140606 | 6/6/2014 | 16:14 | Water | 10 | **150** | 3.0 U | **13** | **560** | 1.9 U | 2.3 U |
| CRHE-DPT0296-048.0-20140606 | 6/6/2014 | 16:37 | Water | 20 | **300** | 6.0 U | **63** | **2000** | 3.8 U | 4.6 U |
| CRHE-DPT0296-058.0-20140609 | 6/9/2014 | 08:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0297-033.0-20140609 | 6/9/2014 | 08:36 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0297-038.0-20140609 | 6/9/2014 | 08:53 | Water | 1 | **100** | 0.30 U | **3.8** | **2.4** | 0.19 U | 0.23 U |

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0297-043.0-20140609 | 6/9/2014 | 10:03 | Water | 10 | **590** | 3.0 U | **13** | **460** | 1.9 U | 2.3 U |
| CRHE-DPT0297-048.0-20140609 | 6/9/2014 | 10:22 | Water | 10 | **460** | 3.0 U | **8.9 I** | **180** | 1.9 U | 2.3 U |
| CRHE-DPT0298-033.0-20140609 | 6/9/2014 | 11:14 | Water | 10 | **420** | 3.0 U | **14** | **430** | **8.7 I** | 2.3 U |
| CRHE-DPT0298-038.0-20140609 | 6/9/2014 | 11:33 | Water | 10 | **430** | 3.0 U | **31** | **1300** | **3.8 I** | 2.3 U |
| CRHE-DPT0298-043.0-20140609 | 6/9/2014 | 11:52 | Water | 20 | **430** | 6.0 U | **49** | **2000** | 3.8 U | 4.6 U |
| CRHE-DPT0298-048.0-20140609 | 6/9/2014 | 12:12 | Water | 10 | **63** | 3.0 U | 2.9 U | **52** | 1.9 U | 2.3 U |
| CRHE-DPT0298-058.0-20140609 | 6/9/2014 | 13:36 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **1.6** | 0.19 U | 0.23 U |
| CRHE-DPT0299-033.0-20140609 | 6/9/2014 | 14:41 | Water | 1 | 0.26 U | 0.30 U | **0.82 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0299-038.0-20140609 | 6/9/2014 | 14:59 | Water | 1 | **44.3** | 0.30 U | **1.3** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0299-043.0-20140609 | 6/9/2014 | 15:17 | Water | 1 | **36.2** | 0.30 U | **1.7** | **0.33 I** | 0.19 U | 0.23 U |
| CRHE-DPT0299-048.0-20140609 | 6/9/2014 | 16:10 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0300-038.0-20140609 | 6/9/2014 | 16:41 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0300-043.0-20140609 | 6/9/2014 | 16:59 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0300-048.0-20140609 | 6/9/2014 | 17:18 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0300-058.0-20140610 | 6/10/2014 | 07:38 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0301-038.0-20140610 | 6/10/2014 | 08:20 | Water | 20 | **670** | 6.0 U | **26** | **1000** | **15 I** | 4.6 U |
| CRHE-DPT0301-043.0-20140610 | 6/10/2014 | 08:41 | Water | 20 | **370** | 6.0 U | **26** | **1200** | 3.8 U | 4.6 U |
| CRHE-DPT0301-048.0-20140610 | 6/10/2014 | 09:04 | Water | 10 | **130** | 3.0 U | **5.1 I** | **180** | 1.9 U | 2.3 U |
| CRHE-DPT0301-058.0-20140610 | 6/10/2014 | 09:26 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **1.2** | 0.19 U | 0.23 U |
| CRHE-DPT0302-043.0-20140610 | 6/10/2014 | 10;03 | Water | 20 | **250** | 6.0 U | **30** | **1300** | 3.8 U | 4.6 U |
| CRHE-DPT0302-048.0-20140610 | 6/10/2014 | 11:55 | Water | 10 | **200** | 3.0 U | **14** | **560** | 1.9 U | 2.3 U |
| CRHE-DPT0303-038.0-20140610 | 6/10/2014 | 13:15 | Water | 1 | **21.9** | 0.30 U | 0.29 U | **2.8** | 0.19 U | 0.23 U |
| CRHE-DPT0303-043.0-20140610 | 6/10/2014 | 13:36 | Water | 1 | **18.5** | 0.30 U | **1.0** | **80.7** | 0.19 U | 0.23 U |
| CRHE-DPT0303-048.0-20140610 | 6/10/2014 | 13:56 | Water | 1 | **2.8** | 0.30 U | 0.29 U | **5.5** | 0.19 U | 0.23 U |
| CRHE-DPT0304-033.0-20140610 | 6/10/2014 | 14:38 | Water | 1 | **9.6** | 0.30 U | 0.29 U | **2.1** | 0.19 U | 0.23 U |
| CRHE-DPT0304-038.0-20140610 | 6/10/2014 | 14:57 | Water | 1 | **90.7** | 0.30 U | **1.3** | **7.2** | 0.19 U | 0.23 U |
| CRHE-DPT0304-043.0-20140610 | 6/10/2014 | 15:16 | Water | 1 | **95.3** | 0.30 U | **1.7** | **1.6** | 0.19 U | 0.23 U |
| CRHE-DPT0304-048.0-20140610 | 6/10/2014 | 15:36 | Water | 1 | **0.88 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0304-058.0-20140610 | 6/10/2014 | 15:57 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0305-038.0-20140610 | 6/10/2014 | 17:10 | Water | 1 | **19.2** | 0.30 U | 0.29 U | **13.2** | 0.19 U | 0.23 U |

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0305-043.0-20140610 | 6/10/2014 | 17:26 | Water | 1 | **8.9** | 0.30 U | 0.29 U | **0.70 I** | 0.19 U | 0.23 U |
| CRHE-DPT0306-033.0-20140611 | 6/11/2014 | 08:19 | Water | 5 | **46** | 1.5 U | 1.5 U | **230** | 0.95 U | 1.2 U |
| CRHE-DPT0306-038.0-20140611 | 6/11/2014 | 08:37 | Water | 1 | **66.2** | 0.30 U | **0.68 I** | **22.1** | 0.19 U | 0.23 U |
| CRHE-DPT0306-043.0-20140611 | 6/11/2014 | 08:53 | Water | 1 | **2.2** | 0.30 U | 0.29 U | **0.26 I** | 0.19 U | 0.23 U |
| CRHE-DPT0307-028.0-20140611 | 6/11/2014 | 09:22 | Water | 1 | **1.6** | 0.30 U | 0.29 U | **1.1** | 0.19 U | 0.23 U |
| CRHE-DPT0307-033.0-20140611 | 6/11/2014 | 09:37 | Water | 1 | **17.7** | 0.30 U | 0.29 U | **12.6** | 0.19 U | 0.23 U |
| CRHE-DPT0307-038.0-20140611 | 6/11/2014 | 09:55 | Water | 1 | **31.6** | 0.30 U | 0.29 U | **7.1** | 0.19 U | 0.23 U |
| CRHE-DPT0307-043.0-20140611 | 6/11/2014 | 10:12 | Water | 1 | **28.2** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0307-048.0-20140611 | 6/11/2014 | 10:32 | Water | 1 | **11.4** | 0.30 U | 0.29 U | **0.33 I** | 0.19 U | 0.23 U |
| CRHE-DPT0307-058.0-20140611 | 6/11/2014 | 11:30 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0308-028.0-20140611 | 6/11/2014 | 15:14 | Water | 1 | **13.8** | 0.30 U | 0.29 U | **4.8** | 0.19 U | 0.23 U |
| CRHE-DPT0308-033.0-20140611 | 6/11/2014 | 15:28 | Water | 1 | **20.3** | 0.30 U | 0.29 U | **10.3** | 0.19 U | 0.23 U |
| CRHE-DPT0308-038.0-20140611 | 6/11/2014 | 15:45 | Water | 1 | **70.9** | 0.30 U | 0.29 U | **21.7** | 0.19 U | 0.23 U |
| CRHE-DPT0308-043.0-20140611 | 6/11/2014 | 17:37 | Water | 1 | **59.9** | 0.30 U | 0.29 U | **9.4** | 0.19 U | 0.23 U |
| CRHE-DPT0308-048.0-20140611 | 6/11/2014 | 17:54 | Water | 1 | **25.0** | 0.30 U | 0.29 U | **0.36 I** | 0.19 U | 0.23 U |

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0308-058.0-20140611 | 6/11/2014 | 18:14 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0309-033.0-20140612 | 6/12/2014 | 08:45 | Water | 1 | **0.53 I** | 0.30 U | **1.4** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0309-038.0-20140612 | 6/12/2014 | 09:02 | Water | 10 | **450** | 3.0 U | **6.7 I** | **50** | 1.9 U | 2.3 U |
| CRHE-DPT0309-043.0-20140612 | 6/12/2014 | 09:18 | Water | 10 | **280** | 3.0 U | **20** | **560** | 1.9 U | 2.3 U |
| CRHE-DPT0309-048.0-20140612 | 6/12/2014 | 10:12 | Water | 1 | **45.2** | 0.30 U | **1.2** | **5.6** | 0.19 U | 0.23 U |
| CRHE-DPT0309-058.0-20140612 | 6/12/2014 | 10:31 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0310-033.0-20140612 | 6/12/2014 | 11:08 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0310-038.0-20140612 | 6/12/2014 | 11:26 | Water | 1 | **0.46 I** | 0.30 U | **0.42 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0310-043.0-20140612 | 6/12/2014 | 11:46 | Water | 1 | **1.4** | 0.30 U | **0.98 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0310-048.0-20140612 | 6/12/2014 | 12:06 | Water | 1 | **0.86 I** | 0.30 U | **0.63 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0310-058.0-20140612 | 6/12/2014 | 12:25 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0311-033.0-20140612 | 6/12/2014 | 14:01 | Water | 10 | **770** | 3.0 U | **19** | **280** | 1.9 U | 2.3 U |
| CRHE-DPT0311-038.0-20140612 | 6/12/2014 | 14:25 | Water | 20 | **1300** | 6.0 U | **87** | **3300** | 3.8 U | 4.6 U |
| CRHE-DPT0311-043.0-20140612 | 6/12/2014 | 14:49 | Water | 50 | **710** | 15 U | **120** | **4400** | 9.5 U | 12 U |
| CRHE-DPT0311-048.0-20140613 | 6/13/2014 | 7:11 | Water | 20 | **490** | 6.0 U | **71** | **1900** | **51** | 4.6 U |

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0311-058.0-20140613 | 6/13/2014 | 7:32 | Water | 1 | **1.8** | 0.30 U | **0.31** I | **12.9** | **0.24** I | 0.23 U |
| CRHE-DPT0312-033.0-20140613 | 6/13/2014 | 8:11 | Water | 1 | **145** | 0.30 U | **1.8** | **11.6** | 0.19 U | 0.23 U |
| CRHE-DPT0312-038.0-20140613 | 6/13/2014 | 8:28 | Water | 1 | **156** | 0.30 U | **2.2** | **26.4** | 0.19 U | 0.23 U |
| CRHE-DPT0312-043.0-20140613 | 6/13/2014 | 8:48 | Water | 10 | **270** | 3.0 U | 2.9 U | **32** | 1.9 U | 2.3 U |
| CRHE-DPT0312-048.0-20140613 | 6/13/2014 | 9:11 | Water | 10 | **100** | 3.0 U | 2.9 U | **13** | 1.9 U | 2.3 U |
| CRHE-DPT0312-058.0-20140613 | 6/13/2014 | 9:31 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0313-033.0-20140613 | 6/13/2014 | 16:14 | Water | 1 | **12.9** | 0.30 U | 0.29 U | **0.83** I | 0.19 U | 0.23 U |
| CRHE-DPT0313-038.0-20140613 | 6/13/2014 | 16:31 | Water | 1 | **19.6** | 0.30 U | **0.29 I** | **1.6** | 0.19 U | 0.23 U |
| CRHE-DPT0313-043.0-20140613 | 6/13/2014 | 16:48 | Water | 1 | **9.1** | 0.30 U | 0.29 U | **1.5** | 0.19 U | 0.23 U |
| CRHE-DPT0313-048.0-20140613 | 6/13/2014 | 17:05 | Water | 1 | **27.4** | 0.30 U | **3.4** | **180** | **0.20 I** | 0.23 U |

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-IDW193876-20140530 | 5/30/2014 | 16:22 | Water | 10 | **28** | 3.0 U | **3.2 I** | **140** | 1.9 U | 2.3 U |
| CRHE-IDW195127-20140602 | 6/2/2014 | 15:58 | Water | 10 | 2.6 U | 3.0 U | 2.9 U | **5.8 I** | 1.9 U | 2.3 U |
| CRHE-IDW195128-20140603 | 6/3/2014 | 16:16 | Water | 10 | **3.7 I** | 3.0 U | 2.9 U | **2.4 I** | 1.9 U | 2.3 U |
| CRHE-IDW195129-20140605 | 6/5/2014 | 12:13 | Water | 10 | **30** | 3.0 U | **3.4 I** | **140** | 1.9 U | 2.3 U |
| CRHE-IDW195130-20140609 | 6/9/2014 | 13:55 | Water | 10 | **34** | 3.0 U | 2.9 U | **190** | **50** | 2.3 U |
| CRHE-IDW197034-20140610 | 6/10/2014 | 16:40 | Water | 10 | **6.5 I** | 3.0 U | 2.9 U | **27** | 1.9 U | 2.3 U |
| CRHE-IDW197035-20140613 | 6/13/2014 | 10:06 | Water | 10 | **19** | 3.0 U | 2.9 U | **72** | 1.9 U | 2.3 U |

# KB LABS, INC.

Method Blank Summary

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| Method Blank 05/28/14 | 5/28/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank 05/29/14 | 5/29/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank 05/30/14 | 5/30/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank 06/02/14 | 6/2/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank 06/03/14 | 6/3/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank 06/04/14 | 6/4/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank 06/05/14 | 6/5/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank 06/06/14 | 6/6/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank 06/09/14 | 6/9/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank 06/10/14 | 6/10/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank 06/11/14 | 6/11/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank 06/12/14 | 6/12/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank 06/13/14 | 6/13/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Mobile Laboratory Services

6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

# CHAIN-OF-CUSTODY RECORD

1/2

**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | CRHE KSC, FL | |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 | COMMENT / SAMPLE PRE FIX: 30528/4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0268-033.0 | 5/28/14 | 0901 | | | 5/28/14 | 1039 | | GW | 2 | ✓ | 01A,B |
| -038.0 | | 0921 | | | | 1039 | | GW | 2 | ✓ | 02A,B |
| -043.0 | | 0939 | | | | 1039 | | GW | 2 | ✓ | 03A,B |
| -048.0 | | 0956 | | | | 1039 | | GW | 2 | ✓ | 04A,B |
| -058.0 | | 1017 | | | | 1039 | | GW | 2 | ✓ | 05A,B |
| DPT0269-038.0 | | 1057 | | | | 1211 | | GW | 2 | ✓ | 06A,B |
| -043.0 | | 1108 | | | | 1211 | | GW | 2 | ✓ | 07A,B |
| -048.0 | | 1122 | | | | 1211 | | GW | 2 | ✓ | 08A,B |
| -058.0 | | 1141 | | | | 1211 | | GW | 2 | ✓ | 09A,B |
| DPT0270-038.0 | | 1256 | | | | 1444 | | GW | 2 | ✓ | 10A,B |
| 043.0 | | 1345 | | | | 1444 | | GW | 2 | ✓ | 11A,B |
| 048.0 | | 1405 | | | | 1444 | | GW | 2 | ✓ | 12A,B |
| 058.0 | | 1427 | | | | 1444 | | GW | 2 | ✓ | 13A,B |
| DPT0271-038.0 | | 1457 | | | | 1617 | | GW | 2 | ✓ | 14A,B |
| -043.0 | | 1509 | | | | 1617 | | GW | 2 | ✓ | 15A,B |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | | CRHE - -20140528 |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | [signature] | 5/28/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

Mobile Laboratory Services

6821 SW Archer Road
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Raleigh, NC 27607
TEL (352) 538-6507

# CHAIN-OF-CUSTODY RECORD

2/2

**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Geosyntec | CRHE KSC, FL | | | | | | | | | | | | | | | | | | | | |
| SAMPLERS | CONTACT PERSON | | | | | | BATCH # (Lab Use Only) | | | | | | | | | | | | | | |
| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS | 8260 | | | | | PRESERVATION C Chilled H HCL Ot Other (see Remarks) | COMMENT / SAMPLE PRE FIX |
| | | | | | | | | | | | | | | | | 3052814 | |
| APT0271-048.0 | 5/28/14 | 1528 | | | 5/28/14 | 1617 | | GW | 2 | ✓ | | | | | | | 016A, B |
| -058.0 | ↓ | 1549 | | | ↓ | 1617 | | GW | 2 | ✓ | | | | | | | 17A, B |
| APT0272-035.0 | | 1623 | | | | 1810 | | GW | 2 | ✓ | | | | | | | 18A B |
| -043.0 | | 1642 | | | | 1810 | | GW | 2 | ✓ | | | | | | | 19A, B |
| -048.0 | | 1701 | | | | 1810 | | GW | 2 | ✓ | | | | | | | 20A, B |
| -058.0 | | 1745 | | | | 1810 | | GW | 2 | ✓ | | | | | | | 21A, B |
| | | | | | | | | | | | | | | | | | |
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| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 5/28/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

1/2

Mobile Laboratory Services

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6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CRTE KSC, FL |
| SAMPLERS | CONTACT PERSON / BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 | COMMENT / SAMPLE PRE FIX: 305291 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT 0273 - 038.0 | 5/25/14 | 0729 | | | 5/25/14 | 0850 | | GW | 2 | ✓ | 01 A,B |
| - 043.0 | | 0748 | | | | 0850 | | GW | 2 | ✓ | 02 A,B |
| - 048.0 | | 0809 | | | | 0850 | | GW | 2 | ✓ | 03 A,B |
| - 058.0 | | 0828 | | | | 0850 | | GW | 2 | ✓ | 04 A,B |
| DPT 0277 - 048.0 | | 0906 | | | | 1025 | | GW | 2 | ✓ | 05 A,B |
| DPT 0274 - 033.0 | | 0944 | | | | 1025 | | GW | 2 | ✓ | 06 A,B |
| - 038.0 | | 1002 | | | | 1025 | | GW | 2 | ✓ | 07 A,B |
| - 043.0 | | 1022 | | | | 1140 | | GW | 2 | ✓ | 08 A,B |
| - 048.0 | | 1042 | | | | 1140 | | GW | 2 | ✓ | 09 A,B |
| - 058.0 | | 1132 | | | | 1140 | | GW | 2 | ✓ | 10 A,B |
| DPT 0275 - 038.0 | | ~~1330~~ | 1235 | | | 1330 | | GW | 2 | ✓ | 11 A,B |
| DPT 0275 - 043.0 | | 1302 | | | | 1330 | | GW | 2 | ✓ | 12 A,B |
| - 048.0 | | 1320 | | | | 1330 | | GW | 2 | ✓ | 13 A,B |
| - 058.0 | | 1342 | | | | 1434 | | GW | 2 | ✓ | 14 A,B |
| DPT 0276 - 033.0 | | 1415 | | | | 1434 | | GW | 2 | ✓ | 15 A,B |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | CRTE - 20404052 |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* BHR | Date / Time 5/25/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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# CHAIN-OF-CUSTODY RECORD

2/2

**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CRTE KSC, FL |
| SAMPLERS | CONTACT PERSON / BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 | COMMENT / SAMPLE PRE FIX: 3052914 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT 0276 - 038.0 | 5/29/14 | 1432 | | | 5/29/14 | 1522 | | GW | 2 | ✓ | 16 A,B |
| - 043.0 | " | 1453 | | | " | 1522 | | GW | 2 | ✓ | 17 A,B |
| - 048.0 | " | 1512 | | | " | 1522 | | GW | 2 | ✓ | 18 A,B |
| - 058.0 | " | 1540 | | | " | 1600 | | GW | 2 | ✓ | 19 A,B |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) RSD JR | Date / Time 5/29/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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TEL (352) 538-6507

# CHAIN-OF-CUSTODY RECORD



**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE, KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | 8260 | COMMENT / SAMPLE PRE FIX 30530I4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0277-038.0 | 5/30/14 | 0729 | | | 5/30/14 | 0850 | | GW | 2 | ✓ | 01A,B |
| -043.0 | | 0746 | | | | 0850 | | GW | 2 | ✓ | 02A,B |
| -048.0 | | 0805 | | | | 0850 | | GW | 2 | ✓ | 03A,B |
| -053.0 | | 0825 | | | | 0850 | | GW | 2 | ✓ | 04A,B |
| DPT0278-028.0 | | 0859 | | | | 1020 | | GW | 2 | ✓ | 05A,B |
| -033.0 | | 0915 | | | | 1020 | | GW | 2 | ✓ | 06A,B |
| -038.0 | | 0933 | | | | 1020 | | GW | 2 | ✓ | 07A,B |
| -043.0 | | 0949 | | | | 1020 | | GW | 2 | ✓ | 08A,B |
| -048.0 | | 1007 | | | | 1020 | | GW | 2 | ✓ | 09A,B |
| DPT0279-028.0 | | 1038 | | | | 1155 | | GW | 2 | ✓ | 10A,B |
| -033.0 | | 1121 | | | | 1155 | | GW | 2 | ✓ | 11A,B |
| -038.0 | | 1138 | | | | 1155 | | GW | 2 | ✓ | 12A,B |
| -043.0 | | 1157 | | | | 1216 | | GW | 2 | ✓ | 13A,B |
| -048.0 | | 1346 | | | | 1400 | | GW | 2 | ✓ | 14A,B |
| DPT0280-023.0 | | 1422 | | | | 1454 | | GW | 2 | ✓ | 15A,B |

| | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | |
| Relinquished by: (Signature) | | Received by: (Signature) | Date / Time 5/30/14 |

**Remarks and Observations**
CRTE - 20140530

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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# CHAIN-OF-CUSTODY RECORD

2/2

**MOBILE UNIT #** 183

| CLIENT NAME | PROJECT NAME & ADDRESS | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Geosyntec | CRHE KSC, FL | | | | | | | | | | | | | | | | | |
| SAMPLERS | CONTACT PERSON | | | | | | BATCH # (Lab Use Only) | | | | | | | | | | | |
| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS | 8260 | | | | PRESERVATION C Chilled H HCL Ot Other (see Remarks) 3053014 COMMENT / SAMPLE PRE FIX | | | |
| DPT0280-028.0 | 5/30/14 | 1439 | | | 5/30/14 | 1454 | | GW | 2 | ✓ | | | | | 16A,B | | | |
| -033.0 | | 1537 | | | | 1611 | | GW | 2 | ✓ | | | | | 17A,B | | | |
| -038.0 | | 1558 | | | | 1611 | | GW | 2 | ✓ | | | | | 18A,B | | | |
| -043.0 | | 1616 | | | | 1700 | | GW | 2 | ✓ | | | | | 19A,B | | | |
| -048.0 | | 1635 | | | | 1700 | | GW | 2 | ✓ | | | | | 20A,B | | | |
| IDW193876 | | 1622 | | | | 1700 | | GW | 2 | ✓ | | | | | 21A,B | | | |

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 5/30/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSK, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | 8260 | COMMENT / SAMPLE PRE FIX (30602l4) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0281 - 028.0 | 6/2/14 | 0730 | | | 6/2/14 | 0857 | | GW | 2 | ✓ | 01A,B |
| -033.0 | | 0747 | | | | 0857 | | GW | 2 | ✓ | 02A,B |
| -038.0 | | 0832 | | | | 0857 | | GW | 2 | ✓ | 03A,B |
| -043.0 | | 0850 | | | | 0857 | | GW | 2 | ✓ | 04A,B |
| -048.0 | | 0909 | | | | 1030 | | GW | 2 | ✓ | 05A,B |
| DPT0282 - 023.0 | | 0939 | | | | 1030 | | GW | 2 | ✓ | 06A,B |
| -028.0 | | 0954 | | | | 1030 | | GW | 2 | ✓ | 07A,B |
| -033.0 | | 1009 | | | | 1030 | | GW | 2 | ✓ | 08A,B |
| -038.0 | | 1025 | | | | 1154 | | GW | 2 | ✓ | 09A,B |
| -043.0 | | 1041 | | | | 1154 | | GW | 2 | ✓ | 10A,B |
| -048.0 | | 1117 | | | | 1154 | | GW | 2 | ✓ | 11A,B |
| -058.0 | | 1137 | | | | 1154 | | GW | 2 | ✓ | 12A,B |
| DPT0283 - 028.0 | | 1236 | | | | 1335 | | GW | 2 | ✓ | 13A,B |
| -033.0 | | 1253 | | | | 1335 | | GW | 2 | ✓ | 14A,B |
| -038.0 | | 1328 | 1309 | | | 1335 | | GW | 2 | ✓ | 15A,B |

| | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | |
| Relinquished by: (Signature) | | Received by: (Signature) BM | Date / Time 6/2/14 |

**Remarks and Observations**

CRHE - -20140602

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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# CHAIN-OF-CUSTODY RECORD



**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Geosyntec | CRHE KSC, FL | | | | | | | | | | | | | | | | | | |
| SAMPLERS | CONTACT PERSON | | | | | | BATCH # (Lab Use Only) | | | | | | | | | | | | |
| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS | 8260 | | | | COMMENT / SAMPLE PRE FIX | | | | |
| DPT0283-043.0 | 6/2/14 | 1328 | | | 6/2/14 | 1335 | | GW | 2 | ✓ | | | | | 16A,B | | | | |
| -048.0 | | 1349 | | | | 1453 | | GW | 2 | ✓ | | | | | 17A,B | | | | |
| DPT0284-028.0 | | 1425 | | | | 1453 | | GW | 2 | ✓ | | | | | 18A,B | | | | |
| -033.0 | | 1439 | | | | 1453 | | GW | 2 | ✓ | | | | | 19A,B | | | | |
| -038.0 | | 1457 | | | | 1547 | | GW | 2 | ✓ | | | | | 20A,B | | | | |
| -043.0 | | 1546 | | | | 1645 | | GW | 2 | ✓ | | | | | 21A,B | | | | |
| -048.0 | | 1609 | | | | 1645 | | GW | 2 | ✓ | | | | | 22A,B | | | | |
| -058.0 | | 1633 | | | | 1645 | | GW | 2 | ✓ | | | | | 23A,B | | | | |
| IDW 195127 | | 1558 | | | | 1645 | | IDW | 2 | ✓ | | | | | 24A,B | | | | |
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**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

3060214

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* BM | Date / Time 6/2/14 |

**Remarks and Observations**
CRHE - -20140602

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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# CHAIN-OF-CUSTODY RECORD

1/2

**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CRHE KSC, FL |
| SAMPLERS | CONTACT PERSON / BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 | COMMENT / SAMPLE PRE FIX: 3060314 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT 0285-033.0 | 6/3/14 | 0733 | | | 6/3/14 | 0852 | | GW | 2 | ✓ | 01A,B |
| -038.0 | | 0759 | | | | 0852 | | GW | 2 | ✓ | 02A,B |
| -043.0 | | 0817 | | | | 0852 | | GW | 2 | ✓ | 03A,B |
| -048.0 | | 0835 | | | | 0852 | | GW | 2 | ✓ | 04A,B |
| -058.0 | | 0845 | | | | 1030 | | GW | 2 | ✓ | 05A,B |
| DPT 0286-028.0 | | 0932 | | | | 1030 | | GW | 2 | ✓ | 06A,B |
| -033.0 | | 0948 | | | | 1030 | | GW | 2 | ✓ | 07A,B |
| -038.0 | | 1029 | | | | 1155 | | GW | 2 | ✓ | 08A,B |
| -043.0 | | 1047 | | | | 1155 | | GW | 2 | ✓ | 09A,B |
| -048.0 | | 1106 | | | | 1155 | | GW | 2 | ✓ | 10A,B |
| -058.0 | | 1134 | | | | 1155 | | GW | 2 | ✓ | 11A,B |
| DPT 0287-028.0 | | 1246 | | | | 1406 | | GW | 2 | ✓ | 12A,B |
| -033.0 | | 1304 | | | | 1406 | | GW | 2 | ✓ | 13A,B |
| -038.0 | | 1325 | | | | 1406 | | GW | 2 | ✓ | 14A,B |
| -043.0 | ↓ | 1345 | | | ↓ | 1406 | | GW | 2 | ✓ | 15A,B |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* BH | Date / Time 6/3/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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# CHAIN-OF-CUSTODY RECORD

2/2

**MOBILE UNIT #** KB 3

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CKHE KSC, FL |
| SAMPLERS | CONTACT PERSON / BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 | COMMENT / SAMPLE PRE FIX: 3060314 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT 0288 - 028.0 | | 1443 | | | | 1540 | | GW | 2 | ✓ | 16A, B |
| - 033.0 | | 1501 | | | | 1540 | | GW | 2 | ✓ | 17 A, B |
| - 038.0 | | 1549 | | | | 1644 | | GW | 2 | ✓ | 18 A, B |
| - 043.0 | | 1607 | | | | 1644 | | GW | 2 | ✓ | 19A, B |
| IDW - 195128 | | 1616 | | | | 1644 | | IDW | 2 | ✓ | 20 A, B |
| DPT 0289 - 010.0 | | 1659 | | | | 1721 | | GW | 2 | ✓ | 21A, B |
| - 018.0 | | 1712 | | | | 1721 | | GW | 2 | ✓ | 22A, B |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time: 6/3/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (352) 538-6507

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 | COMMENT / SAMPLE PRE FIX: 30604/14 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT 0289 - 023.0 | 6/4/14 | 0728 | | | 6/4/14 | 0836 | | GW | 2 | ✓ | 01 A, B |
| - 028.0 | | 0743 | | | | 0836 | | GW | 2 | ✓ | 02 A, B |
| - 033.0 | | 0800 | | | | 0836 | | GW | 2 | ✓ | 03 A, B |
| - 038.0 | | 0818 | | | | 0836 | | GW | 2 | ✓ | 04 A, B |
| - 043.0 | | 0835 | | | | 1013 | | GW | 2 | ✓ | 05 A, B |
| - 048.0 | | 0854 | | | | 1013 | | GW | 2 | ✓ | 06 A, B |
| - 058.0 | | 0943 | | | | 1013 | | GW | 2 | ✓ | 07 A, B |
| DPT 0290 - 033.0 | | 1045 | | | | 1226 | | GW | 2 | ✓ | 08 A, B |
| - 038.0 | | 1104 | | | | 1226 | | GW | 2 | ✓ | 09 A, B |
| - 043.0 | | 1123 | | | | 1226 | | GW | 2 | ✓ | 10 A, B |
| - 048.0 | | 1143 | | | | 1226 | | GW | 2 | ✓ | 11 A, B |
| - 058.0 | | 1204 | | | | 1226 | | GW | 2 | ✓ | 12 A, B |
| DPT 0291 - 033.0 | | 1404 | | | | 1456 | | GW | 2 | ✓ | 13 A, B |
| - 038.0 | | 1428 | | | | 1456 | | GW | 2 | ✓ | 14 A, B |
| - 043.0 | | 1441 | | | | 1456 | | GW | 2 | ✓ | 15 A, B |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations**<br>CRHE |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)*<br>BMJ | Date / Time<br>6/4/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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# CHAIN-OF-CUSTODY RECORD

2/2

**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Geosyntec | CRHE KSC, FL | | | | | | | | | | | | | | | | | | |
| SAMPLERS | CONTACT PERSON | | | | | | BATCH # (Lab Use Only) | | | | | | | | | | | | |
| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 | | | | | PRESERVATION: C Chilled, H HCL, Ot Other (see Remarks) | | | | COMMENT / SAMPLE PRE FIX |
| DPT0291-048.0 | 6/4/14 | 1502 | | | 6/4/14 | 1610 | | GW | 2 | V | | | | | | | | | 16A,B |
| -058.0 | | 1558 | | | | 1640 | | GW | 2 | V | | | | | | | | | 17A,B |
| DPT0292-033.0 | | 1647 | | | | 1736 | | GW | 2 | V | | | | | | | | | 18A,B |
| -038.0 | | 1705 | | | | 1736 | | GW | 2 | V | | | | | | | | | 19A,B |
| -043.0 | | 1725 | | | | 1736 | | GW | 2 | V | | | | | | | | | 20A,B |
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| Precleaned Containers Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| | | | | CRHE |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* BH | Date / Time 6/4/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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TEL (352) 538-6507

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 4260

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

30605I4

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | | | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0292-048.0 | 6/5/14 | 0806 | | | 6/5/14 | 0842 | | GW | 2 | ✓ | | | | | 01A,B |
| -058.0 | | 0826 | | | | 0842 | | GW | 2 | ✓ | | | | | 02A,B |
| DPT0293-033.0 | | 0912 | | | | 1048 | | GW | 2 | ✓ | | | | | 03A,B |
| -038.0 | | 0928 | | | | 1048 | | GW | 2 | ✓ | | | | | 04A,B |
| -043.0 | | 0946 | | | | 1048 | | GW | 2 | ✓ | | | | | 05A,B |
| -048.0 | | 1002 | | | | 1048 | | GW | 2 | ✓ | | | | | 06A,B |
| -058.0 | | 1102 | | | | 1146 | | GW | 2 | ✓ | | | | | 07A,B |
| IDW195129 | | 1213 | | | | 1437 | | IDW | 2 | ✓ | | | | | 08A,B |
| DPT0294-018.0 | | 1407 | | | | 1437 | | GW | 2 | ✓ | | | | | 09A,B |
| -023.0 | | 1429 | | | | 1437 | | GW | 2 | ✓ | | | | | 10A,B |
| -028.0 | | 1457 | | | | 1602 | | GW | 2 | ✓ | | | | | 11A,B |
| -033.0 | | 1553 | | | | 1602 | | GW | 2 | ✓ | | | | | 12A,B |
| -038.0 | | 1627 | | | | 1703 | | GW | 2 | ✓ | | | | | 13A,B |
| -043.0 | | 1656 | | | | 1703 | | GW | 2 | ✓ | | | | | 14A,B |

| | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | |
| Relinquished by: (Signature) | | Received by: (Signature) | 6/5/14 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

1/1

**MOBILE UNIT #** KB3


KB LABS Mobile Laboratory Services

6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507


CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 4260

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | 4260 | | | | COMMENT / SAMPLE PRE FIX 30606l4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0295-018.0 | 6/6/14 | 0945 | | | 6/6/14 | 1024 | | GW | 2 | ✓ | | | | 01A,B |
| -023.0 | | 1011 | | | | 1024 | | GW | 2 | ✓ | | | | 02A,B |
| -028.0 | | 1040 | | | | 1209 | | GW | 2 | ✓ | | | | 03A,B |
| -033.0 | | 1157 | | | | 1209 | | GW | 2 | ✓ | | | | 04A,B |
| -038.0 | | 1315 | | | | 1405 | | GW | 2 | ✓ | | | | 05A,B |
| -043.0 | | 1354 | | | | 1405 | | GW | 2 | ✓ | | | | 06A,B |
| DPT0296-033.0 | | 1535 | | | | 1619 | | GW | 2 | ✓ | | | | 07A,B |
| -038.0 | | 1555 | | | | 1619 | | GW | 2 | ✓ | | | | 08A,B |
| -043.0 | | 1614 | | | | 1619 | | GW | 2 | ✓ | | | | 09A,B |
| -048.0 | | 1637 | | | | 1704 | | GW | 2 | ✓ | | | | 10A,B |
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|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations**<br>CRHE - 20140606 |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/6/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | 8260 | COMMENT / SAMPLE PRE FIX (30600814) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0296-058.0 | 6/5/14 | 0800 | | | 6/5/14 | 0820 | | GW | 2 | ✓ | 01A,B |
| DPT0297-033.0 | | 0836 | | | | 0912 | | GW | 2 | ✓ | 02A,B |
| -038.0 | | 0853 | | | | 0912 | | GW | 2 | ✓ | 03A,B |
| -043.0 | | 1003 | | | | 1058 | | GW | 2 | ✓ | 04A,B |
| -048.0 | | 1022 | | | | 1058 | | GW | 2 | ✓ | 05A,B |
| DPT0298-033.0 | | 1114 | | | | 1224 | | GW | 2 | ✓ | 06A,B |
| -038.0 | | 1133 | | | | 1224 | | GW | 2 | ✓ | 07A,B |
| -043.0 | | 1152 | | | | 1224 | | GW | 2 | ✓ | 08A,B |
| -048.0 | | 1212 | | | | 1224 | | GW | 2 | ✓ | 09A,B |
| -058.0 | | 1336 | | | | 1402 | | GW | 2 | ✓ | 10A,B |
| IDW195130 | | 1355 | | | | 1402 | | IDW | 2 | ✓ | 11A,B |
| DPT0299-033.0 | | 1441 | | | | 1531 | | GW | 2 | ✓ | 12A,B |
| -038.0 | | 1459 | | | | 1531 | | GW | 2 | ✓ | 13,A,B |
| -043.0 | | 1517 | | | | 1531 | | GW | 2 | ✓ | 14A,B |
| -048.0 | — | ~~1627~~ | 1400 | | — | 1627 | | GW | 2 | ✓ | 15A,B |

| | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | |
| Relinquished by: (Signature) | | Received by: (Signature) BNE | |

**Remarks and Observations**
CRHE - 20140609

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

KB LABS Mobile Laboratory Services

6821 SW Archer Road
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6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 | | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0300-028.0 | 6/9/14 | 1641 | | | 6/9/14 | 1727 | | GW | 2 | ✓ | | | | | 16A,B |
| -043.0 | " | 1659 | | | " | 1727 | | GW | 2 | ✓ | | | | | 17A,B |
| -048.0 | " | 1718 | | | " | 1727 | | GW | 2 | ✓ | | | | | 15A,B |
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| | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| Precleaned Containers Relinquished by: (Signature) | | | |
| Relinquished by: (Signature) | | Received by: (Signature) | Date / Time: 6/9/14 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

1/2


KB LABS inc
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6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507


**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 | | | | 30610/14 | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT 0300 - 058.0 | 6/10/14 | 0738 | | | 6/10/14 | 0833 | | GW | 2 | ✓ | | | | | 01A, B |
| DPT 0301 - 038.0 | | 0820 | | | | 0833 | | GW | 2 | ✓ | | | | | 02A,B |
| - 043.0 | | 0841 | | | | 0942 | | GW | 2 | ✓ | | | | | 03A,B |
| - 048.0 | | 0904 | | | | 0942 | | GW | 2 | ✓ | | | | | 04A,B |
| - 058.0 | | 0926 | | | | 0942 | | GW | 2 | ✓ | | | | | 05A,B |
| DPT 0302 - 043.0 | | 1003 | | | | 1045 | | GW | 2 | ✓ | | | | | 06A,B |
| - 048.0 | | 1155 | | | | 1213 | | GW | 2 | ✓ | | | | | 07A,B |
| DPT 0303 - 038.0 | | 1315 | | | | 1410 | | GW | 2 | ✓ | | | | | 08A,B |
| - 043.0 | | 1336 | | | | 1410 | | GW | 2 | ✓ | | | | | 09A,B |
| - 048.0 | | 1356 | | | | 1410 | | GW | 2 | ✓ | | | | | 10A,B |
| DPT 0304 - 033.0 | | 1438 | | | | 1528 | | GW | 2 | ✓ | | | | | 11A,B |
| - 038.0 | | 1457 | | | | 1528 | | GW | 2 | ✓ | | | | | 12A,B |
| - 043.0 | | 1516 | | | | 1528 | | GW | 2 | ✓ | | | | | 13A,B |
| - 048.0 | | 1536 | | | | 1620 | | GW | 2 | ✓ | | | | | 14A,B |
| - 058.0 | | 1557 | | | | 1620 | | GW | 2 | ✓ | | | | | 15A,B |

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|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations**<br>CRHE - - 20140610 |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)*<br>BN JE | Date / Time<br>6/10/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

KB LABS inc
Mobile Laboratory Services

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TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | 8260 | | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IDW197034 | 6/10/14 | 1640 | | | 6/10/14 | 1740 | | GW | 2 | ✓ | | | | | 16A, B |
| DPT 0305-038.0 | " | 1710 | | | " | 1740 | | GW | 2 | ✓ | | | | | 17A, B |
| -0430 | " | 1726 | | | " | 1740 | | GW | 2 | ✓ | | | | | 18A, B |
| | | | | | | | | | | | | | | | |
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| | Date / Time | | Date / Time |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | |
| Relinquished by: *(Signature)* | | Received by: *(Signature)* BG | 6/10/14 |

**Remarks and Observations**
CRHE - - 20140610

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

1/1


Mobile Laboratory Services

6821 SW Archer Road
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TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507


**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CRHE KSC, FL |
| SAMPLERS | CONTACT PERSON / BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 | COMMENT / SAMPLE PRE FIX: 30611 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0306-033.0 | 6/11/14 | 0819 | | | 6/11/14 | 0906 | | GW | 2 | ✓ | 01A,B |
| -038.0 | | 0837 | | | | 0906 | | GW | 2 | ✓ | 02A,B |
| -043.0 | | 0853 | | | | 0906 | | GW | 2 | ✓ | 03A,B |
| DPT0307-029.0 | | 0922 | | | | 1007 | | GW | 2 | ✓ | 04A,B |
| -033.0 | | 0937 | | | | 1007 | | GW | 2 | ✓ | 05A,B |
| -038.0 | | 0955 | | | | 1007 | | GW | 2 | ✓ | 06A,B |
| -043.0 | | 1012 | | | | 1055 | | GW | 2 | ✓ | 07A,B |
| -048.0 | | 1032 | | | | 1055 | | GW | 2 | ✓ | 08A,B |
| -058.0 | | 1130 | | | | 1154 | | GW | 2 | ✓ | 09A,B |
| DPT0308-028.0 | | 1514 | | | | 1620 | | GW | 2 | ✓ | 10A,B |
| -033.0 | | 1528 | | | | 1620 | | GW | 2 | ✓ | 11A,B |
| -038.0 | | 1545 | | | | 1620 | | GW | 2 | ✓ | 12A,B |
| -043.0 | | 1737 | | | | 1829 | | GW | 2 | ✓ | 13A,B |
| -048.0 | | 1754 | | | | 1829 | | GW | 2 | ✓ | 14A,B |
| -058.0 | | 1814 | | | | 1829 | | GW | 2 | ✓ | 15A,B |

| | Date / Time | | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | CRHE - - 20140611 |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 6/11/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

1/1

KB LABS inc
Mobile Laboratory Services

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TEL (352) 538-6507

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | 8260 | | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | 3061214 |
| DPT 0309 - 033.0 | 6/12/14 | 0845 | | | 6/12/14 | 0935 | | GW | 2 | ✓ | | | | | 01 A,B |
| - 038.0 | | 0902 | | | | 0935 | | GW | 2 | ✓ | | | | | 02 A,B |
| - 043.0 | | 0918 | | | | 0935 | | GW | 2 | ✓ | | | | | 03 A,B |
| - 048.0 | | 1012 | | | | 1047 | | GW | 2 | ✓ | | | | | 04 A,B |
| - 053.0 | | 1031 | | | | 1047 | | GW | 2 | ✓ | | | | | 05 A,B |
| DPT 0310 - 033.0 | | 1108 | | | | 1200 | | GW | 2 | ✓ | | | | | 06 A,B |
| - 038.0 | | 1126 | | | | 1200 | | GW | 2 | ✓ | | | | | 07 A,B |
| - 043.0 | | 1146 | | | | 1200 | | GW | 2 | ✓ | | | | | 08 A,B |
| - 048.0 | | 1206 | | | | 1244 | | GW | 2 | ✓ | | | | | 09 A,B |
| - 053.0 | | 1225 | | | | 1244 | | GW | 2 | ✓ | | | | | 10 A,B |
| DPT 0311 - 033.0 | | 1401 | | | | 1506 | | GW | 2 | ✓ | | | | | 11 A,B |
| - 038.0 | | 1425 | | | | 1506 | | GW | 2 | ✓ | | | | | 12 A,B |
| - 043.0 | | 1445 | | | | 1506 | | GW | 2 | ✓ | | | | | 13 A,B |
| | | | | | | | | | | | | | | | |
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| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | | |
| Relinquished by: (Signature) | | Received by: (Signature) | Date / Time 6/12/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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6701 Conference Drive
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TEL (352) 538-6507

**MOBILE UNIT #**

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE, KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT 0311-048.0 | 6/13/14 | 0711 | | ✓ | 6/13/14 | 0745 | | GW | 2 | ✓ | |
| -058.0 | | 0732 | | | | | | | | | |
| DPT 0312-033.0 | | 0811 | | | | 0900 | | | | | |
| -038.0 | | 0828 | | | | | | | | | |
| -043.0 | | 0848 | | | | | | | | | |
| -048.0 | | 0911 | | | | 1015 | | | | | |
| 058.0 | | 0931 | | | | | | | | | |
| IDW 197035 | | 1006 | | | | | | | | | |
| DPT 0313 -033.0 | | 1614 | | | | 1710 | | | | | |
| -038.0 | | 1631 | | | | | | | | | |
| -043.0 | | 1648 | | | | | | | | | |
| 048.0 | | 1705 | | | | | | | | | |

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|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/13/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**6821 SW Archer Road**
**Gainesville, Florida 32608**
***Telephone* (352) 367-0073**
***Fax* (352) 378-6491**
Email: info@kbmobilelabs.com

August 27, 2014

Jill Johnson
Geosyntec Consultants
316 South Baylen Street, Suite 201
Pensacola, FL 32502

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project # 14-116**

Dear Ms. Johnson:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from August 18 to 25, 2014. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 472-5830.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

*KB Labs, Inc.*
*6821 SW Archer Road*
*Gainesville, FL 32608*
*Phone: 352-367-0073*
*Fax: 352-378-6491*
*Email: info@kbmobilelabs.com*

# PROJECT NARRATIVE

## Project Scope

From August 18 to 25, 2014, a total of 114 water samples were analyzed for Geosyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1, 1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene. Two additional IDW samples from WILC were also ran during this project and reported.

## NELAP Certification

KB Mobile Labs Unit KB3: FDOH NELAP Certification Number E82816

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report and the results relate only to the actual samples received and analyzed in the laboratory. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## FDEP Data Qualifiers:

U Analyte was not detected or below the laboratory MDL.
I Result is below the PQL but larger than the laboratory MDL.
L Result exceeded Upper Calibration Range.

*"KB Labs is a small, woman-owned business enterprise."*

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Gainesville, FL 32608
Phone: 352-367-0073
Fax: 352-378-6491
Email: info@kbmobilelabs.com

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as ± 3 times the standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0 ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

## Quality Control (QC) Data

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

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# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. Results reported in the Preliminary Data analyzed on 8/23/14 seemed to be biased slightly high based on ending CCS standards. A new curve was ran on the morning of 8/24/14 and the 8/23 data was requanted based on the new curve. This data is reported in the Final data report. All QC passed based on the new curve.

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## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 14-116 |
| **On-site Dates**: 8/18/14-8/25/14 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| BLANK/TUNE | 08/18/14 | 97 | 109 | 96 | 94 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/18/14 | 96 | 99 | 93 | 92 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/18/14 | 97 | 103 | 92 | 90 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/18/14 | 99 | 102 | 95 | 91 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/18/14 | 97 | 112 | 94 | 90 | Pass | Pass | Pass | Pass |
| BLANK | 08/18/14 | 96 | 100 | 94 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0314-038.0' | 08/18/14 | 102 | 104 | 93 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0314-043.0' | 08/18/14 | 98 | 105 | 94 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0314-048.0' | 08/18/14 | 96 | 103 | 96 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0314-048.0' MS | 08/18/14 | 101 | 107 | 95 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0314-048.0' MSD | 08/18/14 | 92 | 108 | 95 | 87 | Pass | Pass | Pass | Pass |
| BLANK | 08/18/14 | 99 | 105 | 96 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0314-058.0' | 08/18/14 | 96 | 105 | 95 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0315-038.0' 1:10 | 08/18/14 | 103 | 112 | 97 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0315-043.0' 1:20 | 08/18/14 | 115 | 125 | 109 | 96 | Pass | Pass | Pass | Pass |
| WILC-IDW188850 1:10 | 08/18/14 | 99 | 112 | 97 | 83 | Pass | Pass | Pass | Pass |
| WILC-IDW195149 1:10 | 08/18/14 | 98 | 114 | 94 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0315-048.0' | 08/18/14 | 102 | 121 | 92 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0315-058.0' | 08/18/14 | 95 | 114 | 92 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0316-038.0' | 08/18/14 | 101 | 118 | 95 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0316-043.0' | 08/18/14 | 103 | 117 | 94 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0316-048.0' | 08/18/14 | 97 | 113 | 93 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0316-058.0' | 08/18/14 | 101 | 115 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0317-033.0' | 08/18/14 | 99 | 117 | 96 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0317-038.0' | 08/18/14 | 98 | 115 | 91 | 82 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/18/14 | 97 | 115 | 94 | 89 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 08/19/14 | 99 | 119 | 95 | 94 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/19/14 | 99 | 117 | 93 | 91 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/19/14 | 95 | 116 | 96 | 86 | Pass | Pass | Pass | Pass |
| BLANK | 08/19/14 | 97 | 120 | 98 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0317-043.0' 1:50 | 08/19/14 | 103 | 125 | 90 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0317-048.0' | 08/19/14 | 97 | 116 | 90 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0317-058.0' | 08/19/14 | 96 | 120 | 90 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0317-033.0' 1:10 | 08/19/14 | 98 | 111 | 91 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0317-038.0' 1:100 | 08/19/14 | 97 | 110 | 95 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0317-058.0' MS | 08/19/14 | 100 | 119 | 95 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0317-058.0' MSD | 08/19/14 | 99 | 109 | 92 | 84 | Pass | Pass | Pass | Pass |
| BLANK | 08/19/14 | 100 | 122 | 90 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0318-033.0' 1:50 | 08/19/14 | 103 | 118 | 93 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0318-038.0' 1:10 | 08/19/14 | 102 | 111 | 96 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0319-038.0' | 08/19/14 | 104 | 112 | 93 | 88 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (63% - 142%)
S2 = 1,2- Dichloroethane-D4 (68% - 136%)
S3 = Toluene-D8 (76% - 124%)
S4 = 4-Bromofluorobenzene (70% - 133%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 14-116 |
| **On-site Dates**: 8/18/14-8/25/14 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0319-043.0' 1:50 | 08/19/14 | 105 | 128 | 84 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0319-048.0' 1:100 | 08/19/14 | 100 | 126 | 93 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0319-058.0' | 08/19/14 | 103 | 118 | 94 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0320-038.0' 1:20 | 08/19/14 | 100 | 123 | 93 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0320-043.0' 1:20 | 08/19/14 | 97 | 117 | 90 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0320-048.0' 1:20 | 08/19/14 | 107 | 126 | 95 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0320-058.0' | 08/19/14 | 100 | 122 | 87 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0321-038.0' | 08/19/14 | 104 | 127 | 97 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0321-043.0' 1:20 | 08/19/14 | 106 | 120 | 93 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0321-048.0' 1:10 | 08/19/14 | 102 | 123 | 96 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0321-058.0' | 08/19/14 | 100 | 126 | 94 | 82 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/19/14 | 99 | 123 | 95 | 82 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 08/20/14 | 105 | 122 | 95 | 91 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/20/14 | 107 | 129 | 92 | 84 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/20/14 | 105 | 120 | 94 | 86 | Pass | Pass | Pass | Pass |
| BLANK | 08/20/14 | 98 | 122 | 95 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0322-038.0' | 08/20/14 | 103 | 125 | 90 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0322-043.0' 1:20 | 08/20/14 | 101 | 120 | 86 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0322-048.0' 1:50 | 08/20/14 | 109 | 128 | 82 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0322-058.0' | 08/20/14 | 109 | 128 | 84 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0322-038.0' MS | 08/20/14 | 113 | 117 | 84 | 77 | Pass | Pass | Pass | Pass |
| CRHE-DPT0322-038.0' MSD | 08/20/14 | 108 | 125 | 78 | 80 | Pass | Pass | Pass | Pass |
| BLANK | 08/20/14 | 106 | 123 | 88 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0323-038.0' | 08/20/14 | 113 | 125 | 81 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0323-043.0' | 08/20/14 | 104 | 115 | 89 | 71 | Pass | Pass | Pass | Pass |
| CRHE-DPT0323-048.0' | 08/20/14 | 112 | 128 | 84 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0323-058.0' | 08/20/14 | 107 | 125 | 86 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0324-038.0' | 08/20/14 | 112 | 126 | 84 | 80 | Pass | Pass | Pass | Pass |
| CRHE-DPT0324-043.0' 1:2 | 08/20/14 | 114 | 124 | 84 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0324-048.0' 1:50 | 08/20/14 | 116 | 130 | 84 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0324-058.0' | 08/20/14 | 114 | 121 | 84 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0325-038.0' | 08/20/14 | 112 | 123 | 84 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0325-043.0' 1:10 | 08/20/14 | 113 | 123 | 86 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0325-048.0 1:20 | 08/20/14 | 109 | 118 | 81 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0326-038.0' | 08/20/14 | 114 | 130 | 84 | 81 | Pass | Pass | Pass | Pass |
| CRHE-DPT0326-043.0' | 08/20/14 | 114 | 130 | 82 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0326-048.0' 1:10 | 08/20/14 | 112 | 121 | 84 | 82 | Pass | Pass | Pass | Pass |
| CRHE-DPT0326-058.0' | 08/20/14 | 109 | 122 | 84 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0323-058.0' MS | 08/20/14 | 108 | 127 | 82 | 79 | Pass | Pass | Pass | Pass |
| CRHE-DPT0323-058.0' MSD | 08/20/14 | 115 | 127 | 84 | 77 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/20/14 | 108 | 126 | 86 | 82 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (63% - 142%)
S2 = 1,2- Dichloroethane-D4 (68% - 136%)
S3 = Toluene-D8 (76% - 124%)
S4 = 4-Bromofluorobenzene (70% - 133%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 14-116 |
| **On-site Dates**: 8/18/14-8/25/14 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| BLANK/TUNE | 08/21/14 | 114 | 134 | 90 | 87 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/21/14 | 113 | 132 | 87 | 86 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/21/14 | 108 | 133 | 86 | 83 | Pass | Pass | Pass | Pass |
| BLANK | 08/21/14 | 98 | 105 | 101 | 102 | Pass | Pass | Pass | Pass |
| VSTD 1 | 08/21/14 | 98 | 108 | 100 | 104 | Pass | Pass | Pass | Pass |
| VSTD 5 | 08/21/14 | 97 | 100 | 102 | 104 | Pass | Pass | Pass | Pass |
| VSTD 10 | 08/21/14 | 101 | 102 | 97 | 99 | Pass | Pass | Pass | Pass |
| VSTD 20 | 08/21/14 | 98 | 104 | 99 | 100 | Pass | Pass | Pass | Pass |
| REF 20 | 08/21/14 | 96 | 104 | 101 | 102 | Pass | Pass | Pass | Pass |
| VSTD 50 | 08/21/14 | 98 | 102 | 99 | 101 | Pass | Pass | Pass | Pass |
| VSTD 100 | 08/21/14 | 95 | 95 | 102 | 102 | Pass | Pass | Pass | Pass |
| VSTD 200 | 08/21/14 | 112 | 92 | 102 | 96 | Pass | Pass | Pass | Pass |
| BLANK | 08/21/14 | 93 | 101 | 101 | 103 | Pass | Pass | Pass | Pass |
| VSTD 1 | 08/21/14 | 97 | 105 | 99 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0327-038.0' | 08/21/14 | 99 | 108 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0327-043.0' 1:50 | 08/21/14 | 99 | 105 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0327-048.0' 1:50 | 08/21/14 | 97 | 102 | 103 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0327-053.0' 1:5 | 08/21/14 | 100 | 108 | 99 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0327-058.0' | 08/21/14 | 100 | 103 | 97 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0328-038.0' 1:2 | 08/21/14 | 101 | 106 | 98 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0328-043.0' 1:5 | 08/21/14 | 101 | 109 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0328-048.0' | 08/21/14 | 102 | 107 | 98 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0328-053.0' 1:10 | 08/21/14 | 100 | 99 | 98 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0328-058.0' | 08/21/14 | 102 | 107 | 96 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0329-038.0' 1:50 | 08/21/14 | 102 | 102 | 96 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0329-043.0' 1:50 | 08/21/14 | 101 | 106 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0329-048.0' 1:10 | 08/21/14 | 101 | 106 | 99 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0329-053.0' 1:2 | 08/21/14 | 104 | 98 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0329-058.0' | 08/21/14 | 102 | 105 | 100 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0330-038.0' | 08/21/14 | 102 | 111 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0330-043.0' 1:10 | 08/21/14 | 101 | 101 | 98 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0330-048.0' 1:50 | 08/21/14 | 99 | 105 | 99 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0330-053.0' 1:10 | 08/21/14 | 103 | 104 | 94 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0330-058.0' | 08/21/14 | 106 | 104 | 94 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0327-038.0' MS | 08/21/14 | 100 | 106 | 101 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0327-038.0' MSD | 08/21/14 | 102 | 103 | 99 | 104 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/21/14 | 95 | 93 | 104 | 103 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 08/22/14 | 109 | 107 | 91 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/22/14 | 107 | 107 | 94 | 100 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/22/14 | 105 | 104 | 93 | 101 | Pass | Pass | Pass | Pass |
| BLANK | 08/22/14 | 106 | 105 | 93 | 102 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (63% - 142%)
S2 = 1,2- Dichloroethane-D4 (68% - 136%)
S3 = Toluene-D8 (76% - 124%)
S4 = 4-Bromofluorobenzene (70% - 133%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 14-116 |
| **On-site Dates**: 8/18/14-8/25/14 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0331-033.0' 1:50 | 08/22/14 | 113 | 116 | 92 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0331-038.0' 1:50 | 08/22/14 | 110 | 107 | 93 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0331-043.0' 1:20 | 08/22/14 | 108 | 105 | 91 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0331-048.0' 1:2 | 08/22/14 | 104 | 109 | 92 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0331-058.0' | 08/22/14 | 105 | 104 | 89 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0331-058.0' MS | 08/22/14 | 107 | 106 | 92 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0331-058.0' MSD | 08/22/14 | 108 | 107 | 92 | 101 | Pass | Pass | Pass | Pass |
| BLANK | 08/22/14 | 104 | 104 | 91 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0332-033.0' | 08/22/14 | 107 | 107 | 90 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0332-038.0' | 08/22/14 | 112 | 107 | 91 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0332-043.0' 1:2 | 08/22/14 | 107 | 106 | 89 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0332-048.0' 1:10 | 08/22/14 | 107 | 106 | 91 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0332-058.0' | 08/22/14 | 108 | 106 | 92 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0333-028.0' | 08/22/14 | 109 | 110 | 91 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0333-038.0' 1:10 | 08/22/14 | 108 | 104 | 93 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0333-043.0' | 08/22/14 | 104 | 107 | 93 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0333-048.0' | 08/22/14 | 106 | 110 | 95 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0333-058.0' | 08/22/14 | 104 | 110 | 94 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0318-043.0' 1:10 | 08/22/14 | 109 | 110 | 95 | 107 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/22/14 | 103 | 111 | 98 | 103 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/23/14 | 95 | 103 | 107 | 101 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/23/14 | 93 | 101 | 109 | 101 | Pass | Pass | Pass | Pass |
| BLANK | 08/23/14 | 94 | 99 | 109 | 101 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/23/14 | 99 | 110 | 105 | 101 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/23/14 | 94 | 109 | 104 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0334-033.0' | 08/23/14 | 94 | 99 | 110 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0334-038.0' | 08/23/14 | 94 | 101 | 110 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0334-043.0' 1:10 | 08/23/14 | 93 | 98 | 110 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0334-048.0' 1:10 | 08/23/14 | 92 | 99 | 110 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0334-058.0' | 08/23/14 | 93 | 100 | 111 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0334-033.0' 1:20 | 08/23/14 | 92 | 98 | 110 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0334-038.0' 1:20 | 08/23/14 | 94 | 103 | 110 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0335-033.0' 1:10 | 08/23/14 | 92 | 102 | 111 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0335-038.0' | 08/23/14 | 90 | 94 | 109 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0335-043.0' | 08/23/14 | 92 | 95 | 112 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0335-048.0' | 08/23/14 | 92 | 98 | 110 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0335-058.0' | 08/23/14 | 93 | 103 | 112 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0335-058.0' | 08/23/14 | 94 | 104 | 110 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0335-058.0' | 08/23/14 | 92 | 99 | 110 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0336-028.0' 1:500 | 08/23/14 | 94 | 102 | 109 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0336-028.0' 1:20 | 08/23/14 | 94 | 103 | 112 | 108 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (63% - 142%)
S2 = 1,2- Dichloroethane-D4 (68% - 136%)
S3 = Toluene-D8 (76% - 124%)
S4 = 4-Bromofluorobenzene (70% - 133%)

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|---|---|---|
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| **Site:** NASA KSC CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 14-116 |
| **On-site Dates**: 8/18/14-8/25/14 | **Client Project Manager**: Jill Johnson | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0336-033.0' 1:20 | 08/23/14 | 91 | 99 | 111 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0336-038.0' 1:10 | 08/23/14 | 94 | 99 | 112 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0336-043.0' 1:10 | 08/23/14 | 94 | 100 | 110 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0336-048.0' | 08/23/14 | 95 | 102 | 108 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0336-058.0' | 08/23/14 | 91 | 94 | 112 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0337-033.0' | 08/23/14 | 92 | 99 | 111 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0334-038.0' | 08/23/14 | 94 | 101 | 113 | 108 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/23/14 | 91 | 100 | 113 | 104 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/23/14 | 89 | 94 | 111 | 101 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/23/14 | 88 | 94 | 112 | 106 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 08/24/14 | 99 | 102 | 107 | 101 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/24/14 | 114 | 114 | 91 | 105 | Pass | Pass | Pass | Pass |
| CCS 5 | 08/24/14 | 103 | 107 | 100 | 101 | Pass | Pass | Pass | Pass |
| CCS 10 | 08/24/14 | 101 | 105 | 100 | 100 | Pass | Pass | Pass | Pass |
| CCS 50 | 08/24/14 | 97 | 97 | 102 | 100 | Pass | Pass | Pass | Pass |
| CCS 100 | 08/24/14 | 97 | 100 | 99 | 104 | Pass | Pass | Pass | Pass |
| CCS 200 | 08/24/14 | 100 | 90 | 95 | 97 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/24/14 | 94 | 97 | 101 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0337-043.0' | 08/24/14 | 98 | 100 | 101 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0337-048.0' | 08/24/14 | 96 | 97 | 103 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0337-058.0' | 08/24/14 | 101 | 107 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0338-028.0' | 08/24/14 | 102 | 103 | 99 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0338-033.0' | 08/24/14 | 99 | 101 | 101 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0338-038.0' | 08/24/14 | 100 | 103 | 101 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0339-028.0' 1:20 | 08/24/14 | 103 | 102 | 100 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0339-033.0' 1:20 | 08/24/14 | 98 | 95 | 102 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0339-038.0' | 08/24/14 | 101 | 98 | 101 | 103 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/24/14 | 105 | 109 | 98 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0338-038.0' MS | 08/24/14 | 104 | 108 | 97 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0338-038.0' MSD | 08/24/14 | 100 | 106 | 100 | 98 | Pass | Pass | Pass | Pass |
| LCS 20 | 08/24/14 | 101 | 106 | 98 | 98 | Pass | Pass | Pass | Pass |
| CRHE-IDW190517 1:10 | 08/25/14 | 101 | 101 | 97 | 95 | Pass | Pass | Pass | Pass |
| CCS 20 | 08/25/14 | 99 | 101 | 97 | 100 | Pass | Pass | Pass | Pass |
| **Comments:** | Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. | | | | | | | | |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (63% - 142%)
S2 = 1,2- Dichloroethane-D4 (68% - 136%)
S3 = Toluene-D8 (76% - 124%)
S4 = 4-Bromofluorobenzene (70% - 133%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-116 |
| **Onsite Dates:** 8/18/14-8/25/14 | **Client Project Manager:**Jill Johnson | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0314-048.0' **Date of Analysis:** 8/18/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 64 | 68 | 6 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 71 | 72 | 2 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 90 | 92 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 94 | 98 | 5 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 103 | 103 | 0 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 107 | 111 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0317-058.0' **Date of Analysis:** 8/19/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 79 | 68 | 14 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 79 | 74 | 7 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 97 | 91 | 7 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 103 | 100 | 3 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 111 | 101 | 10 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 122 | 118 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0322-038.0' **Date of Analysis:** 8/20/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 61 | 85 | 32 | Pass | Pass | > RPDL |
| 1,1-Dichloroethene | 30 | 165 | 20 | 75 | 88 | 16 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 97 | 122 | 24 | Pass | Pass | > RPDL |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 103 | 125 | 19 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 117 | 135 | 14 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 124 | 129 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0323-058.0' **Date of Analysis:** 8/20/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 93 | 94 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 116 | 121 | 4 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 121 | 121 | 0 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 124 | 126 | 1 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 127 | 129 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 132 | 138 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-116 |
| **Onsite Dates:** 8/18/14-8/25/14 | **Client Project Manager:**Jill Johnson | **Matrix**: Water |

**Samples:** CRHE-DPT0327-038.0' **Date of Analysis:** 8/21/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 117 | 122 | 4 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 92 | 96 | 5 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 95 | 98 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 90 | 95 | 5 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 103 | 104 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 101 | 101 | 0 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0331-058.0' **Date of Analysis:** 8/22/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 122 | 106 | 14 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 100 | 100 | 0 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 100 | 101 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 105 | 107 | 2 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 110 | 111 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 93 | 94 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0335-058.0' **Date of Analysis:** 8/23/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 94 | 95 | 1 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 93 | 90 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 92 | 88 | 5 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 91 | 86 | 6 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 88 | 85 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 92 | 91 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0338-038.0' **Date of Analysis:** 8/24/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 100 | 111 | 10 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 95 | 109 | 14 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 98 | 110 | 11 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 98 | 107 | 9 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 96 | 104 | 9 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 91 | 106 | 15 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-116 |
| **Onsite Dates:** 8/18/14-8/25/14 | **Client Project Manager:**Jill Johnson | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 **Date of Analysis:** 8/18/2014
LCS 2 8/18/2014
LCS 3 8/19/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 23 | to | 168 | 55 | 78 | 92 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 39 | to | 161 | 79 | 95 | 110 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 84 | 99 | 104 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 89 | 98 | 101 | Pass | Pass | Pass |
| Trichloroethene | 55 | to | 145 | 92 | 102 | 105 | Pass | Pass | Pass |
| Tetrachloroethene | 53 | to | 147 | 100 | 108 | 131 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 **Date of Analysis:** 8/20/2014
LCS 5 8/21/2014
LCS 6 8/21/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | LCS#6 | LCS#4 | LCS#5 | LCS#6 |
| Vinyl Chloride | 23 | to | 168 | 87 | 108 | 100 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 39 | to | 161 | 105 | 131 | 103 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 101 | 126 | 97 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 105 | 125 | 94 | Pass | Pass | Pass |
| Trichloroethene | 55 | to | 145 | 108 | 128 | 97 | Pass | Pass | Pass |
| Tetrachloroethene | 53 | to | 147 | 131 | 150 | 100 | Pass | > UCL | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 7 **Date of Analysis:** 8/22/2014
LCS 8 8/23/2014
LCS 9 8/23/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#7 | LCS#8 | LCS#9 | LCS#7 | LCS#8 | LCS#9 |
| Vinyl Chloride | 23 | to | 168 | 100 | 112 | 113 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 39 | to | 161 | 107 | 106 | 103 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 100 | 97 | 97 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 99 | 92 | 93 | Pass | Pass | Pass |
| Trichloroethene | 55 | to | 145 | 109 | 92 | 92 | Pass | Pass | Pass |
| Tetrachloroethene | 53 | to | 147 | 100 | 100 | 98 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Tuan Luu, Greg Lamb |
| **Site:** NASA KSC CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-116 |
| **Onsite Dates:** 8/18/14-8/25/14 | **Client Project Manager:**Jill Johnson | **Matrix**: Water |

**Samples:** LCS 10 — **Date of Analysis:** 8/23/2014
LCS 11 — 8/24/2014
LCS 12 — 8/24/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#10 | LCS#11 | LCS#12 | LCS#10 | LCS#11 | LCS#12 |
| Vinyl Chloride | 23 | to | 168 | 114 | 135 | 138 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 39 | to | 161 | 104 | 142 | 124 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 95 | 121 | 116 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 87 | 107 | 112 | Pass | Pass | Pass |
| Trichloroethene | 55 | to | 145 | 92 | 108 | 108 | Pass | Pass | Pass |
| Tetrachloroethene | 53 | to | 147 | 103 | 116 | 108 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 13 — **Date of Analysis:** 8/23/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#13 | | | LCS#13 | | |
| Vinyl Chloride | 23 | to | 168 | 156 | | | Pass | | |
| 1,1-Dichloroethene | 39 | to | 161 | 127 | | | Pass | | |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 123 | | | Pass | | |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 113 | | | Pass | | |
| Trichloroethene | 55 | to | 145 | 110 | | | Pass | | |
| Tetrachloroethene | 53 | to | 147 | 111 | | | Pass | | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0314-038.0-20140818 | 8/18/2014 | 09:50 | Water | 1 | **63.5** | 0.30 U | **3.3** | **31.2** | 0.19 U | 0.23 U |
| CRHE-DPT0314-043.0-20140818 | 8/18/2014 | 10:16 | Water | 1 | **63.0** | 0.30 U | **2.2** | **28.0** | 0.19 U | 0.23 U |
| CRHE-DPT0314-048.0-20140818 | 8/18/2014 | 10:50 | Water | 1 | **0.45 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0314-058.0-20140818 | 8/18/2014 | 11:13 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0315-038.0-20140818 | 8/18/2014 | 12:03 | Water | 10 | **290** | 3.0 U | **14** | **650** | 1.9 U | 2.3 U |
| CRHE-DPT0315-043.0-20140818 | 8/18/2014 | 12:27 | Water | 20 | **290** | 6.0 U | **18 I** | **1100** | 3.8 U | 4.6 U |
| CRHE-DPT0315-048.0-20140818 | 8/18/2014 | 12:51 | Water | 1 | **3.2** | 0.30 U | 0.29 U | **20.3** | 0.19 U | 0.23 U |
| CRHE-DPT0315-058.0-20140818 | 8/18/2014 | 13:10 | Water | 1 | **6.3** | 0.30 U | **0.37 I** | **34.1** | 0.19 U | 0.23 U |
| CRHE-DPT0316-038.0-20140818 | 8/18/2014 | 13:53 | Water | 1 | **72.7** | 0.30 U | **1.1** | **8.0** | 0.19 U | 0.23 U |
| CRHE-DPT0316-043.0-20140818 | 8/18/2014 | 14:30 | Water | 1 | **8.4** | 0.30 U | 0.29 U | **21.9** | 0.19 U | 0.23 U |
| CRHE-DPT0316-048.0-20140818 | 8/18/2014 | 15:02 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0316-058.0-20140818 | 8/18/2014 | 15:26 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0317-033.0-20140818 | 8/18/2014 | 16:16 | Water | 1, 10 | **740** | 0.30 U | **12.9** | **30.7** | 0.19 U | 0.23 U |
| CRHE-DPT0317-038.0-20140818 | 8/18/2014 | 16:40 | Water | 1, 100 | **1900** | 0.30 U | **35.4** | **27.1** | 0.19 U | 0.23 U |
| CRHE-DPT0317-043.0-20140819 | 8/19/2014 | 08:25 | Water | 50 | **2800** | 15 U | **32 I** | **29 I** | 10 U | 12 U |
| CRHE-DPT0317-048.0-20140819 | 8/19/2014 | 08:46 | Water | 1 | **35.0** | 0.30 U | **1.1** | **6.4** | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0317-058.0-20140819 | 8/19/2014 | 09:11 | Water | 1 | **0.93 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0318-033.0-20140819 | 8/19/2014 | 09:55 | Water | 50 | **1000** | 15 U | 15 U | 11 U | 10 U | 12 U |
| CRHE-DPT0318-038.0-20140819 | 8/19/2014 | 10:18 | Water | 10 | **1300** | 3.0 U | **20** | **20** | 1.9 U | 2.3 U |
| CRHE-DPT0319-038.0-20140819 | 8/19/2014 | 11:57 | Water | 1 | **2.5** | 0.30 U | **0.63 I** | **1.2** | 0.19 U | 0.23 U |
| CRHE-DPT0319-043.0-20140819 | 8/19/2014 | 12:21 | Water | 50 | **630** | 15 U | **71** | **2200** | 10 U | 12 U |
| CRHE-DPT0319-048.0-20140819 | 8/19/2014 | 12:58 | Water | 100 | **350** | 30 U | **120** | **3700** | **410** | 23 U |
| CRHE-DPT0319-058.0-20140819 | 8/19/2014 | 13:10 | Water | 1 | **0.33 I** | 0.30 U | 0.29 U | **5.2** | **0.20 I** | 0.23 U |
| CRHE-DPT0320-038.0-20140819 | 8/19/2014 | 13:49 | Water | 20 | **400** | 6.0 U | 5.8 U | **13 I** | 3.8 U | 4.6 U |
| CRHE-DPT0320-043.0-20140819 | 8/19/2014 | 14:08 | Water | 20 | **980** | 6.0 U | **17 I** | **460** | 3.8 U | 4.6 U |
| CRHE-DPT0320-048.0-20140819 | 8/19/2014 | 14:29 | Water | 20 | **540** | 6.0 U | **29** | **1000** | 3.8 U | 4.6 U |
| CRHE-DPT0320-058.0-20140819 | 8/19/2014 | 14:50 | Water | 1 | **0.30 I** | 0.30 U | 0.29 U | **0.65 I** | 0.19 U | 0.23 U |
| CRHE-DPT0321-038.0-20140819 | 8/19/2014 | 16:00 | Water | 1 | **0.49 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0321-043.0-20140819 | 8/19/2014 | 16:25 | Water | 20 | **1100** | 6.0 U | **33** | **1200** | **7.0 I** | 4.6 U |
| CRHE-DPT0321-048.0-20140819 | 8/19/2014 | 16:48 | Water | 10 | **380** | 3.0 U | **13** | **310** | 1.9 U | 2.3 U |
| CRHE-DPT0321-058.0-20140819 | 8/19/2014 | 17:13 | Water | 1 | **1.4** | 0.30 U | 0.29 U | **6.0** | 0.19 U | 0.23 U |
| CRHE-DPT0322-038.0-20140820 | 8/20/2014 | 07:59 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0322-043.0-20140820 | 8/20/2014 | 08:21 | Water | 20 | **650** | 6.0 U | 5.8 U | **63** | 3.8 U | 4.6 U |
| CRHE-DPT0322-048.0-20140820 | 8/20/2014 | 08:45 | Water | 50 | **680** | 15 U | **19 I** | **1600** | 10 U | 12 U |
| CRHE-DPT0322-058.0-20140820 | 8/20/2014 | 09:08 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.28 I** | 0.19 U | 0.23 U |
| CRHE-DPT0323-038.0-20140820 | 8/20/2014 | 09:55 | Water | 1 | 0.26 U | 0.30 U | **2.3** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0323-043.0-20140820 | 8/20/2014 | 10:16 | Water | 1 | 0.26 U | 0.30 U | **0.40 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0323-048.0-20140820 | 8/20/2014 | 10:40 | Water | 1 | **1.4** | 0.30 U | 0.29 U | **9.7** | 0.19 U | 0.23 U |
| CRHE-DPT0323-058.0-20140820 | 8/20/2014 | 11:01 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0324-038.0-20140820 | 8/20/2014 | 11:55 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0324-043.0-20140820 | 8/20/2014 | 12:20 | Water | 2 | **130** | 0.60 U | **6.9** | **110** | 0.38 U | 0.46 U |
| CRHE-DPT0324-048.0-20140820 | 8/20/2014 | 12:40 | Water | 50 | **380** | 15 U | **160** | **4400** | **740** | 12 U |
| CRHE-DPT0324-058.0-20140820 | 8/20/2014 | 13:03 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **1.7** | 0.19 U | 0.23 U |
| CRHE-DPT0325-038.0-20140820 | 8/20/2014 | 13:50 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **1.4** | 0.19 U | 0.23 U |
| CRHE-DPT0325-043.0-20140820 | 8/20/2014 | 14:12 | Water | 10 | **860** | 3.0 U | **34** | **1200** | **60** | 2.3 U |
| CRHE-DPT0325-048.0-20140820 | 8/20/2014 | 14:35 | Water | 20 | **310** | 6.0 U | **29** | **1500** | **38** | 4.6 U |
| CRHE-DPT0326-038.0-20140820 | 8/20/2014 | 15:26 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.46 I** | 0.19 U | 0.23 U |
| CRHE-DPT0326-043.0-20140820 | 8/20/2014 | 15:48 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0326-048.0-20140820 | 8/20/2014 | 16:14 | Water | 10 | **1000** | 3.0 U | **13** | **200** | 1.9 U | 2.3 U |
| CRHE-DPT0326-058.0-20140820 | 8/20/2014 | 16:41 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0327-038.0-20140821 | 8/21/2014 | 07:58 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0327-043.0-20140821 | 8/21/2014 | 08;24 | Water | 50 | **1600** | 15 U | **69** | **2700** | **26 I** | 12 U |
| CRHE-DPT0327-048.0-20140821 | 8/21/2014 | 08:47 | Water | 50 | **1100** | 15 U | **90** | **2900** | **130** | 12 U |
| CRHE-DPT0327-053.0-20140821 | 8/21/2014 | 09:16 | Water | 5 | **70** | 1.5 U | **4.6 I** | **210** | **1.6 I** | 1.2 U |
| CRHE-DPT0327-058.0-20140821 | 8/21/2014 | 09:45 | Water | 1 | **8.7** | 0.30 U | **0.72 I** | **28.6** | **0.91 I** | 0.23 U |
| CRHE-DPT0328-038.0-20140821 | 8/21/2014 | 10:23 | Water | 2 | **100** | 0.60 U | **2.5** | **2.6** | 0.38 U | 0.46 U |
| CRHE-DPT0328-043.0-20140821 | 8/21/2014 | 10:54 | Water | 5 | **160** | 1.5 U | **3.0 I** | **3.2 I** | 1.0 U | 1.2 U |
| CRHE-DPT0328-048.0-20140821 | 8/21/2014 | 11:16 | Water | 1 | **137.4** | 0.30 U | **5.9** | **42.0** | 0.19 U | 0.23 U |
| CRHE-DPT0328-053.0-20140821 | 8/21/2014 | 11:41 | Water | 10 | **120** | 3.0 U | **35** | **1000** | 1.9 U | 2.3 U |
| CRHE-DPT0328-058.0-20140821 | 8/21/2014 | 12:03 | Water | 1 | **0.66 I** | 0.30 U | 0.29 U | **0.82 I** | 0.19 U | 0.23 U |
| CRHE-DPT0329-038.0-20140821 | 8/21/2014 | 13:04 | Water | 50 | **2500** | 15 U | **19 I** | **51** | 10 U | 12 U |
| CRHE-DPT0329-043.0-20140821 | 8/21/2014 | 13:26 | Water | 50 | **1700** | 15 U | **18 I** | **40 I** | 10 U | 12 U |
| CRHE-DPT0329-048.0-20140821 | 8/21/2014 | 13:48 | Water | 10 | **420** | 3.0 U | **5.1 I** | **24** | 1.9 U | 2.3 U |
| CRHE-DPT0329-053.0-20140821 | 8/21/2014 | 14:07 | Water | 2 | **49** | 0.60 U | **1.0 I** | **7.3** | 0.38 U | 0.46 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0329-058.0-20140821 | 8/21/2014 | 14:29 | Water | 1 | **2.6** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0330-038.0-20140821 | 8/21/2014 | 15:11 | Water | 1 | 0.26 U | 0.30 U | **2.1** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0330-043.0-20140821 | 8/21/2014 | 15:32 | Water | 10 | **520** | 3.0 U | **8.2 I** | **120** | 1.9 U | 2.3 U |
| CRHE-DPT0330-048.0-20140821 | 8/21/2014 | 15:55 | Water | 50 | **870** | 15 U | 15 U | **270** | 10 U | 12 U |
| CRHE-DPT0330-053.0-20140821 | 8/21/2014 | 16:22 | Water | 10 | **380** | 3.0 U | **11** | **430** | 1.9 U | 2.3 U |
| CRHE-DPT0330-058.0-20140821 | 8/21/2014 | 16:37 | Water | 1 | **7.0** | 0.30 U | 0.29 U | **2.5** | 0.19 U | 0.23 U |
| CRHE-DPT0331-033.0-20140822 | 8/22/2014 | 08:59 | Water | 50 | **2200** | 15 U | **16 I** | **56** | 10 U | 12 U |
| CRHE-DPT0331-038.0-20140822 | 8/22/2014 | 09:24 | Water | 50 | **2500** | 15 U | **33 I** | **39 I** | 10 U | 12 U |
| CRHE-DPT0331-043.0-20140822 | 8/22/2014 | 09:55 | Water | 20 | **600** | 6.0 U | **5.8 I** | **10 I** | 3.8 U | 4.6 U |
| CRHE-DPT0331-048.0-20140822 | 8/22/2014 | 10:20 | Water | 2 | **47** | 0.60 U | **1.3 I** | **13** | 0.38 U | 0.46 U |
| CRHE-DPT0331-058.0-20140822 | 8/22/2014 | 10:44 | Water | 1 | **7.3** | 0.30 U | 0.29 U | **0.28 I** | 0.19 U | 0.23 U |
| CRHE-DPT0332-033.0-20140822 | 8/22/2014 | 11:30 | Water | 1 | **1.9** | 0.30 U | 0.29 U | **0.50 I** | 0.19 U | 0.23 U |
| CRHE-DPT0332-038.0-20140822 | 8/22/2014 | 11:50 | Water | 1 | **3.4** | 0.30 U | **1.4** | **0.35 I** | 0.19 U | 0.23 U |
| CRHE-DPT0332-043.0-20140822 | 8/22/2014 | 12:24 | Water | 2 | **88** | 0.60 U | **3.1** | **110** | 0.38 U | 0.46 U |
| CRHE-DPT0332-048.0-20140822 | 8/22/2014 | 12:50 | Water | 10 | **230** | 3.0 U | **29** | **1200** | 1.9 U | 2.3 U |
| CRHE-DPT0332-058.0-20140822 | 8/22/2014 | 13:19 | Water | 1 | **1.2** | 0.30 U | 0.29 U | **10.0** | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0333-028.0-20140822 | 8/22/2014 | 14:13 | Water | 1 | **3.4** | 0.30 U | 0.29 U | **18.9** | 0.19 U | 0.23 U |
| CRHE-DPT0333-038.0-20140822 | 8/22/2014 | 14:33 | Water | 10 | **24** | 3.0 U | 2.9 U | **57** | 1.9 U | 2.3 U |
| CRHE-DPT0333-043.0-20140822 | 8/22/2014 | 14:54 | Water | 1 | **19.1** | 0.30 U | 0.29 U | **22.9** | 0.19 U | 0.23 U |
| CRHE-DPT0333-048.0-20140822 | 8/22/2014 | 15:17 | Water | 1 | **21.20** | 0.30 U | 0.29 U | **1.8** | 0.19 U | 0.23 U |
| CRHE-DPT0333-058.0-20140822 | 8/22/2014 | 15:38 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.37 I** | 0.19 U | 0.23 U |
| CRHE-DPT0318-043.0-20140822 | 8/22/2014 | 16:17 | Water | 10 | **1800** | 3.0 U | **18.1** | **55.0** | 1.9 U | 2.3 U |
| CRHE-DPT0334-033.0-20140823 | 8/23/2014 | 08:01 | Water | 1,20 | **1300** | 0.30 U | **5.7** | **3.6** | 0.19 U | 0.23 U |
| CRHE-DPT0334-038.0-20140823 | 8/23/2014 | 08:24 | Water | 1,20 | **1500** | 0.30 U | **9.2** | **3.7** | 0.19 U | 0.23 U |
| CRHE-DPT0334-043.0-20140823 | 8/23/2014 | 09:17 | Water | 10 | **530** | 3.0 U | **3.5 I** | **4.9 I** | 1.9 U | 2.3 U |
| CRHE-DPT0334-048.0-20140823 | 8/23/2014 | 09:38 | Water | 10 | **8.8 I** | 3.0 U | 2.9 U | 2.2 U | 1.9 U | 2.3 U |
| CRHE-DPT0334-058.0-20140823 | 8/23/2014 | 10:03 | Water | 1 | **3.0** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0335-033.0-20140823 | 8/23/2014 | 10:47 | Water | 10 | 2.6 U | 3.0 U | 2.9 U | 2.2 U | 1.9 U | 2.3 U |
| CRHE-DPT0335-038.0-20140823 | 8/23/2014 | 00:00 | Water | 1 | **13.4** | 0.30 U | 0.29 U | **5.3** | 0.19 U | 0.23 U |
| CRHE-DPT0335-043.0-20140823 | 8/23/2014 | 11:32 | Water | 1 | **0.79 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0335-048.0-20140823 | 8/23/2014 | 11:56 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0335-058.0-20140823 | 8/23/2014 | 12:20 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0336-028.0-20140823 | 8/23/2014 | 13:14 | Water | 20 | **1500** | 6.0 U | 5.8 U | **6.6 I** | 3.8 U | 4.6 U |
| CRHE-DPT0336-033.0-20140823 | 8/23/2014 | 13:33 | Water | 20 | **2400** | 6.0 U | **13 I** | 4.4 U | 3.8 U | 4.6 U |
| CRHE-DPT0336-038.0-20140823 | 8/23/2014 | 13:52 | Water | 10 | **140** | 3.0 U | 2.9 U | 2.2 U | 1.9 U | 2.3 U |
| CRHE-DPT0336-043.0-20140823 | 8/23/2014 | 14:15 | Water | 10 | 2.6 U | 3.0 U | 2.9 U | 2.2 U | 1.9 U | 2.3 U |
| CRHE-DPT0336-048.0-20140823 | 8/23/2014 | 14:42 | Water | 1 | **0.53 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0336-058.0-20140823 | 8/23/2014 | 15:04 | Water | 1 | **3.4** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0337-033.0-20140823 | 8/23/2014 | 16:01 | Water | 1 | **17.7** | 0.30 U | 0.29 U | **3.3** | 0.19 U | 0.23 U |
| CRHE-DPT0337-038.0-20140823 | 8/23/2014 | 16:28 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0337-043.0-20140824 | 8/24/2014 | 07:45 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0337-048.0-20140824 | 8/24/2014 | 08:07 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0337-058.0-20140824 | 8/24/2014 | 08:31 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0338-028.0-20140824 | 8/24/2014 | 09:06 | Water | 1 | **1.4** | 0.30 U | **0.71 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0338-033.0-20140824 | 8/24/2014 | 09:25 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0338-038.0-20140824 | 8/24/2014 | 09:45 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0339-028.0-20140824 | 8/24/2014 | 10:28 | Water | 20 | **210** | 6.0 U | 5.8 U | 4.4 U | 3.8 U | 4.6 U |
| CRHE-DPT0339-033.0-20140824 | 8/24/2014 | 10:46 | Water | 20 | **700** | 6.0 U | 5.8 U | 4.4 U | 3.8 U | 4.6 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0339-038.0-20140824 | 8/24/2014 | 11:07 | Water | 1 | **0.79 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-IDW190517-20140824 | 8/25/2014 | 16:03 | Water | 10 | **23** | 3.0 U | 2.9 U | **61** | **2.6 I** | 2.3 U |
| WILC-IDW188850-20140818 | 8/18/2014 | 09:30 | Water | 10 | 2.6 U | 3.0 U | 2.9 U | **3.6 I** | 1.9 U | 2.3 U |
| WILC-IDW195149-20140818 | 8/18/2014 | 09:35 | Water | 10 | **3.1 I** | 3.0 U | 2.9 U | **42** | **8.5 I** | 2.3 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

## Method Blank Summary

## NASA CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| Method Blank | 8/18/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank | 8/18/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank | 8/19/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank | 8/19/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank | 8/20/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank | 8/20/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank | 8/21/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank | 8/22/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank | 8/22/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank | 8/23/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank | 8/24/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** kB3

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | CRHE | KSC, FL |
| **SAMPLERS** | **CONTACT PERSON** | **BATCH # (Lab Use Only)** |
| | Lane | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOCs (4 bottles) | COMMENT / SAMPLE PRE FIX: 30 81814 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20140818 | | | | | | | | | | | |
| CRHE DPT0314-038.0 | 8/18/14 | 0950 | | ✓ | 8/18/14 | 11:00 | | W | 2 | ✓ | 01 A,B |
| -043.0 | | 1016 | | | | | | | | | 02 |
| -048.0 | | 1050 | | | | | | | | | 03 |
| -058.0 | | 1113 | | | | 1330 | | | | | 04 |
| DPT0315-038.0 | | 1203 | | | | | | | | | 05 |
| -043.0 | | 1227 | | | | | | | | | 06 |
| ILC IDW188850 | | 0430 | | | | | | | | | 07 |
| ILC IDW195149 | | 0935 | | | | | | | | | 08 |
| SES IDW195314 | | 1215 | | | | | | | | | 09 |
| CRHE DPT0315-048.0 | | 1251 | | | | 1445 | | | | | 10 |
| -058.0 | | 1310 | | | | | | | | | 11 |
| DPT0316-038.0 | | 1353 | | | | | | | | | 12 |
| -043.0 | | 1430 | | | | | | | | | 13 |
| -048.0 | | 1502 | | | | 1655 | | | | | 14 |
| -058.0 | | 1526 | | | | 1655 | | | | | 15 |

| Precleaned Containers / Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time: 8/18/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD


KB LABS Mobile Laboratory Services

6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507


**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS | BATCH # (Lab Use Only) |
|---|---|---|
| Geosyntec | CRHF KSC, FL | |
| SAMPLERS | CONTACT PERSON: Lane | |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| | SAMPLE FIELD ID.\ NUMBER 20140818 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOCs, ft, 1,6 | COMMENT / SAMPLE PRE FIX: 3081814 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE | DPT0317-033.0 | 8/18/14 | 1616 | | - | 8/18/14 | 1655 | | W | 2 | ✓ | 16 A,B |
| | -038.0 | ↓ | 1640 | | | ↓ | 1655 | | | | | 17 A,B |
| | | | | | | | | | | | | |
| CRHE | DPT0317-043.0 | 8/19/14 | 0825 | | | 8/19/14 | 0925 | | | | | 3081914-01 A,B |
| | -048.0 | | 0846 | | | | ↓ | | | | | 02 A,B |
| | -058.0 | | 0911 | | | | | | | | | 03 |
| | DPT0318-033.0 | | 0955 | | | | 1240 | | | | | 04 |
| | -038.0 | | 1013 | | | | ↓ | | | | | 05 |
| | DPT0319-038.0 | | 1157 | | | | | | | | | 06 |
| | -043.0 | | 1221 | | | | | | | | | 07 |
| | -048.0 | | 1258 | | | | 1420 | | | | | 08 |
| | -058.0 | | 1310 | | | | ↓ | | | | | 09 |
| | DPT0320-038.0 | | 1349 | | | | | | | | | 10 |
| | -043.0 | | 1408 | | | | ↓ | | | | | 11 |
| | -048.0 | | 1429 | | | | 1550 | | | | | 12 |

| | | | |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time: 8/19/14 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | CRTE | KSC, FL |
| SAMPLERS | CONTACT PERSON: Lane | BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| | SAMPLE FIELD ID.\ NUMBER 20140819 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOCs (Full List) | COMMENT / SAMPLE PRE FIX: 3081914- |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RITE | DPT0320-058.0 | 8/19/14 | 1450 | | ✓ | 8/19/14 | 1550 | | W | 2 | ✓ | 13 A,B |
| | DPT0321-038.0 | | 1600 | | | | 1720 | | | | | 14 |
| | -043.0 | | 1625 | | | | | | | | | 15 |
| | -048.0 | | 1648 | | | | | | | | | 16 |
| | -058.0 | | 1713 | | | | | | | | | 17 |
| | | | | | | | | | | | | |
| RITE | DPT0322-038.0 | 8/20/14 | 0759 | | | 8/20/14 | 0920 | | W | 2 | ✓ | 3082014-01A,B |
| | -043.0 | | 0821 | | | | | | | | | 02 A,B |
| | -048.0 | | 0845 | | | | | | | | | 03 |
| | -058.0 | | 0908 | | | | | | | | | 04 |
| | DPT0323-038.0 | | 0955 | | | | 1115 | | | | | 05 |
| | -043.0 | | 1016 | | | | | | | | | 06 |
| | -048.0 | | 1040 | | | | | | | | | 07 |
| | -058.0 | | 1101 | | | | | | | | | 08 |
| | DPT0324-038.0 | | 1155 | | | | 1315 | | | | | 09 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time: 8/20/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTE KSC, FL

SAMPLERS

CONTACT PERSON: Lane

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER 20140820 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOCs, TICs | COMMENT / SAMPLE PRE FIX: 30820 14 - |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRTE DPT0324-043.0 | 8/20/14 | 1220 | | ✓ | 8/20/14 | 1315 | | W | 2 | ✓ | 10 A,B |
| -048.0 | | 1240 | | | | ↓ | | | | | 11 |
| -058.0 | | 1303 | | | | | | | | | 12 |
| DPT0325-038.0 | | 1350 | | | | 1445 | | | | | 13 |
| -043.0 | | 1412 | | | | ↓ | | | | | 14 |
| -048.0 | | 1435 | | | | | | | | | 15 |
| DPT0326-038.0 | | 1526 | | | | 1650 | | | | | 16 |
| -043.0 | | 1548 | | | | | | | | | 17 |
| -048.0 | | 1614 | | | | | | | | | 18 |
| -058.0 | ↓ | 1641 | | | ↓ | ↓ | | ↓ | ↓ | ↓ | 19 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>8/20/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: Volatiles

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER 20140821 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | Volatiles | 30821/14 COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE DPT 0327 - 038.0 | 8/21/14 | 0758 | | ✓ | 8/21/14 | 0950 | | W | 2 | ✓ | 01 A, B |
| -043.0 | | 0824 | | | | | | | | | 02 |
| -048.0 | | 0847 | | | | | | | | | 03 |
| -053.0 | | 0916 | | | | | | | | | 04 |
| -058.0 | | 0945 | | | | | | | | | 05 |
| DPT 0328 - 038.0 | | 1023 | | | | 1210 | | | | | 06 |
| -043.0 | | 1054 | | | | | | | | | 07 |
| -048.0 | | 1116 | | | | | | | | | 08 |
| -053.0 | | 1141 | | | | | | | | | 09 |
| -058.0 | | 1203 | | | | | | | | | 10 |
| DPT 0329 - 038.0 | | 1304 | | | | 1435 | | | | | 11 |
| -043.0 | | 1326 | | | | | | | | | 12 |
| -048.0 | | 1348 | | | | | | | | | 13 |
| -053.0 | | 1407 | | | | | | | | | 14 |
| -058.0 | | 1429 | | | | | | | | | 15 |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 8/21/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS | |
|---|---|---|
| Geosyntec | CRHE | KSC, FL |
| **SAMPLERS** | **CONTACT PERSON** | **BATCH # (Lab Use Only)** |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| | SAMPLE FIELD ID.\ NUMBER 20140821 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: Volatiles | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RHE | DPT0330-038.0 | 8/21/14 | 1511 | | ✓ | 8/22/14 | 1650 | | W | 2 | ✓ | 16 A,B |
| | -043.0 | | 1532 | | | | ↓ | | ↓ | ↓ | ↓ | 17 ↓ |
| | -048.0 | | 1555 | | | | | | | | | 18 |
| | -053.0 | | 1622 | | | | | | | | | 19 |
| | -058.0 | | 1637 | | | | | | | | | 20 |
| | | | | | | | | | | | | |
| RHE | DPT0331-033.0 | 8/22/14 | 0859 | | | 8/22/14 | 1100 | | W | 2 | ✓ | 3092214-01A |
| | -038.0 | ↓ | 0924 | | | ↓ | ↓ | | ↓ | ↓ | ↓ | 02 A,B |
| | -043.0 | | 0955 | | | | | | | | | 03 ↓ |
| | -048.0 | | 1020 | | | | | | | | | 04 |
| | -058.0 | | 1044 | | | | ↓ | | | | | 05 |
| | DPT0332-033.0 | | 1130 | | | | 1330 | | | | | 06 |
| | -038.0 | | 1150 | | | | | | | | | 07 |
| | -043.0 | | 1224 | | | | | | | | | 08 |
| | -048.0 | ↓ | 1250 | | | ↓ | ↓ | | ↓ | ↓ | ↓ | 09 |

| Precleaned Containers / Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 8/22/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: Volatiles

| | SAMPLE FIELD ID.\ NUMBER 20140822 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | | | | | COMMENT / SAMPLE PRE FIX 30822 14- |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE | DPT0332-058.0 | 8/22/14 | 1319 | | ✓ | 8/22/14 | 1330 | | W | 2 | ✓ | | | | 10 A,B |
| | DPT0333-028.0 | | 1413 | | | | 1545 | | | | | | | | 11 |
| | -038.0 | | 1433 | | | | | | | | | | | | 12 |
| | -043.0 | | 1454 | | | | | | | | | | | | 13 |
| | -048.0 | | 1517 | | | | | | | | | | | | 14 |
| | -058.0 | | 1538 | | | | | | | | | | | | 15 |
| | DPT0318-043.0 | | 1617 | | | | 1640 | | | | | | | | 16 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507


**MOBILE UNIT #**

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CRHE KSC

SAMPLERS

CONTACT PERSON: Chris

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE DPT0334-033.0 | 0823 | 0801 | | ✓ | 8/23/14 | 1030 | | W | 2 | ✓ Volt | 01 A,13 |
| 038.0 | | 0824 | | | | | | | | | 02 |
| 043.0 | | 0917 | | | | | | | | | 03 |
| 048.0 | | 0938 | | | | | | | | | 04 |
| 058.0 | | 1003 | | | | | | | | | 05 |
| DPT0335-033.0 | | 1047 | | | | 1235 | | | | | 06 |
| -038.0 | | | | | | | | | | | 07 |
| -043.0 | | 1132 | | | | | | | | | 08 |
| -048.0 | | 1156 | | | | | | | | | 09 |
| -058.0 | | 1220 | | | | | | | | | 10 |
| DPT0336-028.0 | | 1314 | | | | 1520 | | | | | 11 |
| -033.0 | | 1333 | | | | | | | | | 12 |
| -038.0 | | 1352 | | | | | | | | | 13 |
| -043.0 | | 1415 | | | | | | | | | 14 |
| -048.0 | | 1442 | | | | | | | | | 15 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>8/23/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #**

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC

SAMPLERS

CONTACT PERSON: Chris

BATCH # (Lab Use Only)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: VOH

**PRESERVATION**
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | | | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT 0336-058.0 | 0823 | 1504 | | ✓ | 8/23/14 | 1520 | | W | 2 | ✓ | | | | | 16 A, B |
| DPT 0337-033.0 | ↓ | 1601 | | ↓ | ↓ | 1630 | | ↓ | ↓ | ↓ | | | | | 17 |
| ↓ -038.0 | ↓ | 1628 | | ↓ | ↓ | ↓ | | ↓ | ↓ | ↓ | | | | | 18 ↓ |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>6/23/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

MOBILE UNIT #

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CRTE KSC

SAMPLERS

CONTACT PERSON: Chris

BATCH # (Lab Use Only)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: Volt

PRESERVATION
C Chilled
H HCL
Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|
| CRTE DPT 0337-043.0 | 0824 | 0745 | | ✓ | 8/24/14 | 0955 | | W | 2 | 01 A, B |
| -048.0 | | 0807 | | | | | | | | 02 |
| -058.0 | | 0831 | | | | | | | | 03 |
| DPT 0338-028.0 | | 0906 | | | | | | | | 04 |
| -033.0 | | 0925 | | | | | | | | 05 |
| -038.0 | | 0945 | | | | | | | | 06 |
| DPT 0339-028.0 | | 1028 | | | | 1125 | | | | 07 Both ICs had "38" must be "28" |
| -033.0 | | 1046 | | | | | | | | 08 |
| -038.0 | | 1107 | | | | | | | | 09 |

| Precleaned Containers Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 8/24/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB 3

| CLIENT NAME | PROJECT NAME & ADDRESS | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Geosyntec | CRHE KSC, FL | | | | | | | | | | | | | | | | |
| SAMPLERS | CONTACT PERSON | | | | | | BATCH # (Lab Use Only) | | | | | | | | | | |
| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS | | | | | PRESERVATION: C Chilled, H HCL, Ot Other (see Remarks) | COMMENT / SAMPLE PRE FIX | |
| | | | | | | | | | | VOCs, 1,4-D | | | | | | 3082514 | |
| RHE IDW 190517 | 8/24/14 | 1603 | | ✓ | 8/25/14 | 0930 | | W | 2 | ✓ | | | | | | 01 A, B | |

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>8/25/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**6821 SW Archer Road**
**Gainesville, Florida 32608**
***Telephone* (352) 367-0073**
***Fax* (352) 378-6491**
Email: info@kbmobilelabs.com

October 7, 2014

Lane Dorman
Geosyntec Consultants
316 South Baylen Street, Suite 201
Pensacola, FL 32502

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project 14-120**

Dear Mr. Dorman:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Samples were collected and analyzed from September 22 to October 3, 2014. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

KB Labs, Inc.
6821 SW Archer Road
Gainesville, FL 32608
Phone: 352-367-0073
Fax: 352-378-6491
Email: info@kbmobilelabs.com

# PROJECT NARRATIVE

## Project Scope

From September 22 to October 3, 2014, a total of 105 water samples were analyzed for Geosyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1, 1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene,

## NELAP Certification

KB Mobile Labs Unit KB1: FDOH NELAP Certification Number E82815
KB Mobile Labs Unit KB2: FDOH NELAP Certification Number E82840
KB Mobile Labs Unit KB3: FDOH NELAP Certification Number E82816

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report and the results relate only to the actual samples received and analyzed in the laboratory. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the

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Gainesville, FL 32608
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standard deviation from the mean of historical measurements of the percent recovery of spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0 ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

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# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. Sample CRHE-DPT0354-033.0-20140929 was rerun neat on 10/3/14.

3. Second reporting in Field Data for sample DPT0342-038.0 on 9/23 is actually DPT0342-058.0.

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Yael Hoogland, Greg Lamb, Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 145-120 |
| **On-site Dates**: 9/22/14-10/3/14 | **Client Project Manager**: Lane Dorman | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CCS 20 | 09/22/14 | 105 | 111 | 101 | 102 | Pass | Pass | Pass | Pass |
| LCS 20 | 09/22/14 | 103 | 113 | 99 | 107 | Pass | Pass | Pass | Pass |
| TUNE/BLANK | 09/22/14 | 102 | 103 | 102 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0340-033.0 | 09/22/14 | 102 | 112 | 100 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0340-038.0 1:20 | 09/22/14 | 104 | 109 | 102 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0340-043.0 1:20 | 09/22/14 | 103 | 106 | 101 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0340-048.0 1:5 | 09/22/14 | 102 | 107 | 102 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0340-058.0 | 09/22/14 | 105 | 115 | 101 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0341-033.0 | 09/22/14 | 103 | 113 | 100 | 106 | Pass | Pass | Pass | Pass |
| CRHE-DPT0341-038.0 | 09/22/14 | 104 | 116 | 102 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0341-043.0 1:50 | 09/22/14 | 101 | 108 | 101 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0341-048.0 1;10 | 09/22/14 | 103 | 110 | 104 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0341-053.0 | 09/22/14 | 104 | 115 | 103 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0340-058.0 MS | 09/22/14 | 109 | 126 | 99 | 104 | Pass | Pass | Pass | Pass |
| CRHE-DPT0340-058.0 MSD | 09/22/14 | 103 | 112 | 103 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 09/22/14 | 100 | 115 | 104 | 102 | Pass | Pass | Pass | Pass |
| CCS 50 | 09/22/14 | 101 | 109 | 104 | 103 | Pass | Pass | Pass | Pass |
| CCS 50 | 09/23/14 | 108 | 112 | 96 | 88 | Pass | Pass | Pass | Pass |
| LCS 20 | 09/23/14 | 104 | 105 | 97 | 92 | Pass | Pass | Pass | Pass |
| BLANK | 09/23/14 | 96 | 101 | 99 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0341-058.0 | 09/23/14 | 99 | 107 | 95 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0342-033.0 | 09/23/14 | 97 | 96 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0342-038.0 | 09/23/14 | 94 | 95 | 100 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0342-043.0 | 09/23/14 | 96 | 97 | 97 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0342-048.0 | 09/23/14 | 96 | 101 | 95 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0342-058.0 | 09/23/14 | 100 | 98 | 98 | 85 | Pass | Pass | Pass | Pass |
| TUNE/BLANK | 09/24/14 | 93 | 92 | 96 | 82 | Pass | Pass | Pass | Pass |
| CCS 50 | 09/24/14 | 104 | 102 | 100 | 83 | Pass | Pass | Pass | Pass |
| LCS 20 | 09/24/14 | 106 | 107 | 94 | 86 | Pass | Pass | Pass | Pass |
| BLANK | 09/24/14 | 98 | 97 | 95 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0343-033.0 | 09/24/14 | 103 | 103 | 94 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0343-038.0 | 09/24/14 | 98 | 99 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0343-043.0 | 09/24/14 | 98 | 96 | 96 | 87 | Pass | Pass | Pass | Pass |
| CRHE-DPT0343-048.0 | 09/24/14 | 99 | 94 | 98 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0342-058.0 MS | 09/24/14 | 100 | 97 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0342-058.0 MSD | 09/24/14 | 99 | 98 | 97 | 84 | Pass | Pass | Pass | Pass |
| CCS | 09/24/14 | 115 | 130 | 90 | 77 | Pass | Pass | Pass | Pass |
| LCS 20 | 09/24/14 | 114 | 124 | 94 | 80 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (63% - 142%)
S2 = 1,2- Dichloroethane-D4 (68% - 136%)
S3 = Toluene-D8 (76% - 124%)
S4 = 4-Bromofluorobenzene (70% - 133%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Yael Hoogland, Greg Lamb, Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 145-120 |
| **On-site Dates**: 9/22/14-10/3/14 | **Client Project Manager**: Lane Dorman | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| METHOD BLANK | 09/24/14 | 106 | 115 | 94 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0344-033.0 | 09/24/14 | 108 | 113 | 97 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0344-038.0 1:10 | 09/24/14 | 106 | 109 | 94 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0344-043.0 | 09/24/14 | 105 | 106 | 96 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0344-048.0 1:2 | 09/24/14 | 108 | 113 | 95 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0344-053.0 | 09/24/14 | 105 | 111 | 98 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0344-058.0 | 09/24/14 | 103 | 106 | 97 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0345-033.0 | 09/24/14 | 102 | 112 | 96 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0345-038.0 | 09/24/14 | 103 | 109 | 94 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0345-043.0 | 09/24/14 | 99 | 98 | 100 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0345-048.0 | 09/24/14 | 97 | 97 | 98 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0345-053.0 | 09/24/14 | 103 | 106 | 96 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0345-058.0 | 09/24/14 | 99 | 104 | 98 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0346-033.0 | 09/24/14 | 100 | 102 | 97 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0346-038.0 | 09/24/14 | 110 | 124 | 93 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0346-043.0 | 09/24/14 | 108 | 114 | 96 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0346-048.0 | 09/24/14 | 103 | 111 | 95 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0346-053.0 | 09/25/14 | 104 | 115 | 96 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0346-058.0 | 09/25/14 | 103 | 109 | 96 | 96 | Pass | Pass | Pass | Pass |
| IDW197036 1:10 | 09/25/14 | 103 | 107 | 99 | 93 | Pass | Pass | Pass | Pass |
| IDW195315 1:10 | 09/25/14 | 97 | 100 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0346-058.0 MS | 09/25/14 | 107 | 122 | 97 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0346-058.0 MSD | 09/25/14 | 116 | 127 | 97 | 86 | Pass | Pass | Pass | Pass |
| CCS 50 | 09/25/14 | 116 | 136 | 93 | 78 | Pass | Pass | Pass | Pass |
| TUNE/BLANK | 09/25/14 | 103 | 106 | 99 | 91 | Pass | Pass | Pass | Pass |
| CCS 50 | 09/25/14 | 108 | 132 | 93 | 82 | Pass | Pass | Pass | Pass |
| LCS 20 | 09/25/14 | 108 | 122 | 96 | 84 | Pass | Pass | Pass | Pass |
| BLANK | 09/25/14 | 100 | 104 | 99 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0347-028.0 | 09/25/14 | 104 | 110 | 99 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0347-033.0 | 09/25/14 | 103 | 116 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0347-038.0 | 09/25/14 | 105 | 118 | 92 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0347-043.0 | 09/25/14 | 107 | 117 | 95 | 85 | Pass | Pass | Pass | Pass |
| CRHE-DPT0347-048.0 | 09/25/14 | 107 | 129 | 94 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0347-058.0 | 09/25/14 | 104 | 126 | 91 | 84 | Pass | Pass | Pass | Pass |
| CRHE-DPT0348-033.0 | 09/25/14 | 107 | 122 | 94 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0348-038.0 | 09/25/14 | 116 | 136 | 96 | 79 | Pass | Pass | Pass | Pass |
| CCS 50 | 09/25/14 | 120 | 156 | 96 | 75 | Pass | > UCL | Pass | Pass |
| LCS 20 | 09/25/14 | 123 | 148 | 93 | 82 | Pass | > UCL | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (63% - 142%)
S2 = 1,2- Dichloroethane-D4 (68% - 136%)
S3 = Toluene-D8 (76% - 124%)
S4 = 4-Bromofluorobenzene (70% - 133%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Yael Hoogland, Greg Lamb, Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 145-120 |
| **On-site Dates**: 9/22/14-10/3/14 | **Client Project Manager**: Lane Dorman | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| BLANK | 09/25/14 | 110 | 120 | 95 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0348-043.0 | 09/25/14 | 110 | 125 | 95 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0348-048.0 | 09/25/14 | 111 | 130 | 94 | 86 | Pass | Pass | Pass | Pass |
| CRHE-DPT0348-053.0 | 09/25/14 | 106 | 132 | 100 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0349-033.0 | 09/25/14 | 109 | 131 | 98 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0349-038.0 | 09/25/14 | 119 | 141 | 94 | 94 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0349-043.0 | 09/25/14 | 115 | 133 | 97 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0349-048.0 | 09/25/14 | 109 | 132 | 100 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0349-053.0 | 09/25/14 | 112 | 139 | 97 | 92 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0349-058.0 | 09/25/14 | 115 | 142 | 94 | 88 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0348-053.0 RERUN | 09/25/14 | 117 | 137 | 97 | 91 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0348-058.0 RERUN | 09/25/14 | 117 | 144 | 94 | 92 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0347-043.0 MS | 09/25/14 | 117 | 143 | 97 | 84 | Pass | > UCL | Pass | Pass |
| CRHE-DPT0347-043.0 MSD | 09/25/14 | 125 | 151 | 100 | 88 | Pass | > UCL | Pass | Pass |
| CCS 20 | 09/25/14 | 128 | 156 | 96 | 85 | Pass | > UCL | Pass | Pass |
| TUNE/BLANK | 09/26/14 | 123 | 158 | 94 | 91 | Pass | > UCL | Pass | Pass |
| CCS 20 | 09/26/14 | 134 | 161 | 90 | 81 | Pass | > UCL | Pass | Pass |
| LCS 20 | 09/26/14 | 126 | 169 | 90 | 79 | Pass | > UCL | Pass | Pass |
| BLANK | 09/26/14 | 106 | 127 | 86 | 83 | Pass | Pass | Pass | Pass |
| CRHE-DPT0350-033.0 | 09/26/14 | 112 | 132 | 97 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0350-038.0 | 09/26/14 | 110 | 129 | 92 | 85 | Pass | Pass | Pass | Pass |
| BLANK/TUNE | 09/26/14 | 97 | 106 | 102 | 116 | Pass | Pass | Pass | Pass |
| CCS 20 | 09/26/14 | 92 | 101 | 103 | 119 | Pass | Pass | Pass | Pass |
| CCS 20 | 09/27/14 | 86 | 79 | 113 | 117 | Pass | Pass | Pass | Pass |
| LCS 20 | 09/27/14 | 87 | 88 | 110 | 110 | Pass | Pass | Pass | Pass |
| BLANK | 09/27/14 | 87 | 85 | 108 | 122 | Pass | Pass | Pass | Pass |
| CRHE-DPT0350-043.0 1:10 | 09/27/14 | 82 | 81 | 109 | 128 | Pass | Pass | Pass | Pass |
| CRHE-DPT0350-048.0 1:20 | 09/27/14 | 87 | 81 | 111 | 121 | Pass | Pass | Pass | Pass |
| CRHE-DPT0350-053.0 | 09/27/14 | 87 | 82 | 110 | 128 | Pass | Pass | Pass | Pass |
| CRHE-DPT0350-058.0 | 09/27/14 | 86 | 83 | 110 | 122 | Pass | Pass | Pass | Pass |
| CRHE-DPT0351-033.0 | 09/27/14 | 87 | 83 | 113 | 129 | Pass | Pass | Pass | Pass |
| CRHE-DPT0351-038.0 | 09/27/14 | 87 | 87 | 111 | 128 | Pass | Pass | Pass | Pass |
| CRHE-DPT0351-043.0 | 09/27/14 | 83 | 83 | 112 | 133 | Pass | Pass | Pass | Pass |
| CRHE-DPT0351-048.0 | 09/27/14 | 86 | 84 | 108 | 119 | Pass | Pass | Pass | Pass |
| CRHE-DPT0351-053.0 | 09/27/14 | 84 | 80 | 114 | 119 | Pass | Pass | Pass | Pass |
| CRHE-DPT0352-033.0 | 09/27/14 | 87 | 84 | 111 | 121 | Pass | Pass | Pass | Pass |
| CRHE-DPT0352-038.0 | 09/27/14 | 85 | 84 | 110 | 121 | Pass | Pass | Pass | Pass |
| CRHE-DPT0352-043.0 | 09/27/14 | 89 | 85 | 113 | 111 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**
S1 = Dibromofluoromethane (63% - 142%)
S2 = 1,2- Dichloroethane-D4 (68% - 136%)
S3 = Toluene-D8 (76% - 124%)
S4 = 4-Bromofluorobenzene (70% - 133%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Yael Hoogland, Greg Lamb, Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 145-120 |
| **On-site Dates**: 9/22/14-10/3/14 | **Client Project Manager**: Lane Dorman | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0352-048.0 | 09/27/14 | 89 | 83 | 108 | 119 | Pass | Pass | Pass | Pass |
| CRHE-DPT0352-053.0 | 09/27/14 | 89 | 84 | 106 | 120 | Pass | Pass | Pass | Pass |
| CRHE-DPT0352-058.0 | 09/27/14 | 84 | 89 | 113 | 122 | Pass | Pass | Pass | Pass |
| IDW198326 1:10 | 09/27/14 | 89 | 85 | 110 | 119 | Pass | Pass | Pass | Pass |
| CRHE-DPT0351-053.0 MS | 09/27/14 | 87 | 87 | 108 | 124 | Pass | Pass | Pass | Pass |
| CRHE-DPT0351-053.0 MSD | 09/27/14 | 86 | 84 | 109 | 119 | Pass | Pass | Pass | Pass |
| CCS 20 | 09/27/14 | 89 | 85 | 111 | 117 | Pass | Pass | Pass | Pass |
| LCS 20 | 09/27/14 | 95 | 98 | 103 | 120 | Pass | Pass | Pass | Pass |
| BLANK | 09/27/14 | 94 | 101 | 107 | 116 | Pass | Pass | Pass | Pass |
| CRHE-DPT0350-053.0 1:10 | 09/27/14 | 91 | 91 | 109 | 118 | Pass | Pass | Pass | Pass |
| CRHE-DPT0352-033.0 1:10 | 09/27/14 | 87 | 85 | 107 | 118 | Pass | Pass | Pass | Pass |
| CCS 20 | 09/27/14 | 90 | 93 | 107 | 113 | Pass | Pass | Pass | Pass |
| CCS 20 | 09/29/14 | 115 | 115 | 90 | 108 | Pass | Pass | Pass | Pass |
| LCS 20 | 09/29/14 | 103 | 98 | 92 | 103 | Pass | Pass | Pass | Pass |
| BLANK | 09/29/14 | 97 | 87 | 96 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0353-028.0 | 09/29/14 | 98 | 93 | 97 | 115 | Pass | Pass | Pass | Pass |
| CRHE-DPT0353-033.0 | 09/29/14 | 99 | 87 | 95 | 119 | Pass | Pass | Pass | Pass |
| CRHE-DPT0353-038.0 | 09/29/14 | 97 | 89 | 97 | 115 | Pass | Pass | Pass | Pass |
| CRHE-DPT0353-043.0 | 09/29/14 | 97 | 91 | 96 | 115 | Pass | Pass | Pass | Pass |
| CRHE-DPT0353-048.0 | 09/29/14 | 98 | 94 | 94 | 116 | Pass | Pass | Pass | Pass |
| CRHE-DPT0353-058.0 | 09/29/14 | 95 | 88 | 95 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0343-053.0 | 09/29/14 | 92 | 86 | 97 | 112 | Pass | Pass | Pass | Pass |
| CRHE-DPT0343-058.0 | 09/29/14 | 100 | 92 | 96 | 118 | Pass | Pass | Pass | Pass |
| CRHE-DPT0354-033.0 1:50 | 09/29/14 | 96 | 86 | 98 | 118 | Pass | Pass | Pass | Pass |
| CRHE-DPT0354-038.0 | 09/29/14 | 96 | 88 | 95 | 116 | Pass | Pass | Pass | Pass |
| CRHE-DPT0354-043.0 1:5 | 09/29/14 | 94 | 88 | 97 | 105 | Pass | Pass | Pass | Pass |
| CRHE-DPT0354-048.0 1:5 | 09/29/14 | 100 | 92 | 96 | 109 | Pass | Pass | Pass | Pass |
| CRHE-DPT0354-053.0 | 09/29/14 | 95 | 90 | 99 | 123 | Pass | Pass | Pass | Pass |
| CRHE-DPT0354-058.0 | 09/29/14 | 92 | 89 | 96 | 113 | Pass | Pass | Pass | Pass |
| CRHE-DPT0355-033.0 | 09/29/14 | 99 | 87 | 96 | 117 | Pass | Pass | Pass | Pass |
| CRHE-DPT0353-038.0 MS | 09/29/14 | 107 | 100 | 96 | 111 | Pass | Pass | Pass | Pass |
| CRHE-DPT0353-038.0 MSD | 09/29/14 | 114 | 113 | 92 | 110 | Pass | Pass | Pass | Pass |
| CCS 20 | 09/29/14 | 103 | 101 | 97 | 107 | Pass | Pass | Pass | Pass |
| CCS 50 | 10/03/14 | 97 | 96 | 97 | 96 | Pass | Pass | Pass | Pass |
| LCS 20 | 10/03/14 | 100 | 101 | 96 | 97 | Pass | Pass | Pass | Pass |
| BLANK | 10/03/14 | 103 | 101 | 99 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0354-033.0 | 10/03/14 | 102 | 102 | 98 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0356-033.0 | 10/03/14 | 102 | 100 | 99 | 90 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (63% - 142%)
S2 = 1,2- Dichloroethane-D4 (68% - 136%)
S3 = Toluene-D8 (76% - 124%)
S4 = 4-Bromofluorobenzene (70% - 133%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob George, Yael Hoogland, Greg Lamb, Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 145-120 |
| **On-site Dates**: 9/22/14-10/3/14 | **Client Project Manager**: Lane Dorman | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0356-038.0 | 10/03/14 | 103 | 103 | 99 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0356-043.0 | 10/03/14 | 101 | 102 | 99 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0356-048.0 | 10/03/14 | 102 | 100 | 100 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0356-053.0 | 10/03/14 | 101 | 101 | 99 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0356-058.0 | 10/03/14 | 101 | 101 | 100 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0357-033.0 | 10/03/14 | 99 | 100 | 100 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0357-038.0 | 10/03/14 | 100 | 99 | 101 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0357-043.0 | 10/03/14 | 98 | 100 | 101 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0357-048.0 | 10/03/14 | 99 | 100 | 101 | 92 | Pass | Pass | Pass | Pass |
| CRHE-DPT0357-053.0 | 10/03/14 | 101 | 104 | 100 | 90 | Pass | Pass | Pass | Pass |
| CRHE-DPT0357-058.0 | 10/03/14 | 101 | 100 | 100 | 92 | Pass | Pass | Pass | Pass |
| CRHE-IDW198327 1:10 | 10/03/14 | 99 | 100 | 100 | 90 | Pass | Pass | Pass | Pass |
| CRHE-IDW198328 1:10 | 10/03/14 | 100 | 100 | 102 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0356-033.0 MS | 10/03/14 | 97 | 97 | 100 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0356-033.0 MSD | 10/03/14 | 96 | 94 | 101 | 94 | Pass | Pass | Pass | Pass |
| CCS 50 | 10/03/14 | 94 | 91 | 101 | 96 | Pass | Pass | Pass | Pass |

**Comments:** Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data.

***Surrogate Compounds:**

S1 = Dibromofluoromethane (63% - 142%)
S2 = 1,2- Dichloroethane-D4 (68% - 136%)
S3 = Toluene-D8 (76% - 124%)
S4 = 4-Bromofluorobenzene (70% - 133%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Greg Lamb, Bob George, Tuan Luu, Yael Hoogland |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-120 |
| **Onsite Dates:** 9/22/14-10/3/14 | **Client Project Manager:** Lane Dorman | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0340-058.0 **Date of Analysis:** 9/22/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 76 | 66 | 14 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 104 | 88 | 17 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 103 | 88 | 16 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 114 | 96 | 17 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 111 | 91 | 19 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 100 | 87 | 14 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0342-058.0 **Date of Analysis:** 9/24/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 82 | 85 | 3 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 75 | 72 | 4 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 79 | 76 | 3 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 79 | 78 | 2 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 91 | 90 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 99 | 96 | 2 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0346-058.0 **Date of Analysis:** 9/24/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 41 | 70 | 52 | Pass | Pass | > RPDL |
| 1,1-Dichloroethene | 30 | 165 | 20 | 72 | 74 | 3 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 74 | 81 | 10 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 77 | 85 | 10 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 88 | 91 | 4 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 91 | 96 | 6 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0347-043.0 **Date of Analysis:** 9/25/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 45 | 54 | 17 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 91 | 99 | 8 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 81 | 82 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 82 | 86 | 5 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 92 | 94 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 100 | 103 | 3 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Greg Lamb, Bob George, Tuan Luu, Yael Hoogland |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-120 |
| **Onsite Dates:** 9/22/14-10/3/14 | **Client Project Manager:** Lane Dorman | **Matrix**: Water |

**Samples:** CRHE-DPT0351-053.0 **Date of Analysis:** 9/26/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 121 | 119 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 123 | 119 | 4 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 112 | 112 | 0 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 111 | 113 | 2 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 96 | 93 | 3 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 81 | 78 | 4 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-DPT0353-038.0 **Date of Analysis:** 9/29/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 333 | 411 | 21 | > UCL | > UCL | > RPDL |
| 1,1-Dichloroethene | 30 | 165 | 20 | 207 | 199 | 4 | > UCL | > UCL | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 106 | 104 | 2 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 110 | 118 | 6 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 97 | 99 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 92 | 88 | 5 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines. VC high concentration. Two separate vials.

**Samples:** CRHE-DPT0356-033.0 **Date of Analysis:** 10/3/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 97 | 95 | 2 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 99 | 100 | 1 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 94 | 93 | 0 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 95 | 94 | 1 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 97 | 96 | 1 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 96 | 97 | 1 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Greg Lamb, Bob George, Tuan Luu, Yael Hoogland |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-120 |
| **Onsite Dates:** 9/22/14-10/3/14 | **Client Project Manager:** Lane Dorman | **Matrix**: Water |

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 **Date of Analysis:** 9/22/2014
LCS 2 9/23/2014
LCS 3 9/24/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 23 | to | 168 | 64 | 105 | 94 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 39 | to | 161 | 96 | 85 | 95 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 93 | 103 | 97 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 100 | 101 | 96 | Pass | Pass | Pass |
| Trichloroethene | 55 | to | 145 | 99 | 104 | 99 | Pass | Pass | Pass |
| Tetrachloroethene | 53 | to | 147 | 96 | 102 | 100 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 4 **Date of Analysis:** 9/24/2014
LCS 5 9/25/2014
LCS 6 9/25/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#4 | LCS#5 | LCS#6 | LCS#4 | LCS#5 | LCS#6 |
| Vinyl Chloride | 23 | to | 168 | 89 | 66 | 71 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 39 | to | 161 | 81 | 102 | 103 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 93 | 98 | 85 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 93 | 97 | 89 | Pass | Pass | Pass |
| Trichloroethene | 55 | to | 145 | 103 | 108 | 95 | Pass | Pass | Pass |
| Tetrachloroethene | 53 | to | 147 | 104 | 114 | 100 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** LCS 7 **Date of Analysis:** 9/26/2014
LCS 8 9/27/2014
LCS 9 9/27/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#7 | LCS#8 | LCS#9 | LCS#7 | LCS#8 | LCS#9 |
| Vinyl Chloride | 23 | to | 168 | 115 | 112 | 132 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 39 | to | 161 | 119 | 116 | 136 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 96 | 115 | 122 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 104 | 134 | 123 | Pass | Pass | Pass |
| Trichloroethene | 55 | to | 145 | 118 | 107 | 107 | Pass | Pass | Pass |
| Tetrachloroethene | 53 | to | 147 | 118 | 84 | 93 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Greg Lamb, Bob George, Tuan Luu, Yael Hoogland |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-120 |
| **Onsite Dates:** 9/22/14-10/3/14 | **Client Project Manager:** Lane Dorman | **Matrix**: Water |

**Samples:** LCS 10 — **Date of Analysis:** 9/29/2014
LCS 11 — 10/3/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#10 | LCS#11 | | LCS#10 | LCS#11 | |
| Vinyl Chloride | 23 | to | 168 | 210 | 100 | | > UCL | Pass | |
| 1,1-Dichloroethene | 39 | to | 161 | 169 | 103 | | > UCL | Pass | |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 105 | 105 | | Pass | Pass | |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 112 | 105 | | Pass | Pass | |
| Trichloroethene | 55 | to | 145 | 100 | 104 | | Pass | Pass | |
| Tetrachloroethene | 53 | to | 147 | 90 | 100 | | Pass | Pass | |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0340-033.0-20140922 | 9/22/2014 | 09:52 | Water | 1 | 0.26 U | 0.30 U | **0.74 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0340-038.0-20140922 | 9/22/2014 | 10:18 | Water | 20 | **460** | 6.0 U | **14 I** | **350** | 3.8 U | 4.6 U |
| CRHE-DPT0340-043.0-20140922 | 9/22/2014 | 10:42 | Water | 20 | **450** | 6.0 U | **13 I** | **320** | 3.8 U | 4.6 U |
| CRHE-DPT0340-048.0-20140922 | 9/22/2014 | 11:11 | Water | 5 | **43** | 1.5 U | 1.5 U | **4.5 I** | 0.95 U | 1.2 U |
| CRHE-DPT0340-058.0-20140922 | 9/22/2014 | 11:36 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.35 I** | 0.19 U | 0.23 U |
| CRHE-DPT0341-033.0-20140922 | 9/22/2014 | 12:56 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0341-038.0-20140922 | 9/22/2014 | 13:20 | Water | 1 | **100** | 0.30 U | **4.7** | **2.8** | 0.19 U | 0.23 U |
| CRHE-DPT0341-043.0-20140922 | 9/22/2014 | 13:42 | Water | 50 | **560** | 15 U | **28 I** | **1300** | 9.5 U | 12 U |
| CRHE-DPT0341-048.0-20140922 | 9/22/2014 | 14:11 | Water | 10 | **36** | 3.0 U | 2.9 U | **140** | 1.9 U | 2.3 U |
| CRHE-DPT0341-053.0-20140922 | 9/22/2014 | 14:46 | Water | 1 | **7.6** | 0.30 U | **0.33 I** | **4.7** | 0.19 U | 0.23 U |
| CRHE-DPT0341-058.0-20140923 | 9/23/2014 | 08:11 | Water | 1 | **8.9** | 0.30 U | **0.44 I** | **22.3** | 0.19 U | 0.23 U |
| CRHE-DPT0342-033.0-20140923 | 9/23/2014 | 08:43 | Water | 1 | **0.29 I** | 0.30 U | **0.49 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0342-038.0-20140923 | 9/23/2014 | 09:03 | Water | 1 | 0.26 U | 0.30 U | **1.3** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0342-043.0-20140923 | 9/23/2014 | 09:27 | Water | 1 | **5.2** | 0.30 U | **0.74 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0342-048.0-20140923 | 9/23/2014 | 10:37 | Water | 1 | **120** | 0.30 U | **2.8** | **26.2** | 0.19 U | 0.23 U |
| CRHE-DPT0342-058.0-20140923 | 9/23/2014 | 11:01 | Water | 1 | **0.77 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0343-033.0-20140923 | 9/24/2012 | 12:00 | Water | 1 | **3.0** | 0.30 U | **0.31 I** | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0343-038.0-20140923 | 9/24/2012 | 12:21 | Water | 1 | **21.6** | 0.30 U | **0.32 I** | **0.36 I** | 0.19 U | 0.23 U |
| CRHE-DPT0343-043.0-20140923 | 9/24/2012 | 12:44 | Water | 1 | **81.4** | 0.30 U | **1.4** | **9.3** | 0.19 U | 0.23 U |
| CRHE-DPT0343-048.0-20140923 | 9/24/2012 | 17:40 | Water | 1 | **12.0** | 0.30 U | **0.63 I** | **18.4** | 0.19 U | 0.23 U |
| CRHE-DPT0344-033.0-20140924 | 9/24/2012 | 09:10 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0344-038.0-20140924 | 9/24/2012 | 09:30 | Water | 10 | **26** | 3.0 U | 2.9 U | **100** | 1.9 U | 2.3 U |
| CRHE-DPT0344-043.0-20140924 | 9/24/2012 | 09:52 | Water | 1 | **5.3** | 0.30 U | **0.49 I** | **3.3** | 0.19 U | 0.23 U |
| CRHE-DPT0344-048.0-20140924 | 9/24/2012 | 10:14 | Water | 2 | **29** | 0.60 U | **0.80 I** | **42** | 0.38 U | 0.46 U |
| CRHE-DPT0344-053.0-20140924 | 9/24/2012 | 10:46 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0344-058.0-20140924 | 9/24/2012 | 11:10 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.78 I** | 0.19 U | 0.23 U |
| CRHE-DPT0345-033.0-20140924 | 9/24/2012 | 11:53 | Water | 1 | **1.1** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0345-038.0-20140924 | 9/24/2012 | 12:21 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0345-043.0-20140924 | 9/24/2012 | 13:20 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0345-048.0-20140924 | 9/24/2012 | 13:41 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0345-053.0-20140924 | 9/24/2012 | 14"10 | Water | 1 | **0.40 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0345-058.0-20140924 | 9/24/2012 | 14:36 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0346-033.0-20140924 | 9/25/2014 | 15:24 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0346-038.0-20140924 | 9/25/2014 | 15:44 | Water | 1 | **26.0** | 0.30 U | **1.5** | **5.3** | 0.19 U | 0.23 U |
| CRHE-DPT0346-043.0-20140924 | 9/25/2014 | 16:05 | Water | 1 | **7.8** | 0.30 U | 0.29 U | **1.8** | 0.19 U | 0.23 U |
| CRHE-DPT0346-048.0-20140924 | 9/25/2014 | 16:24 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0346-053.0-20140924 | 9/25/2014 | 16:57 | Water | 1 | **0.78 I** | 0.30 U | 0.29 U | **0.24 I** | 0.19 U | 0.23 U |
| CRHE-DPT0346-058.0-20140924 | 9/25/2014 | 17:24 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0347-028.0-20140925 | 9/25/2014 | 08:48 | Water | 1 | **9.6** | 0.30 U | 0.29 U | **1.8** | 0.19 U | 0.23 U |
| CRHE-DPT0347-033.0-20140925 | 9/25/2014 | 09:08 | Water | 1 | **3.7** | 0.30 U | 0.29 U | **1.1** | 0.19 U | 0.23 U |
| CRHE-DPT0347-038.0-20140925 | 9/25/2014 | 09:24 | Water | 1 | **0.7 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0347-043.0-20140925 | 9/25/2014 | 09:43 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0347-048.0-20140925 | 9/25/2014 | 10:13 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0347-058.0-20140925 | 9/25/2014 | 10:34 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0348-033.0-20140925 | 9/25/2014 | 11:20 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0348-038.0-20140925 | 9/25/2014 | 11:52 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0348-043.0-20140925 | 9/25/2014 | 12:21 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0348-048.0-20140925 | 9/25/2014 | 12:47 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0348-053.0-20140925 | 9/25/2014 | 13:10 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0348-058.0-20140925 | 9/25/2014 | 13:34 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0349-033.0-20140925 | 9/25/2014 | 15:28 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.90 I** | 0.19 U | 0.23 U |
| CRHE-DPT0349-038.0-20140925 | 9/25/2014 | 15:51 | Water | 1 | **6.8** | 0.30 U | **0.45 I** | **8.9** | 0.19 U | 0.23 U |
| CRHE-DPT0349-043.0-20140925 | 9/25/2014 | 16:11 | Water | 1 | **21** | 0.30 U | **1.8** | **0.76 I** | 0.19 U | 0.23 U |
| CRHE-DPT0349-048.0-20140925 | 9/25/2014 | 16:35 | Water | 1 | **4.8** | 0.30 U | 0.29 U | **0.49 I** | 0.19 U | 0.23 U |
| CRHE-DPT0349-053.0-20140925 | 9/25/2014 | 17:05 | Water | 1 | **0.62 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0349-058.0-20140925 | 9/25/2014 | 17:32 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0350-033.0-20140926 | 9/26/2014 | 08:27 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0350-038.0-20140926 | 9/26/2014 | 08:51 | Water | 1 | **13.0** | 0.30 U | 0.29 U | **1.6** | 0.19 U | 0.23 U |
| CRHE-DPT0350-043.0-20140926 | 9/27/2014 | 09:17 | Water | 10 | **160** | 3.0 U | 2.9 U | **45** | 1.9 U | 2.3 U |
| CRHE-DPT0350-048.0-20140926 | 9/27/2014 | 09:41 | Water | 20 | **280** | 6.0 U | 5.8 U | **100** | 3.8 U | 4.6 U |
| CRHE-DPT0350-053.0-20140926 | 9/27/2014 | 10:12 | Water | 1, 10 | **260** | 0.30 U | **2.1** | **13.0** | 0.19 U | 0.23 U |
| CRHE-DPT0350-058.0-20140926 | 9/27/2014 | 10:49 | Water | 1 | **4.5** | 0.30 U | 0.29 U | **0.88** I | 0.19 U | 0.23 U |
| CRHE-DPT0351-033.0-20140926 | 9/27/2014 | 11:48 | Water | 1 | **0.42 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0351-038.0-20140926 | 9/27/2014 | 12:20 | Water | 1 | **35.0** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0351-043.0-20140926 | 9/27/2014 | 12:44 | Water | 1 | **53.2** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0351-048.0-20140926 | 9/27/2014 | 13:09 | Water | 1 | **50.6** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0351-053.0-20140926 | 9/27/2014 | 13:36 | Water | 1 | **2.8** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0352-033.0-20140926 | 9/27/2014 | 14:28 | Water | 1, 10 | **110** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0352-038.0-20140926 | 9/27/2014 | 14:50 | Water | 1 | **73.3** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0352-043.0-20140926 | 9/27/2014 | 15:13 | Water | 1 | **10.2** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0352-048.0-20140926 | 9/27/2014 | 15:32 | Water | 1 | **11.4** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0352-053.0-20140926 | 9/27/2014 | 15:58 | Water | 1 | **0.98 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0352-058.0-20140926 | 9/27/2014 | 16:22 | Water | 1 | **0.44 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0353-028.0-20140929 | 9/29/2014 | 09:08 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0353-033.0-20140929 | 9/29/2014 | 09:37 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0353-038.0-20140929 | 9/29/2014 | 10:05 | Water | 1 | **100** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0353-043.0-20140929 | 9/29/2014 | 10:35 | Water | 1 | **8.4** | 0.30 U | 0.29 U | **0.25 I** | 0.19 U | 0.23 U |
| CRHE-DPT0353-048.0-20140929 | 9/29/2014 | 11:07 | Water | 1 | **2.1** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0353-058.0-20140929 | 9/29/2014 | 11:31 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0343-053.0-20140929 | 9/29/2014 | 12:26 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0343-058.0-20140929 | 9/29/2014 | 13:01 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.23 I** | 0.19 U | 0.23 U |
| CRHE-DPT0354-033.0-20140929 | 10/3/2014 | 13:37 | Water | 1 | **23.8** | 0.35 U | 0.32 U | **1.6** | **0.43 I** | 0.36 U |
| CRHE-DPT0354-038.0-20140929 | 9/29/2014 | 14:04 | Water | 1 | **22.4** | 0.30 U | 0.29 U | **0.93 I** | 0.19 U | 0.23 U |
| CRHE-DPT0354-043.0-20140929 | 9/29/2014 | 14:26 | Water | 5 | **21** | 1.5 U | 1.5 U | **1.8 I** | 0.95 U | 1.2 U |
| CRHE-DPT0354-048.0-20140929 | 9/29/2014 | 15:02 | Water | 5 | **55** | 1.5 U | **3.7 I** | **230** | 0.95 U | 1.2 U |
| CRHE-DPT0354-053.0-20140929 | 9/29/2014 | 15:38 | Water | 1 | **4.8** | 0.30 U | 0.29 U | **4.7** | 0.19 U | 0.23 U |
| CRHE-DPT0354-058.0-20140929 | 9/29/2014 | 16:06 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0355-033.0-20140929 | 9/29/2014 | 16:47 | Water | 1 | **4.3** | 0.30 U | 0.29 U | **1.9** | 0.19 U | 0.23 U |
| CRHE-DPT0356-033.0-20140930 | 10/3/2014 | 08:48 | Water | 1 | 0.31 U | 0.35 U | 0.32 U | 0.28 U | 0.31 U | 0.36 U |
| CRHE-DPT0356-038.0-20140930 | 10/3/2014 | 09:10 | Water | 1 | 0.31 U | 0.35 U | 0.32 U | 0.28 U | 0.31 U | 0.36 U |
| CRHE-DPT0356-043.0-20140930 | 10/3/2014 | 09:41 | Water | 1 | **64.0** | 0.35 U | **2.0** | **1.4** | 0.31 U | 0.36 U |
| CRHE-DPT0356-048.0-20140930 | 10/3/2014 | 10:16 | Water | 1 | **0.94 I** | 0.35 U | 0.32 U | 0.28 U | 0.31 U | 0.36 U |
| CRHE-DPT0356-053.0-20140930 | 10/3/2014 | 10:39 | Water | 1 | 0.31 U | 0.35 U | 0.32 U | 0.28 U | 0.31 U | 0.36 U |
| CRHE-DPT0356-058.0-20140930 | 10/3/2014 | 11:04 | Water | 1 | 0.31 U | 0.35 U | 0.32 U | 0.28 U | 0.31 U | 0.36 U |
| CRHE-DPT0357-033.0-20140930 | 10/3/2014 | 12:54 | Water | 1 | 0.31 U | 0.35 U | 0.32 U | 0.28 U | 0.31 U | 0.36 U |
| CRHE-DPT0357-038.0-20140930 | 10/3/2014 | 13:15 | Water | 1 | **2.5** | 0.35 U | 0.32 U | **0.74 I** | 0.31 U | 0.36 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0357-043.0-20140930 | 10/3/2014 | 13:49 | Water | 1 | **90.0** | 0.35 U | **1.3** | **17.6** | 0.31 U | 0.36 U |
| CRHE-DPT0357-048.0-20140930 | 10/3/2014 | 14:10 | Water | 1 | **9.7** | 0.35 U | 0.32 U | **3.5** | 0.31 U | 0.36 U |
| CRHE-DPT0357-053.0-20140930 | 10/3/2014 | 15:31 | Water | 1 | **2.2** | 0.35 U | 0.32 U | **3.1** | 0.31 U | 0.36 U |
| CRHE-DPT0357-058.0-20140930 | 10/3/2014 | 15:45 | Water | 1 | 0.31 U | 0.35 U | 0.32 U | 0.28 U | 0.31 U | 0.36 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-IDW197036-20140924 | 9/25/2014 | 17:50 | Water | 10 | 2.6 U | 3.0 U | 2.9 U | **2.8 I** | 1.9 U | 2.3 U |
| CRHE-IDW195315-20140924 | 9/25/2014 | 18:05 | Water | 10 | 2.6 U | 3.0 U | 2.9 U | 2.2 U | 1.9 U | 2.3 U |
| CRHE-IDW198326-20140926 | 9/27/2014 | 17:55 | Water | 10 | 2.6 U | 3.0 U | 2.9 U | 2.2 U | 1.9 U | 2.3 U |
| CRHE-IDW198327-20140930 | 10/3/2014 | 14:46 | Water | 10 | 3.1 U | 3.5 U | 3.2 U | 2.8 U | 3.1 U | 3.6 U |
| CRHE-IDW198328-20140930 | 10/3/2014 | 15:00 | Water | 10 | 3.1 U | 3.5 U | 3.2 U | 2.8 U | 3.1 U | 3.6 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

## Method Blank Summary - KB1, KB2, KB3

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| Method Blank KB3 | 9/22/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank KB3 | 9/23/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank KB3 | 9/24/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank KB3 | 9/24/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank KB3 | 9/25/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank KB3 | 9/25/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank KB3 | 9/26/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank KB3 | 9/26/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank KB1 | 9/27/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank KB1 | 9/29/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank KB2 | 10/3/2014 | 00:00 | Water | 1 | 0.31 U | 0.35 U | 0.32 U | 0.28 U | 0.31 U | 0.36 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# CHAIN-OF-CUSTODY RECORD

1/1

Mobile Laboratory Services


6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507


**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CKHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 | 3092214 COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0340-33 | 9/22/14 | 0952 | | | 9/22/14 | 1615 | | GW | 3 | ✓ | 12A,B |
| DPT0340-38 | | 1018 | | | | | | | | | 13A,B |
| DPT0340-43 | | 1042 | | | | | | | | | 14A,B |
| DPT0340-48 | | 1111 | | | | | | | | | 15A,B |
| DPT0340-58 | | 1136 | | | | | | | | | 16A,B |
| DPT0341-33 | | 1256 | | | | | | | | | 17A,B |
| DPT0341-38 | | 1320 | | | | | | | | | 18A,B |
| DPT0341-43 | | 1342 | | | | | | | | | 19A,B |
| DPT0341-48 | | 1411 | | | | | | | | | 20A,B |
| DPT0341-53 | | 1446 | | | | | | | | | 21A,B |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations**<br>CKHE |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>9/22/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

Mobile Laboratory Services

6821 SW Archer Road
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6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

# CHAIN-OF-CUSTODY RECORD

1 / 1

**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Geosyntec | CRHE KSC, FL | | | | | | | | | | | | | | | | | |
| SAMPLERS | CONTACT PERSON | | | | | | BATCH # (Lab Use Only) | | | | | | | | | | | |
| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 | | | | | | PRESERVATION: C Chilled, H HCL, Ot Other (see Remarks) | COMMENT / SAMPLE PRE FIX: 30923 14 |
| DPT 0341 - 58 | 9/23/14 | 0811 | | | 9/23/14 | 1850 | | GW | 2 | V | | | | | | | 12A, B |
| DPT 0342 - 33 | | 0843 | | | | | | | | | | | | | | | 13 |
| DPT 0342 - 38 | | 0903 | | | | | | | | | | | | | | | 14 |
| DPT 0342 - 43 | | 0927 | | | | | | | | | | | | | | | 15 |
| DPT 0342 - 48 | | 1037 | | | | | | | | | | | | | | | 16 |
| DPT 0342 - 58 | | 1101 | | | | | | | | | | | | | | | 17 |
| DPT 0343 - 33 | | 1200 | | | | | | | | | | | | | | | 18 |
| DPT 0343 - 38 | | 1221 | | | | | | | | | | | | | | | 19 |
| DPT 0343 - 43 | | 1244 | | | | | | | | | | | | | | | 20 |
| DPT 0343 - 48 | | 1740 | | | | | | | | | | | | | | | 21 |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
|---|---|---|---|---|
| | | | | CRHE |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | |
| | | | 9/23/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

KB LABS Mobile Laboratory Services

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Gainesville, FL 32608
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Raleigh, NC 27607
TEL (352) 538-6507

# CHAIN-OF-CUSTODY RECORD



**MOBILE UNIT #** 1B3

| CLIENT NAME | PROJECT NAME & ADDRESS | | |
|---|---|---|---|
| Geosyntec | CRTE KSC, FL | | |
| SAMPLERS | CONTACT PERSON | BATCH # (Lab Use Only) | |

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

3092414

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|
| DPT0344-33 | 9/24/14 | 0910 | | ✓ | 9/24/13 | 1400 | | GW | 2 | 30A,B |
| DPT0344-38 | | 0930 | | | | 1400 | | | | 31 |
| DPT0344-43 | | 0952 | | | | 1400 | | | | 32 |
| DPT0344-48 | | 1014 | | | | 1400 | | | | 33 |
| DPT0344-53 | | 1046 | | | | 1400 | | | | 34 |
| DPT0344-58 | | 1110 | | | | 1400 | | | | 35 |
| DPT0345-33 | | 1153 | | | | 1400 | | | | 36 |
| DPT0345-38 | | 1221 | | | | 1400 | | | | 37 |
| DPT0345-43 | | 1320 | | | | 1400 | | | | 38 |
| DPT0345-48 | | 1341 | | | | 1400 | | | | 39 |
| DPT0345-53 | | 1410 | | | | 1650 | | | | 40 |
| DPT0345-58 | | 1436 | | | | | | | | 41 |
| DPT0346-33 | | 1524 | | | | | | | | 42 |
| DPT0346-38 | | 1544 | | | | | | | | 43 |
| DPT0346-43 | | 1605 | | | | 1800 | | | | 44 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>9/24/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

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6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRATE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS | | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | 5260 | | | | | |
| DPT 0346 -48 | 9/24/14 | 1624 | | ✓ | 9/24/14 | 1800 | | GW | 2 | ✓ | | | | | 45A, B |
| DPT 0346 53 | ↓ | 1657 | | ↓ | ↓ | ↓ | | ↓ | ↓ | ↓ | | | | | 46 |
| DPT 0346 58 | | 1724 | | | | | | | | | | | | | 47 |
| IDW 197036 | | 1750 | | | | | | | | | | | | | 48 |
| IDW 195315 | | 1805 | | | | | | | | | | | | | 49 |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>9/24/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

KB LABS
Mobile Laboratory Services

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Raleigh, NC 27607
TEL (352) 538-6507

# CHAIN-OF-CUSTODY RECORD

1/2

**MOBILE UNIT #** KB3

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CRHE KSC, FL |
| SAMPLERS | CONTACT PERSON |
| | BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 | COMMENT / SAMPLE PRE FIX: 309251/4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0347 - 28 | 9/25/14 | 0848 | | | 9/25/14 | 1335 | | GW | 2 | ✓ | 30A, B |
| DPT0347 - 33 | | 0908 | | | | 1335 | | | | | 31 |
| DPT0347 - 38 | | 0924 | | | | 1335 | | | | | 32 |
| DPT0347 - 43 | | 0943 | | | | 1335 | | | | | 33 |
| DPT0347 - 48 | | 1013 | | | | 1335 | | | | | 34 |
| DPT0347 - 58 | | 1034 | | | | 1335 | | | | | 35 |
| DPT0348 - 33 | | 1120 | | | | 1335 | | | | | 36 |
| DPT0348 - 38 | | 1152 | | | | 1335 | | | | | 37 |
| DPT0348 - 43 | | 1221 | | | | 1335 | | | | | 38 |
| DPT0348 - 48 | | 1247 | | | | 1335 | | | | | 39 |
| DPT0348 - 53 | | 1310 | | | | 1335 | | | | | 40 |
| DPT0348 - 58 | | 1334 | | | | 1800 | | | | | 41 |
| DPT0349 - 33 | | 1528 | | | | 1800 | | | | | 42 |
| DPT0349 - 38 | | 1551 | | | | 1800 | | | | | 43 |
| DPT0349 - 43 | | 1611 | | | | 1800 | | | | | 44 |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time |
|---|---|---|---|
| | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time |
| | | | 9/25/14 1800 |

**Remarks and Observations**
CRHE

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

Mobile Laboratory Services

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6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB3

CLIENT NAME: GeoSyntec

PROJECT NAME & ADDRESS: CRHE LCSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 | COMMENT / SAMPLE PRE FIX: 30925I4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0349-48 | 9/25/14 | 1635 | | | 9/25/14 | 1800 | | GW | 2 | ✓ | 45 A, B |
| DPT0349-53 | ↓ | 1705 | | | ↓ | ↓ | | ↓ | ↓ | ↓ | 46 |
| DPT0349-58 | ↓ | 1732 | | | ↓ | ↓ | | ↓ | ↓ | ↓ | 47 |

| Precleaned Containers / Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| | | | | CRHE |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time | |
| | | | 9/25/14 1800 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

1/2


KB LABS Mobile Laboratory Services

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Gainesville, FL 32608
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6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507


**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | COMMENT / SAMPLE PRE FIX (30926/14) |
|---|---|---|---|---|---|---|---|---|---|---|
| DPT 350 - 33 | 9/26/14 | 0827 | | | 9/26/14 | 0925 | | GW | 2 | 01 A,B |
| DPT 350 - 38 | | 0851 | | | | 0925 | | | | 02 A,B |
| DPT 350 - 43 | | 0917 | | | | 0925 | | | | 03 A,B |
| DPT 350 - 48 | | 0941 | | | | 1400 | | | | 04 |
| DPT 350 - 53 | | 1012 | | | | 1400 | | | | 05 |
| DPT 350 - 58 | | 1045 | | | | 1400 | | | | 06 |
| DPT 351 - 33 | | 1148 | | | | 1400 | | | | 07 |
| DPT 351 - 38 | | 1220 | | | | 1400 | | | | 08 |
| DPT 351 - 43 | | 1244 | | | | 1400 | | | | 09 |
| DPT 351 - 48 | | 1309 | | | | 1400 | | | | 10 |
| DPT 351 - 53 | | 1336 | | | | 1400 | | | | 11 |
| DPT 352 - 33 | | 1428 | | | | 1800 | | | | 12 |
| DPT 352 - 38 | | 1450 | | | | 1800 | | | | 13 |
| DPT 352 - 43 | | 1513 | | | | 1800 | | | | 14 |
| DPT 352 - 48 | | 1532 | | | | 1800 | | | | 15 |

| | Date / Time | | Date / Time | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | | Received by: *(Signature)* | | **Remarks and Observations**<br>CRHE |
| Relinquished by: *(Signature)* | | Received by: *(Signature)* BH JB | 9/26/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

KB LABS inc.
Mobile Laboratory Services

6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRH2 KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | 8260 | | | | | COMMENT / SAMPLE PRE FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT 352 - 53 | 9/26/14 | 1558 | | | 9/26/14 | 1800 | | GW | 2 | ✓ | | | | | 14 A,B |
| DPT 352 - 58 | 1 | 1622 | | | 1 | 1 | | 1 | 1 | 1 | | | | | 17 A,B |
| IDW 198326 | 1 | 1755 | | | 1 | 1 | | 1 | 1 | 1 | | | | | 18 A,B |

3092614

| Precleaned Containers Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
|---|---|---|---|
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
| | | | 9/26/14 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

# CHAIN-OF-CUSTODY RECORD

1/1

Mobile Laboratory Services

6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRTS KSC, FL

SAMPLERS

CONTACT PERSON

BATCH # (Lab Use Only)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | 8260 | COMMENT / SAMPLE PRE FIX 3092954 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0353-28 | 9/29/14 | 0908 | | | 9/29/14 | 1220 | | GW | 2 | ✓ | 30 A,B |
| -33 | | 0937 | | | | 1220 | | | | | 31 |
| -38 | | 1005 | | | | 1220 | | | | | 32 |
| -43 | | 1035 | | | | 1220 | | | | | 33 |
| -48 | | 1107 | | | | 1220 | | | | | 34 |
| -58 | | 1131 | | ~~x~~ | | 1220 | | | | | 35 |
| DPT0343-53 | | ~~1217~~ | 1226 | | | 1505 | | | | | 36 |
| -58 | | 1301 | | | | 1505 | | | | | 37 |
| DPT0354-33 | | 1337 | | | | 1505 | | | | | 38 |
| -38 | | 1404 | | | | 1505 | | | | | 39 |
| -43 | | 1426 | | | | 1505 | | | | | 40 |
| -48 | | 1502 | | | | 1730 | | | | | 41 |
| -53 | | 1538 | | | | 1730 | | | | | 42 |
| -58 | | 1606 | | | | 1730 | | | | | 43 |
| DPT0355-33 | | 1647 | | | | 1730 | | | | | 44 |

| | | | |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time 9/29/14 |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

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# CHAIN-OF-CUSTODY RECORD

1 / 1

**MOBILE UNIT #** ICB 3

| CLIENT NAME | PROJECT NAME & ADDRESS |
|---|---|
| Geosyntec | CRAE KSC, FL |
| SAMPLERS | CONTACT PERSON / BATCH # (Lab Use Only) |

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

| SAMPLE FIELD ID.\ NUMBER | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: 8260 | COMMENT / SAMPLE PRE FIX: 30930I4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPT0356-33 | 9/30/14 | 0848 | | | 9/30/14 | 1220 | | GW | 2 | ✓ | 30A,B |
| DPT0356-38 | | 0910 | | | | 1220 | | | | | 31 |
| DPT0356-43 | | 0941 | | | | 1220 | | | | | 32 |
| DPT0356-48 | | 1016 | | | | 1220 | | | | | 33 |
| DPT0356-53 | | 1039 | | | | 1220 | | | | | 34 |
| DPT0356-58 | | 1104 | | | | 1220 | | | | | 35 |
| DPT0357-33 | | 1254 | | | | 1430 | | | | | 36 |
| DPT0357-38 | | 1315 | | | | 1430 | | | | | 37 |
| DPT0357-43 | | 1345 | | | | 1430 | | | | | 38 |
| DPT0357-48 | | 1410 | | | | 1610 | | | | | 39 |
| DPT0357-53 | | 1531 | | | | 1610 | | | | | 40 |
| DPT0357-58 | | 1545 | | | | 1610 | | | | | 41 |
| IDW 198327 | | 1446 | | | | 1610 | | | | | 42 |
| IDW 198328 | | 1500 | | | | 1610 | | | | | 43 |
| | | | | | | | | | | | |

| | Date / Time | Received by: (Signature) | Date / Time | Remarks and Observations |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: (Signature) | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Date / Time: 9/30/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

**KB LABS, INC.**
**6821 SW Archer Road**
**Gainesville, Florida 32608**
***Telephone* (352) 367-0073**
***Fax* (352) 378-6491**
Email: info@kbmobilelabs.com

November 19, 2014

Lane Dorman
Geosyntec Consultants
316 South Baylen Street, Suite 201
Pensacola, FL 32502

**RE: NASA CRHE, KSC, FL - Final Data Report**
**KB Labs Project 14-166**

Dear Mr. Dorman:

Enclosed is the final report of the on-site analysis performed by KB Labs, Inc. at the above referenced site. Included are a brief project narrative, data report narrative, tables listing quality control results, final analytical results, and sample chain-of-custody form.

KB Labs' mobile laboratories have been inspected by the FDOH Bureau of Laboratories and are NELAP Certified as of April 1, 2003. Our personnel, methodology, proficiency testing, and quality assurance requirements comply with the guidelines of Chapter 62-160 of the Florida Administrative Code and with the consensus standards adopted at the National Environmental Laboratory Accreditation Conference (NELAC). Data for the site referenced above were determined in accordance with published procedures under Test Methods for Evaluating Solid Waste (EPA SW-846, Update III Revised May 1997). Unless otherwise indicated on the quality control narrative accompanying the data report, the quality assurance and quality control procedures performed in conjunction with analysis of groundwater samples demonstrated that the reported data met our requirements for accuracy and precision under NELAC Standards.

If you have any questions, please do not hesitate to call me or Kelly Bergdoll, President of KB Labs, at (352) 367-0073.

Sincerely,

KB Labs, Inc.

Todd Romero
Director of Operations

*"KB Labs is a small, woman-owned business enterprise."*

*KB Labs, Inc.*
*6821 SW Archer Road*
*Gainesville, FL 32608*
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*Email: info@kbmobilelabs.com*

# PROJECT NARRATIVE

## Project Scope

From November 10 to 12, 2014, a total of 38 water samples were analyzed for Geosyntec Consultants at NASA CRHE, KSC, FL. The samples were analyzed for vinyl chloride, 1, 1-dichloroethene, cis- and trans-1, 2-dichloroethene, trichloroethene, and tetrachloroethene,

## NELAP Certification

KB Mobile Labs Unit KB1: FDOH NELAP Certification Number E82815
KB Mobile Labs Unit KB2: FDOH NELAP Certification Number E82840

## Analytical Procedure

All samples were analyzed using SW846 Method 5030/8260 for waters. Ten (10) milliliters (mL) of water or air (air samples) were purged with helium and the volatile organic compounds (VOCs) were collected on a solid-phase adsorption trap. The adsorption trap was heated and back-purged with helium. The components were then separated by capillary column gas chromatography and measured with a mass spectrometer (GC/MS) operated in the electron impact full-scan mode. The individual VOCs in the samples were measured against corresponding VOC standards.

## Analytical Results

Laboratory results were provided to the client on an as-completed or next-day basis. Final results of the on-site analyses are provided in a hardcopy report and the results relate only to the actual samples received and analyzed in the laboratory. The data produced and reported in the field has been reviewed and approved for this final report by the Director of Operations for KB Labs.

## Uncertainty of Reported Values

All measurement data presented in this report are subject to a degree of uncertainty and the degree of uncertainty varies with each compound of interest. KB Labs estimates the uncertainty of each measurement using a statistical evaluation of the standard deviation from the mean percent recovery of a number of trials of a given measurement. More specifically, KB Labs maintains historical percent recovery control limits at the 99% confidence level for each analyte of interest. These are calculated as $\pm$ 3 times the standard deviation from the mean of historical measurements of the percent recovery of

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spikes of the analytes of interest into actual and control sample matrices. For example, if the lower and upper percent recovery control limits for a specific analyte of interest have been determined to be 70 and 100 percent respectively, a reported value of 10.0 ug/L will be with 99% confidence 7.0 to 13.0 ug/L.For more information about KB Labs estimation of uncertainty, contact KB Labs' quality assurance officer and/or request a copy of KB Labs' SOP for determining measurement uncertainty.

**Quality Control (QC) Data**

Surrogate Recoveries – Table 1 lists the daily analytical sequence and percent recovery results for surrogate compounds, which were added to all analyses. Four (4) surrogate compounds were added to each analysis in order to continually monitor general method performance.

VOC Spike Recoveries – Table 2 lists the percent recovery results for matrix spike and laboratory control samples. A known amount of each target compound was added to selected field samples and to laboratory reagent water in order to monitor the performance of each of the target compounds in the actual matrix and in laboratory reagent water.

Method Blanks – Daily analysis of laboratory reagent water samples was performed in order to monitor the cleanliness of the analytical system.

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# DATA REPORT NARRATIVE

1. All sample data has been reviewed and, if required, updated in the Final Data Report for rounding and significant figures.

2. TCE result of 0.91 I ug/L for DPT0358-033.0 has been changed to 0.19 U ug/L.

3. Samples for this project were analyzed in 2 different labs, KB1 and KB3, while onsite. Each has a unique set of MDLs.

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob Schock, Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 145-120 |
| **On-site Dates**:11/10/14-11/12/14 | **Client Project Manager**: Lane Dorman | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CCS 50 | 11/10/14 | 82 | 112 | 105 | 124 | Pass | Pass | Pass | Pass |
| LCS 20 | 11/10/14 | 96 | 97 | 109 | 115 | Pass | Pass | Pass | Pass |
| BLANK | 11/10/14 | 82 | 101 | 104 | 125 | Pass | Pass | Pass | Pass |
| CRHE-DPT0358-028.0 | 11/10/14 | 76 | 97 | 109 | 94 | Pass | Pass | Pass | Pass |
| CRHE-DPT0358-033.0 | 11/10/14 | 88 | 108 | 106 | 125 | Pass | Pass | Pass | Pass |
| CRHE-DPT0358-038.0 1:5 | 11/10/14 | 65 | 125 | 104 | 124 | Pass | Pass | Pass | Pass |
| CRHE-DPT0358-043.0 | 11/10/14 | 94 | 106 | 99 | 115 | Pass | Pass | Pass | Pass |
| CRHE-DPT0358-048.0 | 11/10/14 | 81 | 106 | 103 | 124 | Pass | Pass | Pass | Pass |
| CRHE-DPT0358-053.0 | 11/10/14 | 83 | 95 | 108 | 129 | Pass | Pass | Pass | Pass |
| CRHE-DPT0358-058.0 | 11/10/14 | 83 | 105 | 106 | 127 | Pass | Pass | Pass | Pass |
| CRHE-DPT0358-058.0 MS | 11/10/14 | 92 | 116 | 96 | 125 | Pass | Pass | Pass | Pass |
| CRHE-DPT0358-058.0 MSD | 11/10/14 | 85 | 105 | 110 | 133 | Pass | Pass | Pass | Pass |
| CRHE-DPT0359-033.0 | 11/10/14 | 83 | 106 | 110 | 159 | Pass | Pass | Pass | > UCL |
| CRHE-DPT0359-038.0 | 11/10/14 | 78 | 112 | 99 | 154 | Pass | Pass | Pass | > UCL |
| BLANK/TUNE | 11/11/14 | 100 | 98 | 102 | 103 | Pass | Pass | Pass | Pass |
| CCS 20 | 11/11/14 | 105 | 100 | 95 | 101 | Pass | Pass | Pass | Pass |
| LCS 20 | 11/11/14 | 106 | 101 | 97 | 102 | Pass | Pass | Pass | Pass |
| BLANK | 11/11/14 | 102 | 102 | 99 | 95 | Pass | Pass | Pass | Pass |
| CRHE-DPT0359-043.0 | 11/11/14 | 113 | 98 | 90 | 103 | Pass | Pass | Pass | Pass |
| CRHE-DPT0359-048.0 | 11/11/14 | 109 | 100 | 93 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0359-055.0 | 11/11/14 | 108 | 98 | 90 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0358-033.0 1:5 | 11/11/14 | 110 | 102 | 88 | 100 | Pass | Pass | Pass | Pass |
| CRHE-DPT0360-058.0 1:10 | 11/11/14 | 116 | 103 | 86 | 107 | Pass | Pass | Pass | Pass |
| CCS 20 | 11/11/14 | 107 | 103 | 98 | 94 | Pass | Pass | Pass | Pass |
| BLANK | 11/11/14 | 106 | 101 | 102 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0359-058.0 1:5 | 11/11/14 | 115 | 106 | 91 | 88 | Pass | Pass | Pass | Pass |
| CRHE-DPT0360-038.0 1:5 | 11/11/14 | 114 | 105 | 86 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0360-043.0 1:5 | 11/11/14 | 105 | 100 | 90 | 93 | Pass | Pass | Pass | Pass |
| CRHE-DPT0360-048.0 1:5 | 11/11/14 | 104 | 108 | 87 | 89 | Pass | Pass | Pass | Pass |
| CRHE-DPT0360-053.0 | 11/11/14 | 109 | 103 | 86 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0361-033.0 | 11/11/14 | 114 | 104 | 89 | 94 | Pass | Pass | Pass | Pass |
| CCS 20 | 11/12/14 | 98 | 105 | 93 | 95 | Pass | Pass | Pass | Pass |
| BLANK | 11/12/14 | 110 | 105 | 95 | 96 | Pass | Pass | Pass | Pass |
| CRHE-DPT0361-038.0 | 11/12/14 | 112 | 105 | 90 | 98 | Pass | Pass | Pass | Pass |
| CRHE-DPT0361-043.0 | 11/12/14 | 114 | 106 | 86 | 102 | Pass | Pass | Pass | Pass |
| CRHE-DPT0361-048.0 | 11/12/14 | 115 | 99 | 89 | 97 | Pass | Pass | Pass | Pass |
| CRHE-DPT0361-053.0 | 11/12/14 | 111 | 105 | 88 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0361-058.0 1:5 | 11/12/14 | 103 | 97 | 89 | 105 | Pass | Pass | Pass | Pass |

***Surrogate Compounds:**

S1 = Dibromofluoromethane (63% - 142%)
S2 = 1,2- Dichloroethane-D4 (68% - 136%)
S3 = Toluene-D8 (76% - 124%)
S4 = 4-Bromofluorobenzene (70% - 133%)

## KB LABS, INC.

## Table 1: Analytical Run Sequence/Surrogate Percent Recoveries

| | | |
|---|---|---|
| **Client**: Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob Schock, Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager**: Kelly Bergdoll | **KB Labs Project No:** 145-120 |
| **On-site Dates**:11/10/14-11/12/14 | **Client Project Manager**: Lane Dorman | **Matrix:** Water |

| Sample ID | Date of Analysis | Surrogate % Recovery | | | | Surrogate Control Limits | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S1* | S2* | S3* | S4* | S1* | S2* | S3* | S4* |
| CRHE-DPT0362-033.0 1:5 | 11/12/14 | 106 | 99 | 90 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0362-038.0 | 11/12/14 | 110 | 102 | 91 | 99 | Pass | Pass | Pass | Pass |
| CRHE-DPT0362-043.0 | 11/12/14 | 111 | 99 | 91 | 101 | Pass | Pass | Pass | Pass |
| CRHE-DPT0362-048.0 | 11/12/14 | 110 | 101 | 88 | 107 | Pass | Pass | Pass | Pass |
| CRHE-DPT0362-053.0 | 11/12/14 | 117 | 105 | 86 | 91 | Pass | Pass | Pass | Pass |
| CRHE-DPT0362-058.0 | 11/12/14 | 110 | 89 | 91 | 102 | Pass | Pass | Pass | Pass |
| CCS 20 | 11/12/14 | 101 | 103 | 99 | 98 | Pass | Pass | Pass | Pass |
| LCS 20 | 11/12/14 | 91 | 92 | 106 | 100 | Pass | Pass | Pass | Pass |
| BLANK | 11/12/14 | 93 | 94 | 104 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0363-033.0 | 11/12/14 | 95 | 90 | 100 | 108 | Pass | Pass | Pass | Pass |
| CRHE-DPT0363-038.0 | 11/12/14 | 104 | 102 | 101 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0363-043.0 | 11/12/14 | 101 | 98 | 100 | 110 | Pass | Pass | Pass | Pass |
| CRHE-DPT0363-048.0 | 11/12/14 | 100 | 97 | 99 | 112 | Pass | Pass | Pass | Pass |
| CRHE-DPT0363-053.0 1:2 | 11/12/14 | 97 | 92 | 102 | 113 | Pass | Pass | Pass | Pass |
| CRHE-DPT0363-058.0 1:5 | 11/12/14 | 97 | 96 | 101 | 114 | Pass | Pass | Pass | Pass |
| CRHE-IDW-188851 | 11/12/14 | 42 | 96 | 100 | 118 | < LCL | Pass | Pass | Pass |
| CRHE-IDW-188852 | 11/12/14 | 0 | 95 | 99 | 113 | < LCL | Pass | Pass | Pass |
| CRHE-IDW-188852 MS | 11/12/14 | 9 | 94 | 99 | 102 | < LCL | Pass | Pass | Pass |
| CRHE-IDW-188852 MSD | 11/12/14 | 8 | 100 | 93 | 97 | < LCL | Pass | Pass | Pass |
| CRHE-DPT0362-043.0 1:10 | 11/12/14 | 94 | 91 | 96 | 120 | Pass | Pass | Pass | Pass |
| CRHE-DPT0362-048.0 1:20 | 11/12/14 | 99 | 93 | 96 | 123 | Pass | Pass | Pass | Pass |
| CCS 20 | 11/12/14 | 100 | 106 | 94 | 105 | Pass | Pass | Pass | Pass |

**Comments:** Although some surrogates may be out of the control percent recovery range, other supporting QC, such as matrix spikes, matrix spike duplicates, method blanks, and laboratory control samples, are performed by KB Labs to further validate reported data. IDW samples affect first surrogate.

***Surrogate Compounds:**
S1 = Dibromofluoromethane (63% - 142%)
S2 = 1,2- Dichloroethane-D4 (68% - 136%)
S3 = Toluene-D8 (76% - 124%)
S4 = 4-Bromofluorobenzene (70% - 133%)

## KB LABS, INC.

## Table 2: VOC Spike Compound Percent Recoveries

| | | |
|---|---|---|
| **Client:** Geosyntec Consultants | **Driller/Sampler**: Geosyntec Consultants | **Analyst:** Bob Schock, Tuan Luu |
| **Site:** NASA CRHE | **KB Labs Project Manager:** Kelly Bergdoll | **KB Labs Project No.:** 14-120 |
| **Onsite Dates:** 11/10/14-11/12/14 | **Client Project Manager:** Lane Dorman | **Matrix**: Water |

***Matrix Spike/Matrix Spike Duplicate (MS/MSD):***

**Samples:** CRHE-DPT0340-058.0 **Date of Analysis:** 11/10/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 141 | 131 | 7 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 30 | 165 | 20 | 118 | 129 | 9 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 139 | 131 | 6 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 114 | 100 | 13 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 99 | 91 | 8 | Pass | Pass | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 80 | 90 | 12 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

**Samples:** CRHE-IDW-188852 **Date of Analysis:** 11/12/2014

| Matrix Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | Upper | RPD | MS | MSD | RPD | MS | MSD | RPD |
| Vinyl Chloride | 18 | 177 | 20 | 116 | 181 | 44 | Pass | > UCL | > RPDL |
| 1,1-Dichloroethene | 30 | 165 | 20 | 177 | 180 | 2 | > UCL | > UCL | Pass |
| Trans-1,2-Dichloroethene | 37 | 155 | 20 | 66 | 66 | 1 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 29 | 163 | 20 | 95 | 92 | 3 | Pass | Pass | Pass |
| Trichloroethene | 52 | 143 | 20 | 203 | 189 | 7 | > UCL | > UCL | Pass |
| Tetrachloroethene | 50 | 144 | 20 | 82 | 70 | 16 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

***Laboratory Control Spikes (LCS):***

**Samples:** LCS 1 **Date of Analysis:** 11/10/2014
LCS 2 11/11/2014
LCS 3 11/12/2014

| Spike Compounds | Control Limits | | | Percent Recoveries | | | Control Limit Checks | | |
|---|---|---|---|---|---|---|---|---|---|
| | Lower | | Upper | LCS#1 | LCS#2 | LCS#3 | LCS#1 | LCS#2 | LCS#3 |
| Vinyl Chloride | 23 | to | 168 | 104 | 96 | 124 | Pass | Pass | Pass |
| 1,1-Dichloroethene | 39 | to | 161 | 95 | 102 | 128 | Pass | Pass | Pass |
| Trans-1,2-Dichloroethene | 40 | to | 153 | 100 | 107 | 70 | Pass | Pass | Pass |
| Cis-1,2-Dichloroethene | 51 | to | 143 | 89 | 106 | 91 | Pass | Pass | Pass |
| Trichloroethene | 55 | to | 145 | 104 | 105 | 116 | Pass | Pass | Pass |
| Tetrachloroethene | 53 | to | 147 | 103 | 105 | 90 | Pass | Pass | Pass |

**Note:** Control Limits are based on a semi-annual historical evaluation of mobile unit and method guidelines.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0358-028.0-20141110 | 11/10/2014 | 10:07 | Water | 1 | **210** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0358-033.0-20141110 | 11/10/2014 | 10:21 | Water | 1, 5 | **120** | 0.30 U | 0.29 U | **1.5** | 0.19 U | 0.23 U |
| CRHE-DPT0358-038.0-20141110 | 11/10/2014 | 10:39 | Water | 5 | **3.3 I** | 1.5 U | 1.5 U | 1.1 U | 0.95 U | 1.2 U |
| CRHE-DPT0358-043.0-20141110 | 11/10/2014 | 10:55 | Water | 1 | **26.0** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0358-048.0-20141110 | 11/10/2014 | 11:11 | Water | 1 | **12.9** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0358-053.0-20141110 | 11/10/2014 | 11:35 | Water | 1 | **3.0** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0358-058.0-20141110 | 11/10/2014 | 11:52 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0359-033.0-20141110 | 11/10/2014 | 13:55 | Water | 1 | **131** | 0.30 U | **3.1** | **20.0** | 0.19 U | 0.23 U |
| CRHE-DPT0359-038.0-20141110 | 11/10/2014 | 14:09 | Water | 1 | **0.45 I** | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| CRHE-DPT0359-043.0-20141110 | 11/11/2014 | 14:23 | Water | 1 | 0.16 U | 0.15 U | 0.16 U | 0.16 U | 0.17 U | 0.23 U |
| CRHE-DPT0359-048.0-20141110 | 11/11/2014 | 14:39 | Water | 1 | **0.91 I** | 0.15 U | 0.16 U | **0.46 I** | 0.17 U | 0.23 U |
| CRHE-DPT0359-053.0-20141110 | 11/11/2014 | 14:54 | Water | 1 | 0.16 U | 0.15 U | 0.16 U | 0.16 U | 0.17 U | 0.23 U |
| CRHE-DPT0359-058.0-20141111 | 11/11/2014 | 07:48 | Water | 5 | 0.80 U | 0.75 U | 0.80 U | 0.80 U | 0.85 U | 1.2 U |
| CRHE-DPT0360-038.0-20141111 | 11/11/2014 | 09:38 | Water | 5 | **3.8 I** | 0.75 U | 0.80 U | **3.4 I** | 0.85 U | 1.2 U |
| CRHE-DPT0360-043.0-20141111 | 11/11/2014 | 09:51 | Water | 5 | **47** | 0.75 U | 0.80 U | **6.5** | 0.85 U | 1.2 U |
| CRHE-DPT0360-048.0-20141111 | 11/11/2014 | 10:06 | Water | 5 | **130** | 0.75 U | **1.3 I** | **2.4 I** | 0.85 U | 1.2 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0360-053.0-20141111 | 11/11/2014 | 10:28 | Water | 1 | 0.16 U | 0.15 U | 0.16 U | 0.16 U | 0.17 U | 0.23 U |
| CRHE-DPT0360-058.0-20141111 | 11/11/2014 | 10:48 | Water | 10 | 1.6 U | 1.5 U | 1.6 U | 1.6 U | 1.7 U | 2.3 U |
| CRHE-DPT0361-033.0-20141111 | 11/11/2014 | 13:06 | Water | 1 | **0.56 I** | 0.15 U | 0.16 U | **1.7** | 0.17 U | 0.23 U |
| CRHE-DPT0361-038.0-20141111 | 11/12/2014 | 13:19 | Water | 1 | **0.66 I** | 0.15 U | 0.16 U | **3.0** | 0.17 U | 0.23 U |
| CRHE-DPT0361-043.0-20141111 | 11/12/2014 | 13:32 | Water | 1 | **1.2** | 0.15 U | 0.16 U | **8.0** | 0.17 U | 0.23 U |
| CRHE-DPT0361-048.0-20141111 | 11/12/2014 | 13:48 | Water | 1 | **1.2** | 0.15 U | 0.16 U | **7.2** | 0.17 U | 0.23 U |
| CRHE-DPT0361-053.0-20141111 | 11/12/2014 | 14:05 | Water | 1 | **7.1** | 0.15 U | 0.16 U | **7.9** | 0.17 U | 0.23 U |
| CRHE-DPT0361-058.0-20141111 | 11/12/2014 | 14:22 | Water | 5 | 0.80 U | 0.75 U | 0.80 U | 0.80 U | 0.85 U | 1.2 U |
| CRHE-DPT0362-033.0-20141111 | 11/12/2014 | 16:04 | Water | 5 | 0.80 U | 0.75 U | 0.80 U | 0.80 U | 0.85 U | 1.2 U |
| CRHE-DPT0362-038.0-20141111 | 11/12/2014 | 16:18 | Water | 5 | **2.0 I** | 0.75 U | 0.80 U | **2.2 I** | 0.85 U | 1.2 U |
| CRHE-DPT0362-043.0-20141111 | 11/12/2014 | 16:33 | Water | 1, 10 | **770** | **0.33 I** | **13.5** | **130** | **3.4** | 0.23 U |
| CRHE-DPT0362-048.0-20141112 | 11/12/2014 | 07:42 | Water | 1, 20 | **1500** | **2.5** | **59.6** | **1100** | **27.1** | 0.23 U |
| CRHE-DPT0362-053.0-20141112 | 11/12/2014 | 07:51 | Water | 1 | **5.0** | 0.15 U | **0.56 I** | **8.7** | 0.17 U | 0.23 U |
| CRHE-DPT0362-058.0-20141112 | 11/12/2014 | 08:11 | Water | 5 | **270** | 0.75 U | **12** | **300** | 0.85 U | 1.2 U |
| CRHE-DPT0363-033.0-20141112 | 11/12/2014 | 10:11 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **0.53 I** | 0.19 U | 0.23 U |
| CRHE-DPT0363-038.0-20141112 | 11/12/2014 | 10:25 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | **1.5** | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

Final Data Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| CRHE-DPT0363-043.0-20141112 | 11/12/2014 | 10:39 | Water | 1 | **5.2** | 0.30 U | 0.29 U | **3.4** | 0.19 U | 0.23 U |
| CRHE-DPT0363-048.0-20141112 | 11/12/2014 | 10:55 | Water | 1 | **1.2** | 0.30 U | 0.29 U | **0.30 I** | 0.19 U | 0.23 U |
| CRHE-DPT0363-053.0-20141112 | 11/12/2014 | 11:11 | Water | 2 | 0.52 U | 0.60 U | 0.58 U | 0.44 U | 0.38 U | 0.46 U |
| CRHE-DPT0363-058.0-20141112 | 11/12/2014 | 11:31 | Water | 5 | 1.3 U | 1.5 U | 1.5 U | 1.1 U | 0.95 U | 1.2 U |
| CRHE-IDW188851-20141112 | 11/12/2014 | 12:45 | Water | 1 | **2.4** | 0.30 U | 0.29 U | **1.5** | 0.19 U | 0.23 U |
| CRHE-IDW188852-20141112 | 11/12/2014 | 12:50 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

# KB LABS, INC.

MB Summary Report

CRHE

KSC, FL

Prepared for: Geosyntec Consultants

| Sample ID | Analysis Date | Sample Time | Matrix | Dilution Factor | Vinyl chloride | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |
|---|---|---|---|---|---|---|---|---|---|---|
| Method Blank KB3 | 11/10/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |
| Method Blank KB1 | 11/11/2014 | 00:00 | Water | 1 | 0.16 U | 0.15 U | 0.16 U | 0.16 U | 0.17 U | 0.23 U |
| Method Blank KB1 | 11/12/2014 | 00:00 | Water | 1 | 0.16 U | 0.15 U | 0.16 U | 0.16 U | 0.17 U | 0.23 U |
| Method Blank KB3 | 11/12/2014 | 00:00 | Water | 1 | 0.26 U | 0.30 U | 0.29 U | 0.22 U | 0.19 U | 0.23 U |

Reporting units for waters are ug/L and for soils are mg/kg.

Mobile Laboratory Services

6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

# CHAIN-OF-CUSTODY RECORD

1 of 1

**MOBILE UNIT #** KB-3

| CLIENT NAME | PROJECT NAME & ADDRESS | | |

# CHAIN-OF-CUSTODY RECORD

KB LABS
Mobile Laboratory Services

6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

**MOBILE UNIT #** KB-3

CLIENT NAME: Geosyntec
PROJECT NAME & ADDRESS: CRHE
SAMPLERS: Dave
CONTACT PERSON:
BATCH # (Lab Use Only):

PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS: Target VOCs

| SAMPLE FIELD ID.\ NUMBER -20141111 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | Target VOCs | COMMENT / SAMPLE PRE FIX -3111114 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE MPT-0359-058.0 | 11/11/14 | 0748 | | X | 11/11/14 | | | W | 2 | X | 01 A,B |
| -0360-038.0 | | 0938 | | | | | | | | | 02 AB |
| -043.0 | | 0951 | | | | | | | | | 03 AB |
| -048.0 | | 1006 | | | | | | | | | 04 AB |
| -053.0 | | 1028 | | | | | | | | | 05 AB |
| -058.0 | | 1048 | | | | | | | | | 06 AB |
| -0361-033.0 | | 1306 | | | | | | | | | 07 AB |
| -038.0 | | 1319 | | | | | | | | | 08 AB |
| -043.0 | | 1332 | | | | | | | | | 09 AB |
| -048.0 | | 1348 | | | | | | | | | 10 AB |
| -053.0 | | 1405 | | | | | | | | | 11 AB |
| -058.0 | | 1422 | | | | | | | | | 12 AB |
| -0362-033.0 | | 1604 | | | | | | | | | 13 AB |
| -038.0 | | 1618 | | | | | | | | | 14 AB |
| -043.0 | | 1633 | | | | | | | | | 15 AB |

| | | | |
|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time |

**Remarks and Observations**

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas

KB LABS
Mobile Laboratory Services

6821 SW Archer Road
Gainesville, FL 32608
TEL (352) 367-0073 · FAX (352) 378-6491

6701 Conference Drive
Raleigh, NC 27607
TEL (352) 538-6507

# CHAIN-OF-CUSTODY RECORD



**MOBILE UNIT #** KB-3

CLIENT NAME: Geosyntec

PROJECT NAME & ADDRESS: CRHE

SAMPLERS: Dave Sizemore

CONTACT PERSON:

BATCH # (Lab Use Only):

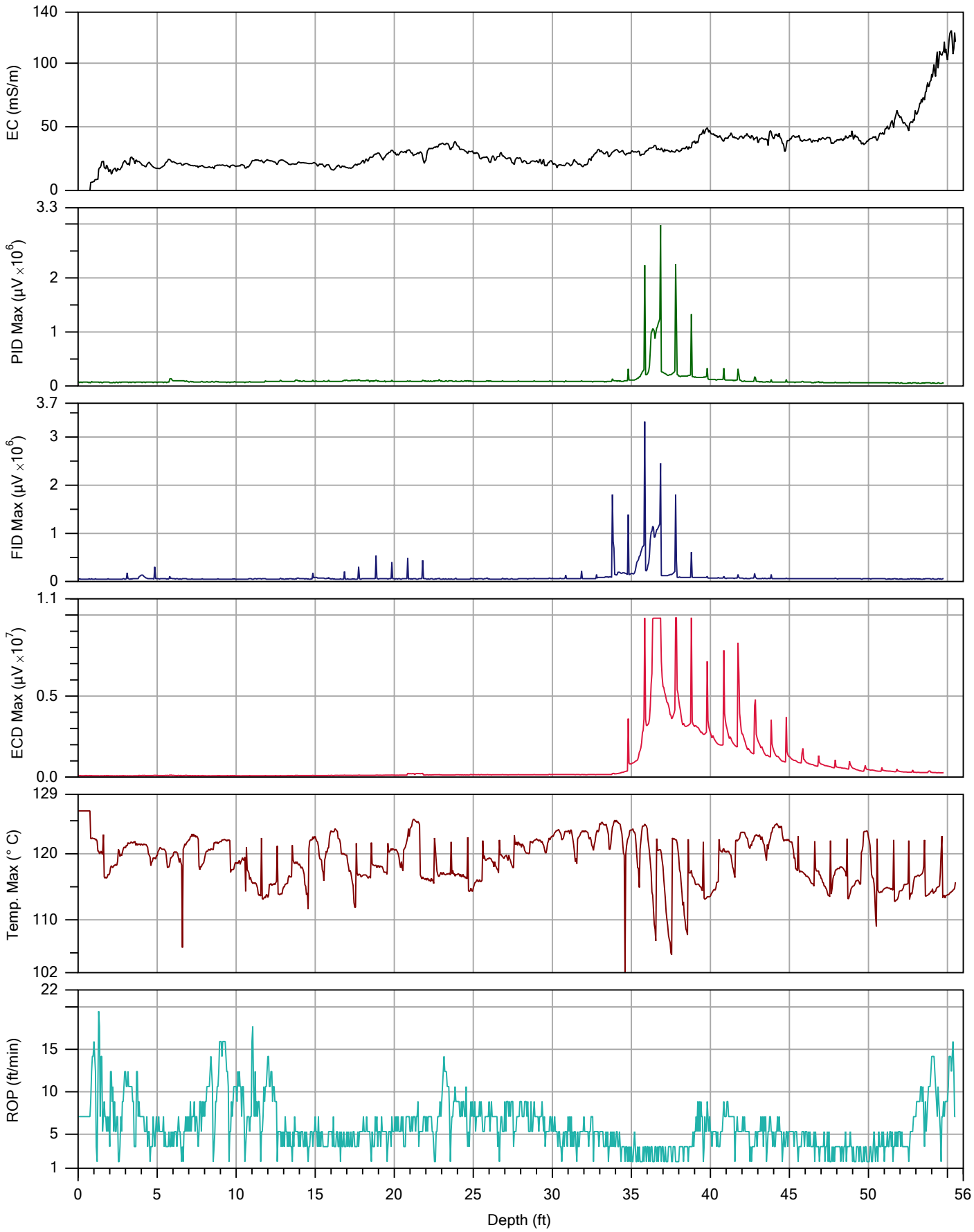
PRESERVATION: C Chilled; H HCL; Ot Other (see Remarks)

IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS

| SAMPLE FIELD ID.\ NUMBER -20141112 | DATE SAMPLED | TIME SAMPLED | COMP. | GRAB | DATE REC'D | TIME REC'D | STATION LOCATION / No. | SAMPLE MATRIX | NUMBER OF CONTAINERS | | | | | | COMMENT / SAMPLE PRE FIX -3111214 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRHE APT-0362-048.0 | 11/12/14 | 0732 | | X | 11/12/14 | | | W | 2 | X | | | | | 01 AB |
| -053.0 | | 0751 | | | | | | | | | | | | | 02 AB |
| -058.0 | | 0811 | | | | | | | | | | | | | 03 AB |
| 0363-033.0 | | 1011 | | | | | | | | | | | | | 04 AB |
| -038.0 | | 1025 | | | | | | | | | | | | | 05 AB |
| -043.0 | | 1039 | | | | | | | | | | | | | 06 AB |
| -048.0 | | 1055 | | | | | | | | | | | | | 07 AB |
| -053.0 | | 1111 | | | | | | | | | | | | | 08 AB |
| -058.0 | | 1131 | | | | | | | | | | | | | 09 AB |
| IDW-188851 | | 1245 | | | | | | | | | | | | | 10 AB |
| 188852 | | 1250 | | | | | | | | | | | | | 11 AB |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Precleaned Containers<br>Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time | **Remarks and Observations** |
| Relinquished by: *(Signature)* | Date / Time | Received by: *(Signature)* | Date / Time<br>11/12/14 | |

**Matrix Types** S Soil SW Surface Water GW Ground Water SG Soil Gas




| | | |
|---|---|---|
| | | File: MIP001.DAT |
| Company: KB Labs | Operator: Brad Weichert | Date: 2/12/2010 |
| Project ID: NASA KSC CRHE | Client: Geosyntec | Location: |

TESTS BYPASSED

01.INF

SITE INFORMATION -- DIRECT IMAGE MIP PROBE

DATA FILE FORMAT:
(FT) (mS/M) (FT/MIN) (T MIN) (T MAX) (PSI) (M) (M/MIN) (KPA)
GAS FILE FORMAT:
D1MIN D1MAX D2MIN D2MAX D3MIN D3MAX D4MIN D4MAX

UNITS:  ENGLISH
PROBE AND ARRAY:  MP6510 MIP PROBE
80 INCH STRING POT USED
LOG START TIME:   Fri Feb 12 2010  12:18

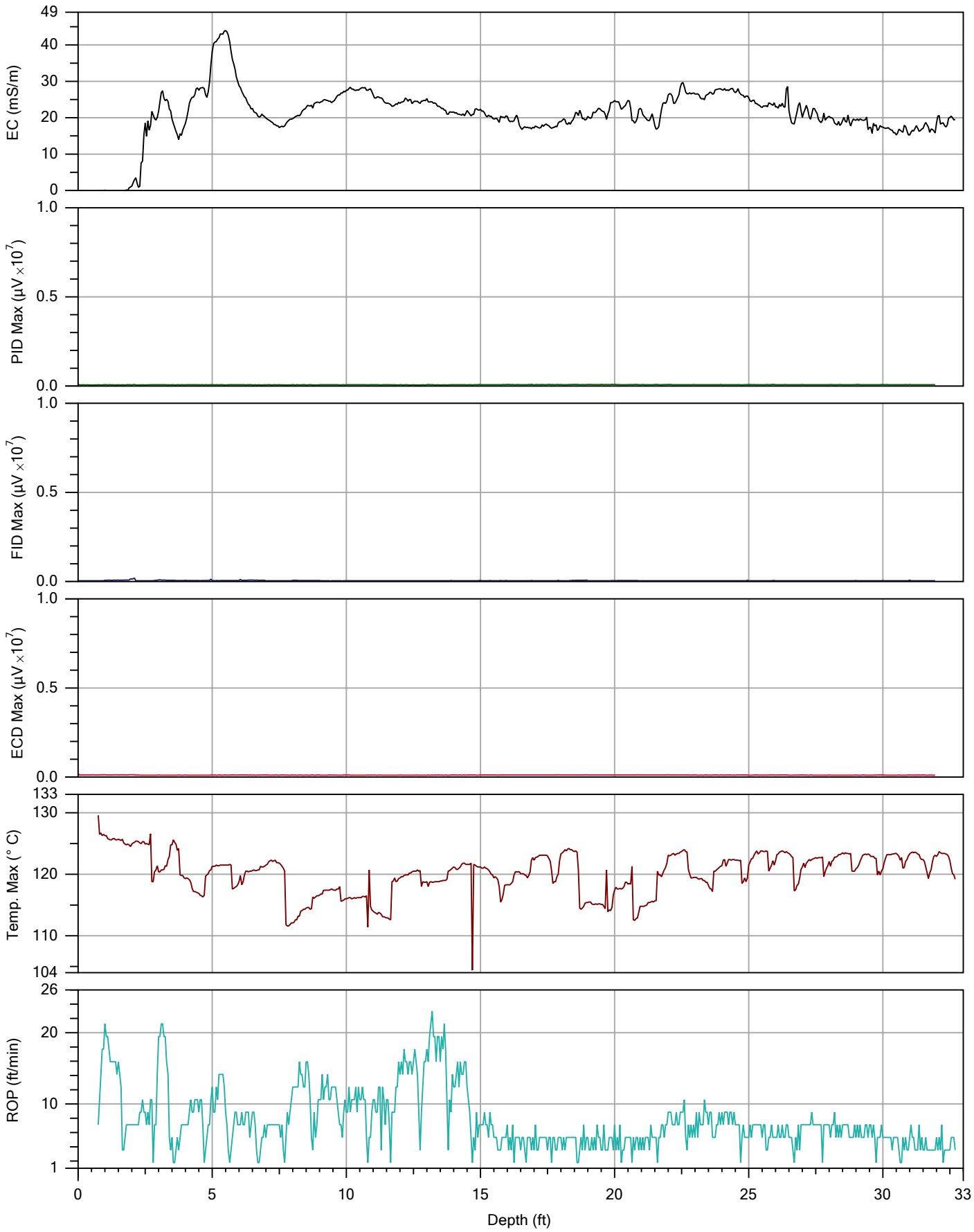
ATTENUATION CHANGES

| DEPTH | DET1 | DET2 | DET3 | DET4 |
|---|---|---|---|---|
| 0.00 | 1 | 1 | 1 | 1 |
| 0.00 | 10 | 1 | 1 | 1 |
| 0.00 | 10 | 10 | 1 | 1 |
| 0.00 | 10 | 10 | 10 | 1 |

LOG END DEPTH: 54.75 FEET 16.688 METERS

LATITUDE:  0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.00 METERS;  0.00 FEET
UNABLE TO ESTABLISH A FIX

LOG END TIME:   Fri Feb 12 2010  13:11




| | | |
|---|---|---|
| | | File: MIP002.DAT |
| Company: KB Labs | Operator: Brad Weichert | Date: 2/12/2010 |
| Project ID: NASA KSC CRHE | Client: Geosyntec | Location: |

TESTS BYPASSED

02.INF

SITE INFORMATION -- DIRECT IMAGE MIP PROBE

DATA FILE FORMAT:
(FT) (mS/M) (FT/MIN) (T MIN) (T MAX) (PSI) (M) (M/MIN) (KPA)
GAS FILE FORMAT:
D1MIN D1MAX D2MIN D2MAX D3MIN D3MAX D4MIN D4MAX

UNITS:  ENGLISH
PROBE AND ARRAY:  MP6510 MIP PROBE
80 INCH STRING POT USED
LOG START TIME:   Fri Feb 12 2010  14:04

ATTENUATION CHANGES

| DEPTH | DET1 | DET2 | DET3 | DET4 |
|---|---|---|---|---|
| 0.00 | 1 | 1 | 1 | 1 |
| 0.00 | 10 | 1 | 1 | 1 |
| 0.00 | 10 | 10 | 1 | 1 |
| 0.00 | 10 | 10 | 10 | 1 |

LOG END DEPTH: 31.95 FEET 9.738 METERS

LATITUDE:  0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.00 METERS;  0.00 FEET
UNABLE TO ESTABLISH A FIX

LOG END TIME:   Fri Feb 12 2010  14:45

April 05, 2012

Service Request No: J1201360

Ms. Jill Johnson
Geosyntec Consultants
9515 Holsberry Road
Suite A
Pensacola, FL 32534

**Laboratory Results for: KSC CRHE/FR1681**

Dear Ms. Johnson:

Enclosed are the results of the sample(s) submitted to our laboratory on March 22, 2012. For your reference, these analyses have been assigned our service request number **J1201360**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. If required, the laboratory can provide uncertainty measurements for each method employed in sample analysis; this uncertainty measurement would be generated using method validation studies and the laboratory's quality control data.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at CMyers@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc. dba ALS Environmental**

Craig Myers
Project Manager



*CAS Jacksonville is NELAC-accredited by the State of Florida, #E82502. Other state accreditations include: Georgia, #958; Kentucky, #63; Louisiana, #02086; North Carolina, #527; South Carolina, #96021001; Texas, #T104704197-09-TX; Maine, #2011006; DoD #66206.*

Columbia Analytical Services℠
ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256
PHONE 904-739-2277 FAX 904-739-2011
Columbia Analytical Services, Inc.
Part of the ALS Group A Campbell Brothers Limited Company
www.caslab.com ▪ www.alsglobal.com

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**CAS Lab Reference No.: J1201360**
**Non CLP Tier III (w/o Raw Data)**


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COLUMBIA ANALYTICAL SERVICES, INC.

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request No.:** | J1201360 |
| **Project:** | KSC CRHE | **Date Received:** | 3/22/12 |
| **Sample Matrix:** | Water/Soil | | |

## CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III data deliverables including validation summary forms. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

### Sample Receipt

Twenty-nine water samples and one trip blank were received for analysis at Columbia Analytical Services on 3/22/12. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at $\leq$6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

### Volatile Organic Analyses:

Method 8260B: The upper control criterion was exceeded for the following analyte in Laboratory Control Samples (LCS) JWG1200321-1 and JWG1200333-3: Isopropylbenzene. The analyte in question was not detected in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

### General Chemistry Analyses:

No significant data anomalies were noted with this analysis.

Approved by_____ Date 4/5/12

**Client:** Geosyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360

## SAMPLE CROSS-REFERENCE

| SAMPLE # | CLIENT SAMPLE ID | DATE | TIME |
|---|---|---|---|
| J1201360-001 | CRHE-MW0032-045.0-03192012 | 3/19/12 | 11:00 |
| J1201360-002 | CRHE-MW0030-010.0-03192012 | 3/19/12 | 12:05 |
| J1201360-003 | CRHE-MW0023-065.0-03192012 | 3/19/12 | 14:40 |
| J1201360-004 | CRHE-MW0031-045.0-03192012 | 3/19/12 | 15:25 |
| J1201360-005 | CRHE-IW0020I-045.0-03192012 | 3/19/12 | 16:40 |
| J1201360-006 | CRHE-MW0039-030.0-03192012 | 3/19/12 | 17:39 |
| J1201360-007 | CRHE-MW0038-010.0-03192012 | 3/19/12 | 18:10 |
| J1201360-008 | EB01-03192012 | 3/19/12 | 15:30 |
| J1201360-009 | CRHE-IW0015I-040.0-03192012 | 3/19/12 | 18:10 |
| J1201360-010 | CRHE-MW0034-038.5-03202012 | 3/20/12 | 09:37 |
| J1201360-011 | CRHE-IW0019I-040.0-03202012 | 3/20/12 | 09:40 |
| J1201360-012 | CRHE-MW0033-048.5-03202012 | 3/20/12 | 10:17 |
| J1201360-013 | CRHE-IW0021I-045.0-03202012 | 3/20/12 | 11:23 |
| J1201360-014 | CRHE-MW0035-045.0-03202012 | 3/20/12 | 14:11 |
| J1201360-015 | CRHE-MW0028-040.0-03202012 | 3/20/12 | 14:20 |
| J1201360-016 | CRHE-MW0037-030.0-03202012 | 3/20/12 | 14:41 |
| J1201360-017 | CRHE-IW0017I-030.0-03202012 | 3/20/12 | 15:10 |
| J1201360-018 | CRHE-IW0014I-040.0-03212012 | 3/21/12 | 09:05 |
| J1201360-019 | CRHE-MW0029-045.0-03212012 | 3/21/12 | 11:00 |
| J1201360-020 | CRHE-MW0026-035.0-03212012 | 3/21/12 | 12:00 |
| J1201360-021 | CRHE-MW0022-065.0-03212012 | 3/21/12 | 15:05 |
| J1201360-022 | CRHE-MW0027-045.0-03212012 | 3/21/12 | 15:45 |
| J1201360-023 | CRHE-MW0024-010.0-03212012 | 3/21/12 | 17:50 |
| J1201360-024 | CRHE-MW0025-030.0-03212012 | 3/21/12 | 18:30 |
| J1201360-025 | CRHE-188849-IDW-03212012 | 3/21/12 | 16:15 |
| J1201360-026 | CRHE-188797-IDW-03212012 | 3/21/12 | 16:40 |
| J1201360-027 | CRHE-188842-IDW-03212012 | 3/21/12 | 16:45 |
| J1201360-028 | CRHE-188838-IDW-03212012 | 3/21/12 | 17:00 |
| J1201360-029 | Trip Blank | 3/19/12 | 00:00 |
| J1201360-030 | CHRE-MW0036-010.0-03202012 | 3/20/12 | 15:21 |

# Florida DEP Data Qualifiers

B Results based upon colony counts outside the acceptable range.

D Measurement was made in the field.

H Value based on field kit determination; results may not be accurate.

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
2. No known quality control criteria exists for the component.
3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).

K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).

L Off scale high. The analyte is above the upper limit of the linear calibration range.

M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.

N Presumptive evidence of the analyte. Confirmation was not performed.

Q Sample held beyond the accepted holding time.

T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.

U Indicates that the compound was analyzed for but not detected.

V Indicates that the analyte was detected in both the sample and the associated method blank.

Y The laboratory analysis was from an improperly preserved sample.

Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.

## Acronyms

| | |
|---|---|
| ASTM | American Society for Testing and Materials |
| A2LA | American Association for Laboratory Accreditation |
| CARB | California Air Resources Board |
| CAS Number | Chemical Abstract Service registry Number |
| CFC | Chlorofluorocarbon |
| CFU | Colony-Forming Unit |
| DEC | Department of Environmental Conservation |
| DEQ | Department of Environmental Quality |
| DHS | Department of Health Services |
| DOE | Department of Ecology |
| DOH | Department of Health |
| EPA | U. S. Environmental Protection Agency |
| ELAP | Environmental Laboratory Accreditation Program |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| LUFT | Leaking Underground Fuel Tank |
| M | Modified |
| MCL | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL | Method Detection Limit |
| MPN | Most Probable Number |
| MRL | Method Reporting Limit |
| NA | Not Applicable |
| NC | Not Calculated |
| NCASI | National Council of the Paper Industry for Air and Stream Improvement |
| ND | Not Detected |
| NIOSH | National Institute for Occupational Safety and Health |
| PQL | Practical Quantitation Limit |
| RCRA | Resource Conservation and Recovery Act |
| SIM | Selected Ion Monitoring |
| TPH | Total Petroleum Hydrocarbons |
| tr | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL. |

Columbia Analytical Services

# Chain of Custody Documentation

9143 Philips Highway, Suite 200
Jacksonville, Florida 32256
Phone: (904) 739-2277 Fax (904) 739-2011
www.caslab.com

Columbia Analytical Services

www.caslab.com

# CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR # J1201360

CAS Contact

9143 Philips Highway, Suite 200, Jacksonville, FL 32256 / Phone (904) 739-2277 / 800-695-7222 x06 / FAX (904) 739-2011



| Project Name | Project Number |
|---|---|
| KSC-CRHE | FR1681/17*4 |
| Report To: Jill Johnson | Report CC |
| jjohnson@geosyntec.com | |
| Company/Address | |
| 316 S. Baylen Street, Suite 201 | |
| Pensacola, FL 32502 | |
| Phone # | FAX # |
| 850-477-6542 | N/A |
| Sampler's Signature | Sampler's Printed Name |
| | Lauren Petty |

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

Preservative Key: 0. None; 1. HCL; 2. HNO3; 3. H2SO4; 4. NaOH; 5. Zn. Acetate; 6. MeOH; 7. NaHSO4; 8. Other

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | Matrix | NUMBER OF CONTAINERS | Preservative | 8260B (Full List VOC) | REMARKS |
|---|---|---|---|---|---|---|---|---|
| CRHE-MW0022-065.0-03212012 | | 3/21/2012 | 1505 | W | 3 | | X | |
| CRHE-MW0023-065.0-03192012 | | 3/19/2012 | 1440 | W | 3 | | X | |
| CRHE-MW0024-010.0-03212012 | | 3/21/2012 | 1750 | W | 3 | | X | |
| CRHE-MW0025-030.0-03212012 | | 3/21/2012 | 1830 | W | 3 | | X | |
| CRHE-MW0026-035.0-03212012 | | 3/21/2012 | 1200 | W | 3 | | X | |
| CRHE-MW0027-045.0-03212012 | | 3/21/2012 | 1545 | W | 3 | | X | |
| CRHE-MW0028-040.0-03202012 | | 3/20/2012 | 1420 | W | 3 | | X | |
| CRHE-MW0029-045.0-03212012 | | 3/21/2012 | 1100 | W | 3 | | X | |
| CRHE-MW0030-010.0-03192012 | | 3/19/2012 | 1205 | W | 3 | | X | |
| CRHE-MW0031-045.0-03192012 | | 3/19/2012 | 1525 | W | 3 | | X | |

**Special Instructions/Comments:**

W = Water

NASA RIS KEDD → Data Deliverable

3.0°C F71

TURNAROUND REQUIREMENTS

RUSH (SURCHARGES APPLY)

1 STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

I. Results Only

II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

III. Results + QC and Calibration Summaries

IV. Data Validation Report with Raw Data

Edata ___ Yes ___ No

INVOICE INFORMATION

P O #

Bill to: Geosyntec

316 S. Baylen Street Ste. 201

Pensacola, FL 32502

| Relinquished By | Received By | Relinquished By | Received By | Relinquished By | Received By |
|---|---|---|---|---|---|
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name: Geosyntec | Printed Name | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm: Lauren Petty | Firm: CAS/ALS | Firm | Firm | Firm | Firm |
| Date/Time: 03/22/12/0530 | Date/Time: 3.22.12 0730 | Date/Time | Date/Time | Date/Time | Date/Time |

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# CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR # J1201360

CAS Contact

9143 Philips Highway, Suite 200 Jacksonville, FL 32256 / Phone (904) 739-2277 / 800-695-7222 x06 / FAX (904) 739-2011 Page 2 of 3

| Project Name | Project Number |
|---|---|
| KSC-CRHE | FR1681/17*4 |
| Report To Jill Johnson | Report CC |
| jjohnson@geosyntec.com | |
| Company/Address | |
| 316 S. Baylen Street, Suite 201 | |
| Pensacola, FL 32502 | |
| Phone # | FAX # |
| 850-477-6542 | N/A |
| Sampler's Signature | Sampler's Printed Name |
| | Lauren Petty |

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

Preservative Key: 0. None; 1. HCL; 2. HNO3; 3. H2SO4; 4. NaOH; 5. Zn Acetate; 6. MeOH; 7. NaHSO4; 8. Other

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | Matrix | NUMBER OF CONTAINERS | Preservative | 8260B (Full List VOC | REMARKS |
|---|---|---|---|---|---|---|---|---|
| CRHE-MW0032-045.0-03192012 | | 3/19/2012 | 1100 | W | | | X | |
| CRHE-MW0033-048 5-03202012 | | 3/20/2012 | 1017 | W | | | X | |
| CRHE-MW0034-038 5-03202012 | | 3/20/2012 | 0937 | W | | | X | |
| CRHE-MW0035-045 0-03202012 | | 3/20/2012 | 1411 | W | | | X | |
| CRHE-MW0036-010 0-03202012 | | 3/20/2012 | 1521 | W | | | X | |
| CRHE-MW0037-030.0-03202012 | | 3/20/2012 | 1441 | W | | | X | |
| CRHE-MW0038-010 0-03192012 | | 3/19/2012 | 1810 | W | | | X | |
| CRHE-MW0039-030 0-03192012 | | 3/19/2012 | 1739 | W | | | X | |
| CRHE-MW0014I-040 0-03212012 | | 3/21/2012 | 0905 | W | | | X | |
| CRHE-IW0015I-040 0-03192012 | | 3/19/2012 | 1810 | W | | | X | |

Special Instructions/Comments:

W = Water

Data Deliverable → NASA RIS KEDD

3.0 c T71

TURNAROUND REQUIREMENTS

[ ] RUSH (SURCHARGES APPLY)

[X] STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

[ ] I. Results Only

[ ] II. Results + QC Summaries

[ ] III. Results + QC and Calibration Summaries

[ ] IV. Data Validation Report with Raw Data

Edata ____ Yes ____ No

INVOICE INFORMATION

P.O. #

Bill to Geosyntec

316 S. Baylen Street Ste. 201

Pensacola, FL 32502

| Relinquished By | Received By | Relinquished By | Received By | Relinquished By | Received By |
|---|---|---|---|---|---|
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name: Lauren Petty | Printed Name: Bauer | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm: Geosyntec | Firm: CAS (ALS) | Firm | Firm | Firm | Firm |
| Date/Time: 3/22/12 1253 | Date/Time: 3.22.12 0930 | Date/Time | Date/Time | Date/Time | Date/Time |

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# CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR # J1201360

CAS Contact

9143 Philips Highway, Suite 200 Jacksonville, FL 32256 / Phone (904) 739-2277 / 800-695-7222 x06 / FAX (904) 739-2011 Page 3 of 3

| | |
|---|---|
| Project Name: KSC-CRHE | Project Number: FR1681/17*4 |
| Report To: Jill Johnson<br>jjohnson@geosyntec.com | Report CC: |
| Company/Address: 316 S. Baylen Street, Suite 201<br>Pensacola, FL 32502 | |
| Phone #: 850-477-6542 | FAX #: N/A |
| Sampler's Signature: | Sampler's Printed Name: Lauren Petty |

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | Matrix | NUMBER OF CONTAINERS | 8260B (Full List VOC | 8260B (Full List VOC | 8260B (Full List VOC | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| Preservative | | | | | | 1 | 0 | 6 | |
| CRHE-IW0017I-030 0-03202012 | | 3/20/2012 | 1510 | W | 3 | X | | | |
| CRHE-IW0019I-040 0-03202012 | | 3/20/2012 | 0940 | W | 3 | X | | | |
| CRHE-IW0020I-045 0-03192012 | | 3/19/2012 | 1640 | W | 3 | X | | | |
| CRHE-IW0021I-045 0-03202012 | | 3/20/2012 | 1123 | W | 3 | X | | | |
| EB01-03192012 | | 3/19/2012 | 1530 | W | 3 | X | | | |
| CRHE-188849-IDW-03212012 | | 3/21/2012 | 1615 | S | 4 | | 3 | 1 | |
| CRHE-188797-IDW-03212012 | | 3/21/2012 | 1640 | S | 4 | | 3 | 1 | |
| CRHE-188842-IDW-03212012 | | 3/21/2012 | 1645 | S | 4 | | 3 | 1 | |
| CRHE-188838-IDW-03212012 | | 3/21/2012 | 1700 | S | 4 | | 3 | 1 | |
| Trip Blank | | Lab Provided | | | 2 | X | | | |

Preservative Key: 0 None; 1 HCL; 2 HNO3; 3 H2SO4; 4 NaOH; 5 Zn Acetate; 6 MeOH; 7 NaHSO4; 8. Other

Special Instructions/Comments:

W = Water
S = Soil

NASA RISKDD → Data Deliverable
3.0°C TM

TURNAROUND REQUIREMENTS

RUSH (SURCHARGES APPLY)

STANDARD

PROJECT REQUIRED TAT (DATE)

REQUESTED REPORT DATE

REPORT REQUIREMENTS

I. Results Only

II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

III. Results + QC and Calibration Summaries

IV. Data Validation Report with Raw Data

Edata ___ Yes ___ No

INVOICE INFORMATION

P.O. #

Bill to: Geosyntec
316 S. Baylen Street Ste. 201
Pensacola, FL 32502

| Relinquished By | Received By | Relinquished By | Received By | Relinquished By | Received By |
|---|---|---|---|---|---|
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name: Lauren Petty | Printed Name | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm: Geosyntec | Firm: CAS LAS | Firm | Firm | Firm | Firm |
| Date/Time: 3/22/12/0530 | Date/Time: 3.22.12 0730 | Date/Time | Date/Time | Date/Time | Date/Time |

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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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PAGE 1 OF 3

SR # J1201360
CAS Contact

| | |
|---|---|
| Project Name: KSC-CRHE | Project Number: FR1681 |
| Project Manager: Bill Johnson | Email Address: bjohnson@grosyntec.com |
| Company/Address: 316 S. Baylen Street, Suite 201, Pensacola, FL 32502 | |
| Phone #: 850-477-6547 | FAX#: 850-477-6707 |
| Sampler's Signature: [signature] | Sampler's Printed Name: Lauren Petty |

ANALYSIS REQUESTED (Include Method Number and [redacted])

PRESERVATIVE: HCl

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | 6200 (VOH) |
|---|---|---|---|---|---|---|
| CRHE-MW0032-03192012 | | 3/19/12 | 1100 | W | 3 | ✓ |
| CRHE-MW0030-03192012 | | 3/19/12 | 1205 | | | |
| CRHE-MW0023-03192012 | | | 1440 | | | |
| CRHE-MW0031-03192012 | | | 1525 | | | |
| CRHE-MW0020I-03192012 | | | 1640 | | | |
| CRHE-MW0039-03192012 | | | 1739 | | | |
| CRHE-MW0036-03192012 | | | 1810 | | | |
| EB01-03192012 | | | 1530 | | | ✓ |
| CRHE-MW0015I-03192012 | | 3/19/12 | 1910 | | | |
| CRHE-MW0034-03202012 | | 3/20/12 | 0937 | | | |

1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

SPECIAL INSTRUCTIONS/COMMENTS

W= Water

Will email Report Requirements 3/22.

See QAPP ☐ 3.0°C T71

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE: _____
REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
___ V. Speicalized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
PO#
BILL TO: Grosyntec
316 S Baylen St, Ste 201
Pensacola, FL 32502

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| Signature | Signature [signature] | Signature | Signature | Signature | Signature |
| Printed Name | Printed Name C Bauer | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm | Firm CAS/ALS | Firm | Firm | Firm | Firm |
| Date/Time | Date/Time 3.22.12 0730 | Date/Time | Date/Time | Date/Time | Date/Time |

Distribution: White - Return to Originator; Yellow - Retained by Client

JSCOC-3/11

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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PAGE 2 OF 3

SR # 31201360

CAS Contact

| | |
|---|---|
| Project Name: KSC - CRHE | Project Number: FR1681 |
| Project Manager: Jill Johnson | Email Address: JJohnson@geosyntec.com |
| Company/Address: 316 S. Baylen Street, Ste 201, Pensacola, FL 32502 | |
| Phone #: 850-477-6547 | FAX#: 850-477-6707 |
| Sampler's Signature: | Sampler's Printed Name: Lauren Petty |

ANALYSIS REQUESTED (Include Method Number a [redacted]

PRESERVATIVE: 1

NUMBER OF CONTAINERS

8260 (VOA)

0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | 8260 (VOA) | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|
| CRHE-IW0019I-03202012 | | 3/20/12 | 0940 | W | 3 | X | |
| CRHE-MW0033-03202012 | | " | 1017 | " | " | " | |
| CRHE-~~MW~~IW0021I-03202012 | | | 1123 | | | | |
| CRHE-MW0035-03202012 | | | 1411 | | | | |
| CRHE-MW0028-03202012 | | | 1420 | | | | |
| CRHE-MW0037-03202012 | | | 1441 | | | | |
| CRHE-IW0017I-03202012 | | | 1570 | | | | |
| CRHE-IW0014I-03202012 | | 3/21/12 | 0905 | | | | |
| CRHE-MW0029-03202012 | | | 1100 | | | | |
| CRHE-MW0026-03212012 | | | 1200 | | | | |

SPECIAL INSTRUCTIONS/COMMENTS

WE Water

See QAPP ☐ 3.0 °C T71

TURNAROUND REQUIREMENTS

____ RUSH (SURCHARGES APPLY)

X STANDARD

REQUESTED FAX DATE: _____

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS

____ I. Results Only

____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

____ V. Speicalized Forms / Custom Report

Edata ____ Yes ____ No

INVOICE INFORMATION

PO#

BILL TO: SE pay

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| 2 | | | | | |
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name | Printed Name: Bauer | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm | Firm: CAS/ACS | Firm | Firm | Firm | Firm |
| Date/Time | Date/Time: 3.22.12 0730 | Date/Time | Date/Time | Date/Time | Date/Time |

Distribution: White - Return to Originator; Yellow - Retained by Client

JSCOC-3/11

Columbia Analytical Services

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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PAGE 3 OF 3

SR # 5120360
CAS Contact

| | |
|---|---|
| Project Name: KSC - CRHE | Project Number: FR11681 |
| Project Manager: Jill Johnson | Email Address: JJohnson@geosyntec.com |
| Company/Address: 316 S. Baylen Street Ste. 201, Pensacola, FL 32502 | |
| Phone #: 805-477-6547 | FAX#: 850-477-6707 |
| Sampler's Signature | Sampler's Printed Name: Lauren Petty |

ANALYSIS REQUESTED (Include Method Number and [redacted]

PRESERVATIVE: 1 | 0 | 6

NUMBER OF CONTAINERS

8260 (VOA)
8260 (VOA)
8260 (VOA)

1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-MW0022-032120 12 | | 3/21/12 | 1505 | W | 3 | X | | | |
| CRHE-MW0027-032120 12 | | | 1545 | | | | | | |
| CRHE-MW0024-032120 12 | | | 1750 | | | | | | |
| CRHE-MW0025-032120 12 | | | ~~1825~~ 1830 | | | | | | |
| ~~CRHE-IDW-188849 MP~~ | | | | ~~SP~~ | | | | | |
| CRHE-188849-IDW-032120 12 | | | 1615 | S | 4 | | 3 | 1 | |
| CRHE-188797-IDW-032120 12 | | | 1640 | | | | 3 | 1 | |
| CRHE-188842-IDW-032120 12 | | | 1645 | | | | 3 | 1 | |
| CRHE-188838-IDW-032120 12 | | | 1700 | | | | 3 | 1 | |
| TRIP Blank | | LAB Provided | | W | 2 | 2 | | | |

SPECIAL INSTRUCTIONS/COMMENTS

CRHE-MW0036-032020 12 3/20/12 1521 W 3

W = Water

S = Soil

* Added per client SL 3/23/12

3.0°C T71

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE:
REQUESTED REPORT DATE:

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO: See pg 1

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| 1 3 | | | | | |
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name | Printed Name | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm | Firm CAS/ALS | Firm | Firm | Firm | Firm |
| Date/Time | Date/Time 3.22.12 0930 | Date/Time | Date/Time | Date/Time | Date/Time |

Distribution: White - Return to Originator; Yellow - Retained by Client

JSCOC-3/11

Columbia Analytical Services™

## Cooler Receipt Form

Client: Geosyntec Service Request #: J1201360

Project: KSC - CRHE

Cooler received on 3.22.12 (Lab 3.23.12) and opened on 3.22.12 by GB

COURIER: CAS UPS FEDEX (Client) Other _____ Airbill # _____

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | Were custody seals on outside of cooler? | (Yes) | No | | | | | |
| | If yes, how many and where? | #: 1 (on lid) | other | | | | | |
| 2 | Were seals intact and signature and date correct? | (Yes) | No | N/A | | | | |
| 3 | Were custody papers properly filled out? | (Yes) | No | N/A | | | | |
| 4 | Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C) | 3.0 | | | | | | |
| 5 | Thermometer ID | IR1 | | | | | | |
| 6 | Temperature Blank Present? | (Yes) | No | | | | | |
| 7 | Were Ice or Ice Packs present | (Ice) | Ice Packs | No | | | | |
| 8 | Did all bottles arrive in good condition (unbroken, etc....)? | (Yes) | No | N/A | | | | |
| 9 | Type of packing material present | Netting | (Vial Holder) | (Bubble Wrap) | | | | |
| | | Paper | Styrofoam | Other | N/A | | | |
| 10 | Were all bottle labels complete (sample ID, preservation, etc....)? | (Yes) | No | N/A | | | | |
| 11 | Did all bottle labels and tags agree with custody papers? | Yes | (No) | N/A | | | | |
| 12 | Were the correct bottles used for the tests indicated? | (Yes) | No | N/A | | | | |
| 13 | Were all of the preserved bottles received with the appropriate preservative? HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2 Preservative additions noted below | Yes | No | (N/A) | | | | |
| 14 | Were all samples received within analysis holding times? | (Yes) | No | N/A | | | | |
| 15 | Were all VOA vials free of air bubbles? If present, note below | (Yes) | No | N/A | | | | |
| 16 | Where did the bottles originate? | (CAS) | Client | | | | | |

| Sample ID | Reagent | Lot # | ml added | Initials Date/Time |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | (1) | |

Additional comments and/or explanation of all discrepancies noted above: 1 of 3 volatile vial label has the ID as MW0031-03192012 for MW0032-03192012. (2) Sample date & time matches Sample time on labels is 1832 for MW0038-03192012. (3) Sample ID on labels is

Client approval to run samples if discrepancies noted: Date:

Columbia Analytical Services

Jacksonville Laboratory
Condition Upon Receipt - Sample pH

SR # : J 1201360

Date: 3.22.12 Initials: GB

Note that pH is check and meets the required pH criterion listed in the column heading unless otherwise noted on the cooler receipt form.

| Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 40mL | 40mL | 40mL | 125mL | 125mL | 125mL | 125mL | 250mL | 250mL | 250mL | 250mL | 250mL | 250mL | 250mL | 500mL | 500mL | 500mL | 500mL | 500mL | 1L | 1L | 1L | 1L | 1L | 2oz | 4oz | 8oz | 16oz | 100ml | Ziplock | Misc. | |
| Container | G | G | G | P | P | P | P | P | P | P | P | P | G | G | P | P | P | P | G | P | P | G | G | G | G | G | G | G | P | P | Misc. | |
| Preserve | N/A | HCl | Na2 S2O3 | N/A | HCl | H2SO4 | HNO3 | N/A | H2SO4 | HNO3 | ZnAc2/ NaOH | NaOH | N/A | HNO3 | N/A | HCl | H2SO4 | HNO3 | N/A | N/A | HNO3 | N/A | HCl | H2SO4 | N/A | N/A | N/A | N/A | Na2 S2O3 | N/A | N/A | |
| Req. pH | N/A | <2 | N/A | N/A | <2 | <2 | <2 | N/A | <2 | <2 | >9 | >12 | N/A | <2 | N/A | <2 | <2 | <2 | N/A | N/A | <2 | N/A | <2 | <2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Sample # | - | - | | - | - | - | - | - | - | - | | - | | - | - | - | - | - | - | - | - | - | - | - | | | | - | - | | - | |
| -1 | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -1 |
| -2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -2 |
| -3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -3 |
| -4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -4 |
| -5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -5 |
| -6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -6 |
| -7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -7 |
| -8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -8 |
| -9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -9 |
| -10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -10 |
| -11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -11 |
| -12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -12 |
| -13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -13 |
| -14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -14 |
| -15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -15 |
| -16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -16 |
| -17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -17 |
| -18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -18 |
| -19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -19 |
| -20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -20 |
| -21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -21 |
| -22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -22 |
| -23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -23 |
| -24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -24 |
| -25 | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | -25 |
| -26 | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | -26 |
| -27 | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | -27 |
| -28 | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | -28 |
| -29 | | 4 | Trip Blank | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -29 |
| -30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -30 |
| -31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -31 |
| -32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -32 |
| -33 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -33 |
| -34 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -34 |
| -35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -35 |
| -36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -36 |
| -37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -37 |
| -38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -38 |
| -39 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -39 |
| -40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -40 |

NOTE: VOA pH checks are performed by the analytical area, not sample control

Columbia Analytical Services™

# Summary Package

9143 Philips Highway, Suite 200
Jacksonville, Florida 32256
Phone: (904) 739-2277 Fax (904) 739-2011
www.caslab.com

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Summary Package

## Sample and QC Results



n:\Stealth\Crystal rpt\DividerA.rpt

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360

## Cover Page - Organic Analysis Data Package
## Volatile Organic Compounds by GC/MS

| Sample Name | Lab Code | Date Collected | Date Received |
|---|---|---|---|
| CRHE-MW0032-045.0-03192012 | J1201360-001 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | 03/19/2012 | 03/22/2012 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | 03/19/2012 | 03/22/2012 |
| EB01-03192012 | J1201360-008 | 03/19/2012 | 03/22/2012 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | 03/20/2012 | 03/22/2012 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | 03/20/2012 | 03/22/2012 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | 03/20/2012 | 03/22/2012 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | 03/20/2012 | 03/22/2012 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | 03/20/2012 | 03/22/2012 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | 03/20/2012 | 03/22/2012 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | 03/20/2012 | 03/22/2012 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | 03/20/2012 | 03/22/2012 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | 03/21/2012 | 03/22/2012 |
| CRHE-188849-IDW-03212012 | J1201360-025 | 03/21/2012 | 03/22/2012 |
| CRHE-188797-IDW-03212012 | J1201360-026 | 03/21/2012 | 03/22/2012 |
| CRHE-188842-IDW-03212012 | J1201360-027 | 03/21/2012 | 03/22/2012 |
| CRHE-188838-IDW-03212012 | J1201360-028 | 03/21/2012 | 03/22/2012 |
| Trip Blank | J1201360-029 | 03/19/2012 | 03/22/2012 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | 03/20/2012 | 03/22/2012 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: James Nicholson

Date: 4/4/12 Title: Organics Manager

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0032-045.0-03192012
**Lab Code:** J1201360-001

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.54** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | **0.57** | I | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.62** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **6.6** | | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **13** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | **0.31** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0032-045.0-03192012
**Lab Code:** J1201360-001

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.30** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.71** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **8.2** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **83** | | 20 | 4.4 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0030-010.0-03192012
**Lab Code:** J1201360-002

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | **5.9** | I | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0030-010.0-03192012
**Lab Code:** J1201360-002

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 101 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0023-065.0-03192012
**Lab Code:** J1201360-003

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **0.70** | I | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.46** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0023-065.0-03192012
**Lab Code:** J1201360-003

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.21** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0031-045.0-03192012
**Lab Code:** J1201360-004

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **59** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0031-045.0-03192012
**Lab Code:** J1201360-004

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **6.0** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | **1.5** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **200** | | 10 | 2.2 | 10 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0020I-045.0-03192012
**Lab Code:** J1201360-005

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.25** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.49** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **33** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **0.92** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **79** | | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0020I-045.0-03192012
**Lab Code:** J1201360-005

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.27** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **130** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0039-030.0-03192012
**Lab Code:** J1201360-006

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.49** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **0.96** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0039-030.0-03192012
**Lab Code:** J1201360-006

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.50** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.43** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **92** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 113 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 97 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0038-010.0-03192012
**Lab Code:** J1201360-007

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0038-010.0-03192012
**Lab Code:** J1201360-007

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** EB01-03192012
**Lab Code:** J1201360-008

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** EB01-03192012
**Lab Code:** J1201360-008

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 101 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0015I-040.0-03192012
**Lab Code:** J1201360-009

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **2.0** | | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.21** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **76** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0015I-040.0-03192012
**Lab Code:** J1201360-009

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | 27 | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0034-038.5-03202012
**Lab Code:** J1201360-010

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.36** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **3.4** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **12** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **1.2** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **140** | | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0034-038.5-03202012
**Lab Code:** J1201360-010

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **150** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 101 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0019I-040.0-03202012
**Lab Code:** J1201360-011

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | **4.1** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.48** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **1.3** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **1000** | | 20 | 7.2 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **1.3** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0019I-040.0-03202012
**Lab Code:** J1201360-011

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.25** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **18** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **530** | | 20 | 4.4 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 102 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0033-048.5-03202012
**Lab Code:** J1201360-012

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.92** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | **9.9** | I | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.42** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **99** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **3.0** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0033-048.5-03202012
**Lab Code:** J1201360-012

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **1.4** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | **0.52** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **33** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 96 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 103 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

Analytical Results

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0021I-045.0-03202012
**Lab Code:** J1201360-013

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.98** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0021I-045.0-03202012
**Lab Code:** J1201360-013

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0035-045.0-03202012
**Lab Code:** J1201360-014

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.26** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.55** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0035-045.0-03202012
**Lab Code:** J1201360-014

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.23** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.44** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **130** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0028-040.0-03202012
**Lab Code:** J1201360-015

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.59** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.31** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **4.2** | | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **3.5** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0028-040.0-03202012
**Lab Code:** J1201360-015

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.55** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **4.1** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **180** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 95 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 110 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0037-030.0-03202012
**Lab Code:** J1201360-016

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.25** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **1.2** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.44** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **8.0** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0037-030.0-03202012
**Lab Code:** J1201360-016

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.20** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **19** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0017I-030.0-03202012
**Lab Code:** J1201360-017

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.32** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.52** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0017I-030.0-03202012
**Lab Code:** J1201360-017

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.27** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **90** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0014I-040.0-03212012
**Lab Code:** J1201360-018

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | **4.0** | I | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0014I-040.0-03212012
**Lab Code:** J1201360-018

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | **3.6** | | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0029-045.0-03212012
**Lab Code:** J1201360-019

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **1.4** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | **1.4** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **420** | | 10 | 3.6 | 10 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0029-045.0-03212012
**Lab Code:** J1201360-019

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **13** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **140** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **100** | | 10 | 2.2 | 10 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 112 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0026-035.0-03212012
**Lab Code:** J1201360-020

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | **3.5** | | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **9.1** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | **6.4** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | **0.41** | I | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **3600** | | 100 | 36 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0026-035.0-03212012
**Lab Code:** J1201360-020

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | **0.22** | I | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | **0.36** | I | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **34** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **1000** | | 100 | 16 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **2000** | | 100 | 22 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 95 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0022-065.0-03212012
**Lab Code:** J1201360-021

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | **0.51** | I | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | **1.5** | | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0022-065.0-03212012
**Lab Code:** J1201360-021

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | **0.22** | I | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0027-045.0-03212012
**Lab Code:** J1201360-022

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | **0.96** | I | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **2.7** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **790** | | 100 | 36 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0027-045.0-03212012
**Lab Code:** J1201360-022

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | **0.22** | I | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **14** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **1.3** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **1700** | | 100 | 22 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0024-010.0-03212012
**Lab Code:** J1201360-023

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **11** | | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0024-010.0-03212012
**Lab Code:** J1201360-023

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **0.74** | I | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **13** | | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0025-030.0-03212012
**Lab Code:** J1201360-024

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | **2.2** | | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | **15** | | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | **9700** | | 200 | 72 | 200 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0025-030.0-03212012
**Lab Code:** J1201360-024

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | **0.41** | I | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | **75** | | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | **0.60** | I | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | **7600** | | 200 | 44 | 200 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 92 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** Trip Blank
**Lab Code:** J1201360-029

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** Trip Blank
**Lab Code:** J1201360-029

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CHRE-MW0036-010.0-03202012
**Lab Code:** J1201360-030

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CHRE-MW0036-010.0-03202012
**Lab Code:** J1201360-030

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

Analytical Results

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 95 | 88-115 | 03/30/12 | Acceptable |

Comments:

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200333-4

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200333-4

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 103 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188849-IDW-03212012
**Lab Code:** J1201360-025

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.1 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.1 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.1 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 11 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 11 | 0.40 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 26 | 0.91 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 11 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 11 | 0.59 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 130 | 3.6 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.1 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 11 | 0.42 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.1 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.1 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 11 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 110 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188849-IDW-03212012
**Lab Code:** J1201360-025

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 11 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.1 | 0.064 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 51 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.1 | 0.074 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.1 | 0.51 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.1 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 21 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 21 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.1 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 99 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 101 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188797-IDW-03212012
**Lab Code:** J1201360-026

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.6 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.6 | 0.33 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.6 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 12 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 12 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 12 | 0.44 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.6 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.6 | 0.067 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.6 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 28 | 1.0 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 12 | 0.62 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 12 | 0.65 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 140 | 3.9 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.6 | 0.077 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 12 | 0.46 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.6 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.6 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.6 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 12 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 120 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188797-IDW-03212012
**Lab Code:** J1201360-026

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.6 | 0.067 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 12 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 12 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.6 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | **2.0** | I | 56 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.6 | 0.082 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.6 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.6 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.6 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 23 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 23 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.6 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 92 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 102 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 105 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188842-IDW-03212012
**Lab Code:** J1201360-027

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.1 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.1 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.1 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 11 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 11 | 0.40 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 26 | 0.91 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 11 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 11 | 0.59 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | 22 | I | 130 | 3.6 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.1 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 11 | 0.42 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.1 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.1 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 11 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 110 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188842-IDW-03212012
**Lab Code:** J1201360-027

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 11 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.1 | 0.064 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 51 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.1 | 0.074 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.1 | 0.51 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.1 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 21 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 21 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.1 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 90 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 103 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 91 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 105 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188838-IDW-03212012
**Lab Code:** J1201360-028

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.8 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.8 | 0.34 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.8 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 12 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 12 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 12 | 0.45 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.8 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.8 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.8 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 29 | 1.1 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 12 | 0.64 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 12 | 0.67 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | **17** | I | 150 | 4.1 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.8 | 0.080 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | **2.1** | I | 12 | 0.48 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.8 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.8 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.8 | 0.32 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 12 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 120 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188838-IDW-03212012
**Lab Code:** J1201360-028

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.8 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 12 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 12 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.8 | 0.073 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 58 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.8 | 0.085 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.8 | 0.58 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.8 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.8 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 24 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 24 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.8 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 116 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 99 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 108 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200305-2

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.0 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.0 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.0 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 10 | 0.39 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 25 | 0.90 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 10 | 0.55 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 10 | 0.58 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 130 | 3.5 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.0 | 0.069 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 10 | 0.41 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.0 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.0 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 10 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 100 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200305-2

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 10 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.0 | 0.063 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 50 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.0 | 0.073 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.0 | 0.50 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.0 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 20 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.0 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 95 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 102 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360

## Surrogate Recovery Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 | Sur2 | Sur3 | Sur4 |
|---|---|---|---|---|---|
| CRHE-MW0032-045.0-03192012 | J1201360-001 | 97 | 109 | 99 | 98 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | 98 | 106 | 98 | 101 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | 100 | 107 | 99 | 96 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | 97 | 106 | 100 | 98 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | 96 | 107 | 100 | 99 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | 99 | 113 | 99 | 97 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | 100 | 109 | 100 | 100 |
| EB01-03192012 | J1201360-008 | 97 | 106 | 99 | 101 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | 101 | 107 | 99 | 100 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | 99 | 109 | 101 | 98 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | 98 | 105 | 97 | 102 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | 96 | 109 | 96 | 103 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | 99 | 109 | 99 | 99 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | 99 | 108 | 98 | 96 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | 95 | 110 | 98 | 98 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | 97 | 107 | 99 | 98 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | 97 | 108 | 99 | 100 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | 94 | 107 | 97 | 99 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | 98 | 112 | 99 | 100 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | 99 | 108 | 95 | 96 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | 99 | 107 | 99 | 98 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | 96 | 107 | 98 | 96 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | 98 | 107 | 99 | 98 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | 97 | 111 | 92 | 98 |
| Trip Blank | J1201360-029 | 94 | 111 | 97 | 96 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | 97 | 111 | 97 | 100 |
| Method Blank | JWG1200321-2 | 98 | 105 | 100 | 95 |
| Method Blank | JWG1200325-2 | 99 | 105 | 99 | 98 |
| Method Blank | JWG1200333-4 | 96 | 103 | 97 | 96 |
| Lab Control Sample | JWG1200321-1 | 99 | 107 | 99 | 100 |
| Lab Control Sample | JWG1200325-1 | 94 | 104 | 98 | 97 |
| Lab Control Sample | JWG1200333-3 | 95 | 109 | 97 | 96 |

**Surrogate Recovery Control Limits (%)**

| | | |
|---|---|---|
| Sur1 = | 1,2-Dichloroethane-d4 | 72-121 |
| Sur2 = | 4-Bromofluorobenzene | 86-113 |
| Sur3 = | Dibromofluoromethane | 86-112 |
| Sur4 = | Toluene-d8 | 88-115 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360

## Surrogate Recovery Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 | Sur2 | Sur3 | Sur4 |
|---|---|---|---|---|---|
| CRHE-188849-IDW-03212012 | J1201360-025 | 94 | 99 | 96 | 101 |
| CRHE-188797-IDW-03212012 | J1201360-026 | 92 | 102 | 96 | 105 |
| CRHE-188842-IDW-03212012 | J1201360-027 | 90 | 103 | 91 | 105 |
| CRHE-188838-IDW-03212012 | J1201360-028 | 94 | 116 | 99 | 108 |
| Method Blank | JWG1200305-2 | 94 | 95 | 96 | 102 |
| Lab Control Sample | JWG1200305-1 | 94 | 97 | 98 | 101 |

**Surrogate Recovery Control Limits (%)**

| | |
|---|---|
| Sur1 = 1,2-Dichloroethane-d4 | 80-120 |
| Sur2 = 4-Bromofluorobenzene | 64-135 |
| Sur3 = Dibromofluoromethane | 74-125 |
| Sur4 = Toluene-d8 | 46-156 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 09:45

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS52\DATA\MS52-120322\0322-02.D
**Instrument ID:** MS52
**Analysis Method:** 8260B

**Lab Code:** JWG1200306-2
**Analysis Lot:** JWG1200306

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 53,457 | 11.60 | 47,863 | 9.16 | 122,997 | 6.17 |
| | **Upper Limit ==>** | 106,914 | 12.10 | 95,726 | 9.66 | 245,994 | 6.67 |
| | **Lower Limit ==>** | 26,729 | 11.10 | 23,932 | 8.66 | 61,499 | 5.67 |
| | **ICAL Result ==>** | 48,766 | 11.60 | 43,592 | 9.16 | 110,750 | 6.17 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200305-1 | 52,658 | 11.60 | 48,614 | 9.16 | 125,564 | 6.17 |
| Method Blank | JWG1200305-2 | 50,853 | 11.59 | 47,975 | 9.16 | 125,218 | 6.17 |
| CRHE-188849-IDW-03212012 | J1201360-025 | 45,168 | 11.60 | 46,360 | 9.16 | 121,432 | 6.17 |
| CRHE-188797-IDW-03212012 | J1201360-026 | 40,555 | 11.60 | 43,358 | 9.16 | 116,772 | 6.17 |
| CRHE-188842-IDW-03212012 | J1201360-027 | 40,415 | 11.60 | 42,767 | 9.17 | 117,887 | 6.17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | 35,955 | 11.60 | 42,626 | 9.16 | 118,248 | 6.18 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 11:12

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120330\0330-02.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200322-2
**Analysis Lot:** JWG1200322

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 328,039 | 11.12 | 413,475 | 8.80 | 1,184,883 | 5.51 |
| | **Upper Limit ==>** | 656,078 | 11.62 | 826,950 | 9.30 | 2,369,766 | 6.01 |
| | **Lower Limit ==>** | 164,020 | 10.62 | 206,738 | 8.30 | 592,442 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200321-1 | 318,654 | 11.12 | 397,222 | 8.80 | 1,171,291 | 5.51 |
| Method Blank | JWG1200321-2 | 337,907 | 11.13 | 403,441 | 8.80 | 1,145,808 | 5.51 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | 315,754 | 11.13 | 399,126 | 8.80 | 1,148,047 | 5.51 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | 323,166 | 11.13 | 392,864 | 8.80 | 1,177,874 | 5.51 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | 322,551 | 11.13 | 384,128 | 8.80 | 1,104,427 | 5.52 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | 331,420 | 11.13 | 396,550 | 8.80 | 1,156,645 | 5.51 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | 322,585 | 11.13 | 393,897 | 8.80 | 1,164,407 | 5.51 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | 319,516 | 11.13 | 401,946 | 8.80 | 1,172,242 | 5.51 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | 327,430 | 11.13 | 405,589 | 8.80 | 1,173,486 | 5.51 |
| EB01-03192012 | J1201360-008 | 330,521 | 11.13 | 389,632 | 8.80 | 1,146,764 | 5.51 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | 332,367 | 11.13 | 389,217 | 8.80 | 1,147,109 | 5.52 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | 321,006 | 11.13 | 397,996 | 8.80 | 1,125,602 | 5.52 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | 316,893 | 11.13 | 382,659 | 8.80 | 1,133,176 | 5.51 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | 324,878 | 11.13 | 388,136 | 8.80 | 1,169,094 | 5.52 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | 320,327 | 11.13 | 393,071 | 8.80 | 1,149,686 | 5.51 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | 330,706 | 11.12 | 409,470 | 8.80 | 1,174,443 | 5.52 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | 319,532 | 11.13 | 409,711 | 8.80 | 1,202,891 | 5.51 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | 322,399 | 11.13 | 400,508 | 8.80 | 1,144,939 | 5.51 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | 326,036 | 11.12 | 400,878 | 8.80 | 1,158,793 | 5.51 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 09:21

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120402\0402-02.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200326-2
**Analysis Lot:** JWG1200326

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 338,282 | 11.13 | 419,066 | 8.80 | 1,182,437 | 5.51 |
| | **Upper Limit ==>** | 676,564 | 11.63 | 838,132 | 9.30 | 2,364,874 | 6.01 |
| | **Lower Limit ==>** | 169,141 | 10.63 | 209,533 | 8.30 | 591,219 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200325-1 | 322,206 | 11.13 | 386,918 | 8.80 | 1,106,267 | 5.51 |
| Method Blank | JWG1200325-2 | 322,051 | 11.13 | 383,241 | 8.80 | 1,093,788 | 5.51 |
| Trip Blank | J1201360-029 | 314,454 | 11.13 | 402,969 | 8.80 | 1,172,678 | 5.51 |
| CRHE-MW0032-045.0-03192012D | J1201360-001 | 317,812 | 11.13 | 379,377 | 8.80 | 1,119,988 | 5.51 |
| CRHE-MW0031-045.0-03192012D | J1201360-004 | 322,770 | 11.13 | 395,883 | 8.80 | 1,159,224 | 5.51 |
| CRHE-IW0020I-045.0-03192012D | J1201360-005 | 319,432 | 11.13 | 390,271 | 8.80 | 1,120,582 | 5.51 |
| CRHE-MW0039-030.0-03192012D | J1201360-006 | 325,142 | 11.13 | 389,370 | 8.80 | 1,108,624 | 5.51 |
| CRHE-MW0034-038.5-03202012D | J1201360-010 | 327,008 | 11.13 | 395,803 | 8.80 | 1,096,028 | 5.51 |
| CRHE-IW0019I-040.0-03202012D | J1201360-011 | 319,532 | 11.13 | 392,191 | 8.80 | 1,116,694 | 5.51 |
| CRHE-MW0035-045.0-03202012D | J1201360-014 | 317,749 | 11.13 | 383,466 | 8.80 | 1,119,903 | 5.52 |
| CRHE-MW0028-040.0-03202012D | J1201360-015 | 320,292 | 11.13 | 385,204 | 8.80 | 1,151,728 | 5.51 |
| CRHE-IW0017I-030.0-03202012D | J1201360-017 | 313,536 | 11.13 | 395,840 | 8.80 | 1,123,689 | 5.51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | 316,218 | 11.13 | 402,165 | 8.80 | 1,116,092 | 5.52 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | 332,100 | 11.13 | 405,929 | 8.80 | 1,179,725 | 5.52 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | 326,026 | 11.13 | 414,330 | 8.80 | 1,170,714 | 5.52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | 314,676 | 11.13 | 399,293 | 8.80 | 1,157,084 | 5.52 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | 324,993 | 11.13 | 393,830 | 8.80 | 1,133,953 | 5.52 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | 318,409 | 11.13 | 384,678 | 8.80 | 1,105,383 | 5.52 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 11:53

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120403\0403-03.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200334-2
**Analysis Lot:** JWG1200334

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 317,277 | 11.13 | 383,361 | 8.80 | 1,079,939 | 5.51 |
| | **Upper Limit ==>** | 634,554 | 11.63 | 766,722 | 9.30 | 2,159,878 | 6.01 |
| | **Lower Limit ==>** | 158,639 | 10.63 | 191,681 | 8.30 | 539,970 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200333-3 | 309,433 | 11.13 | 402,331 | 8.80 | 1,130,474 | 5.51 |
| Method Blank | JWG1200333-4 | 316,138 | 11.13 | 389,420 | 8.80 | 1,095,457 | 5.51 |
| CRHE-IW0014I-040.0-03212012RI | J1201360-018 | 316,659 | 11.13 | 370,802 | 8.80 | 1,091,211 | 5.51 |
| CRHE-MW0022-065.0-03212012R | J1201360-021 | 315,576 | 11.13 | 390,002 | 8.80 | 1,108,138 | 5.51 |
| CRHE-MW0029-045.0-03212012D | J1201360-019 | 301,400 | 11.13 | 375,955 | 8.80 | 1,085,571 | 5.51 |
| CRHE-MW0026-035.0-03212012D | J1201360-020 | 304,045 | 11.12 | 375,196 | 8.80 | 1,067,834 | 5.51 |
| CRHE-MW0027-045.0-03212012D | J1201360-022 | 304,830 | 11.12 | 381,443 | 8.80 | 1,056,074 | 5.51 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | 307,096 | 11.13 | 380,864 | 8.80 | 1,120,196 | 5.51 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | 305,472 | 11.13 | 384,814 | 8.80 | 1,106,582 | 5.51 |
| CRHE-MW0025-030.0-03212012D | J1201360-024 | 313,276 | 11.13 | 402,002 | 8.80 | 1,159,827 | 5.52 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200321

| Analyte Name | Lab Control Sample JWG1200321-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.8 | 20.0 | 99 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 19.6 | 20.0 | 98 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 20.3 | 20.0 | 102 | 66-135 |
| 1,1,2-Trichloroethane | 19.6 | 20.0 | 98 | 75-122 |
| 1,1-Dichloroethane | 20.5 | 20.0 | 103 | 79-117 |
| 1,1-Dichloroethene | 23.0 | 20.0 | 115 | 72-128 |
| 1,2,3-Trichlorobenzene | 20.7 | 20.0 | 104 | 62-136 |
| 1,2,4-Trichlorobenzene | 19.2 | 20.0 | 96 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.5 | 20.0 | 82 | 60-122 |
| 1,2-Dibromoethane (EDB) | 18.7 | 20.0 | 93 | 76-118 |
| 1,2-Dichlorobenzene | 20.5 | 20.0 | 103 | 81-115 |
| 1,2-Dichloroethane (EDC) | 19.9 | 20.0 | 100 | 70-117 |
| 1,2-Dichloropropane | 21.6 | 20.0 | 108 | 79-117 |
| 1,3-Dichlorobenzene | 21.5 | 20.0 | 107 | 82-116 |
| 1,4-Dichlorobenzene | 20.9 | 20.0 | 105 | 82-115 |
| 2-Butanone (MEK) | 102 | 100 | 102 | 62-138 |
| 2-Hexanone | 93.2 | 100 | 93 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 96.1 | 100 | 96 | 77-120 |
| Acetone | 88.3 | 100 | 88 | 42-161 |
| Benzene | 21.4 | 20.0 | 107 | 80-117 |
| Bromochloromethane | 19.6 | 20.0 | 98 | 78-118 |
| Bromodichloromethane | 20.2 | 20.0 | 101 | 75-118 |
| Bromoform | 19.2 | 20.0 | 96 | 63-121 |
| Bromomethane | 19.1 | 20.0 | 95 | 31-153 |
| Carbon Disulfide | 119 | 100 | 119 | 72-128 |
| Carbon Tetrachloride | 18.3 | 20.0 | 91 | 67-124 |
| Chlorobenzene | 20.7 | 20.0 | 103 | 83-118 |
| Chloroethane | 21.5 | 20.0 | 107 | 68-132 |
| Chloroform | 19.6 | 20.0 | 98 | 77-116 |
| Chloromethane | 24.8 | 20.0 | 124 | 60-128 |
| cis-1,2-Dichloroethene | 21.5 | 20.0 | 108 | 78-117 |
| cis-1,3-Dichloropropene | 20.9 | 20.0 | 105 | 80-119 |
| Cyclohexane | 20.3 | 20.0 | 102 | 75-124 |
| Dibromochloromethane | 19.4 | 20.0 | 97 | 74-121 |
| Dichlorodifluoromethane | 22.1 | 20.0 | 111 | 49-132 |
| Ethylbenzene | 21.8 | 20.0 | 109 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200321

| | Lab Control Sample JWG1200321-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| Isopropylbenzene | 24.0 | 20.0 | 120 * | 78-119 |
| m,p-Xylenes | 44.3 | 40.0 | 111 | 79-122 |
| Methyl Acetate | 19.4 | 20.0 | 97 | 50-137 |
| Methyl tert-Butyl Ether | 20.0 | 20.0 | 100 | 73-118 |
| Methylene Chloride | 20.5 | 20.0 | 103 | 75-123 |
| o-Xylene | 21.3 | 20.0 | 106 | 80-119 |
| Styrene | 20.9 | 20.0 | 105 | 80-121 |
| Tetrachloroethene (PCE) | 20.2 | 20.0 | 101 | 75-126 |
| Toluene | 21.1 | 20.0 | 105 | 52-152 |
| trans-1,2-Dichloroethene | 20.9 | 20.0 | 104 | 75-121 |
| trans-1,3-Dichloropropene | 19.7 | 20.0 | 98 | 76-118 |
| Trichloroethene (TCE) | 20.6 | 20.0 | 103 | 78-122 |
| Trichlorofluoromethane | 20.3 | 20.0 | 101 | 58-134 |
| Trichlorotrifluoroethane | 21.4 | 20.0 | 107 | 77-128 |
| Vinyl Chloride | 21.4 | 20.0 | 107 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200325

| Analyte Name | Lab Control Sample JWG1200325-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.4 | 20.0 | 97 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 20.2 | 20.0 | 101 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 21.1 | 20.0 | 106 | 66-135 |
| 1,1,2-Trichloroethane | 19.6 | 20.0 | 98 | 75-122 |
| 1,1-Dichloroethane | 21.2 | 20.0 | 106 | 79-117 |
| 1,1-Dichloroethene | 23.6 | 20.0 | 118 | 72-128 |
| 1,2,3-Trichlorobenzene | 19.5 | 20.0 | 98 | 62-136 |
| 1,2,4-Trichlorobenzene | 18.7 | 20.0 | 93 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.7 | 20.0 | 83 | 60-122 |
| 1,2-Dibromoethane (EDB) | 19.1 | 20.0 | 96 | 76-118 |
| 1,2-Dichlorobenzene | 20.3 | 20.0 | 101 | 81-115 |
| 1,2-Dichloroethane (EDC) | 19.8 | 20.0 | 99 | 70-117 |
| 1,2-Dichloropropane | 21.5 | 20.0 | 108 | 79-117 |
| 1,3-Dichlorobenzene | 21.0 | 20.0 | 105 | 82-116 |
| 1,4-Dichlorobenzene | 21.0 | 20.0 | 105 | 82-115 |
| 2-Butanone (MEK) | 99.8 | 100 | 100 | 62-138 |
| 2-Hexanone | 94.3 | 100 | 94 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 95.0 | 100 | 95 | 77-120 |
| Acetone | 86.2 | 100 | 86 | 42-161 |
| Benzene | 21.4 | 20.0 | 107 | 80-117 |
| Bromochloromethane | 19.4 | 20.0 | 97 | 78-118 |
| Bromodichloromethane | 20.9 | 20.0 | 104 | 75-118 |
| Bromoform | 20.2 | 20.0 | 101 | 63-121 |
| Bromomethane | 19.4 | 20.0 | 97 | 31-153 |
| Carbon Disulfide | 121 | 100 | 121 | 72-128 |
| Carbon Tetrachloride | 19.3 | 20.0 | 96 | 67-124 |
| Chlorobenzene | 20.3 | 20.0 | 101 | 83-118 |
| Chloroethane | 22.3 | 20.0 | 112 | 68-132 |
| Chloroform | 20.5 | 20.0 | 102 | 77-116 |
| Chloromethane | 25.2 | 20.0 | 126 | 60-128 |
| cis-1,2-Dichloroethene | 21.7 | 20.0 | 108 | 78-117 |
| cis-1,3-Dichloropropene | 20.7 | 20.0 | 104 | 80-119 |
| Cyclohexane | 20.8 | 20.0 | 104 | 75-124 |
| Dibromochloromethane | 19.5 | 20.0 | 97 | 74-121 |
| Dichlorodifluoromethane | 22.3 | 20.0 | 111 | 49-132 |
| Ethylbenzene | 21.1 | 20.0 | 105 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200325

| Analyte Name | Lab Control Sample JWG1200325-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| Isopropylbenzene | 23.8 | 20.0 | 119 | 78-119 |
| m,p-Xylenes | 44.3 | 40.0 | 111 | 79-122 |
| Methyl Acetate | 18.4 | 20.0 | 92 | 50-137 |
| Methyl tert-Butyl Ether | 20.8 | 20.0 | 104 | 73-118 |
| Methylene Chloride | 21.2 | 20.0 | 106 | 75-123 |
| o-Xylene | 21.4 | 20.0 | 107 | 80-119 |
| Styrene | 21.2 | 20.0 | 106 | 80-121 |
| Tetrachloroethene (PCE) | 20.2 | 20.0 | 101 | 75-126 |
| Toluene | 21.1 | 20.0 | 105 | 52-152 |
| trans-1,2-Dichloroethene | 21.2 | 20.0 | 106 | 75-121 |
| trans-1,3-Dichloropropene | 19.9 | 20.0 | 100 | 76-118 |
| Trichloroethene (TCE) | 20.8 | 20.0 | 104 | 78-122 |
| Trichlorofluoromethane | 21.2 | 20.0 | 106 | 58-134 |
| Trichlorotrifluoroethane | 22.4 | 20.0 | 112 | 77-128 |
| Vinyl Chloride | 22.0 | 20.0 | 110 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200333

| Analyte Name | Lab Control Sample JWG1200333-3 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.9 | 20.0 | 95 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 19.5 | 20.0 | 97 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 19.6 | 20.0 | 98 | 66-135 |
| 1,1,2-Trichloroethane | 19.4 | 20.0 | 97 | 75-122 |
| 1,1-Dichloroethane | 20.4 | 20.0 | 102 | 79-117 |
| 1,1-Dichloroethene | 22.4 | 20.0 | 112 | 72-128 |
| 1,2,3-Trichlorobenzene | 19.2 | 20.0 | 96 | 62-136 |
| 1,2,4-Trichlorobenzene | 17.9 | 20.0 | 89 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.1 | 20.0 | 81 | 60-122 |
| 1,2-Dibromoethane (EDB) | 18.2 | 20.0 | 91 | 76-118 |
| 1,2-Dichlorobenzene | 19.6 | 20.0 | 98 | 81-115 |
| 1,2-Dichloroethane (EDC) | 20.0 | 20.0 | 100 | 70-117 |
| 1,2-Dichloropropane | 21.1 | 20.0 | 105 | 79-117 |
| 1,3-Dichlorobenzene | 20.9 | 20.0 | 105 | 82-116 |
| 1,4-Dichlorobenzene | 20.4 | 20.0 | 102 | 82-115 |
| 2-Butanone (MEK) | 98.5 | 100 | 99 | 62-138 |
| 2-Hexanone | 91.0 | 100 | 91 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 92.1 | 100 | 92 | 77-120 |
| Acetone | 90.0 | 100 | 90 | 42-161 |
| Benzene | 20.5 | 20.0 | 102 | 80-117 |
| Bromochloromethane | 18.7 | 20.0 | 94 | 78-118 |
| Bromodichloromethane | 20.6 | 20.0 | 103 | 75-118 |
| Bromoform | 18.3 | 20.0 | 92 | 63-121 |
| Bromomethane | 17.8 | 20.0 | 89 | 31-153 |
| Carbon Disulfide | 114 | 100 | 114 | 72-128 |
| Carbon Tetrachloride | 17.7 | 20.0 | 88 | 67-124 |
| Chlorobenzene | 19.7 | 20.0 | 98 | 83-118 |
| Chloroethane | 19.9 | 20.0 | 100 | 68-132 |
| Chloroform | 19.7 | 20.0 | 98 | 77-116 |
| Chloromethane | 21.6 | 20.0 | 108 | 60-128 |
| cis-1,2-Dichloroethene | 20.9 | 20.0 | 104 | 78-117 |
| cis-1,3-Dichloropropene | 19.6 | 20.0 | 98 | 80-119 |
| Cyclohexane | 19.8 | 20.0 | 99 | 75-124 |
| Dibromochloromethane | 18.4 | 20.0 | 92 | 74-121 |
| Dichlorodifluoromethane | 19.8 | 20.0 | 99 | 49-132 |
| Ethylbenzene | 20.8 | 20.0 | 104 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200333

| Analyte Name | Lab Control Sample JWG1200333-3 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| Isopropylbenzene | 24.1 | 20.0 | 120 * | 78-119 |
| m,p-Xylenes | 41.0 | 40.0 | 102 | 79-122 |
| Methyl Acetate | 19.1 | 20.0 | 95 | 50-137 |
| Methyl tert-Butyl Ether | 19.8 | 20.0 | 99 | 73-118 |
| Methylene Chloride | 20.0 | 20.0 | 100 | 75-123 |
| o-Xylene | 20.2 | 20.0 | 101 | 80-119 |
| Styrene | 19.9 | 20.0 | 99 | 80-121 |
| Tetrachloroethene (PCE) | 18.9 | 20.0 | 94 | 75-126 |
| Toluene | 20.0 | 20.0 | 100 | 52-152 |
| trans-1,2-Dichloroethene | 20.1 | 20.0 | 100 | 75-121 |
| trans-1,3-Dichloropropene | 19.3 | 20.0 | 96 | 76-118 |
| Trichloroethene (TCE) | 20.3 | 20.0 | 101 | 78-122 |
| Trichlorofluoromethane | 18.9 | 20.0 | 95 | 58-134 |
| Trichlorotrifluoroethane | 20.0 | 20.0 | 100 | 77-128 |
| Vinyl Chloride | 19.6 | 20.0 | 98 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry
**Level:** Low
**Extraction Lot:** JWG1200305

| | Lab Control Sample JWG1200305-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| 1,1,1,2-Tetrachloroethane | 18.1 | 20.0 | 90 | 71-124 |
| 1,1,1-Trichloroethane (TCA) | 17.4 | 20.0 | 87 | 72-131 |
| 1,1,2,2-Tetrachloroethane | 17.4 | 20.0 | 87 | 51-136 |
| 1,1,2-Trichloroethane | 18.4 | 20.0 | 92 | 74-113 |
| 1,1-Dichloroethane | 18.3 | 20.0 | 92 | 74-124 |
| 1,1-Dichloroethene | 16.0 | 20.0 | 80 | 67-128 |
| 1,2,3-Trichlorobenzene | 18.9 | 20.0 | 94 | 64-129 |
| 1,2,4-Trichlorobenzene | 18.7 | 20.0 | 93 | 61-135 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 17.4 | 20.0 | 87 | 54-129 |
| 1,2-Dibromoethane (EDB) | 18.2 | 20.0 | 91 | 74-114 |
| 1,2-Dichlorobenzene | 18.6 | 20.0 | 93 | 74-111 |
| 1,2-Dichloroethane (EDC) | 17.7 | 20.0 | 88 | 74-120 |
| 1,2-Dichloropropane | 18.3 | 20.0 | 91 | 77-119 |
| 1,3-Dichlorobenzene | 18.5 | 20.0 | 93 | 74-114 |
| 1,4-Dichlorobenzene | 18.7 | 20.0 | 93 | 72-112 |
| 2-Butanone (MEK) | 87.5 | 100 | 87 | 55-136 |
| 2-Hexanone | 88.0 | 100 | 88 | 60-127 |
| 4-Methyl-2-pentanone (MIBK) | 90.1 | 100 | 90 | 64-122 |
| Acetone | 83.4 | 100 | 83 | 30-164 |
| Benzene | 18.2 | 20.0 | 91 | 76-123 |
| Bromochloromethane | 19.0 | 20.0 | 95 | 75-124 |
| Bromodichloromethane | 17.1 | 20.0 | 85 | 74-124 |
| Bromoform | 16.8 | 20.0 | 84 | 58-126 |
| Bromomethane | 18.5 | 20.0 | 92 | 25-175 |
| Carbon Disulfide | 110 | 100 | 110 | 62-134 |
| Carbon Tetrachloride | 16.0 | 20.0 | 80 | 68-134 |
| Chlorobenzene | 19.0 | 20.0 | 95 | 74-116 |
| Chloroethane | 17.5 | 20.0 | 88 | 64-131 |
| Chloroform | 17.1 | 20.0 | 86 | 75-120 |
| Chloromethane | 16.6 | 20.0 | 83 | 59-138 |
| cis-1,2-Dichloroethene | 18.4 | 20.0 | 92 | 74-122 |
| cis-1,3-Dichloropropene | 18.5 | 20.0 | 93 | 75-115 |
| Cyclohexane | 19.3 | 20.0 | 96 | 70-127 |
| Dibromochloromethane | 16.7 | 20.0 | 83 | 67-123 |
| Dichlorodifluoromethane | 17.1 | 20.0 | 86 | 51-150 |
| Ethylbenzene | 18.9 | 20.0 | 95 | 71-122 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry
**Level:** Low
**Extraction Lot:** JWG1200305

| | Lab Control Sample JWG1200305-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| Isopropylbenzene | 20.9 | 20.0 | 105 | 67-124 |
| m,p-Xylenes | 38.0 | 40.0 | 95 | 71-122 |
| Methyl Acetate | 16.6 | 20.0 | 83 | 25-160 |
| Methyl tert-Butyl Ether | 18.1 | 20.0 | 90 | 72-121 |
| Methylene Chloride | 16.6 | 20.0 | 83 | 60-140 |
| o-Xylene | 18.3 | 20.0 | 92 | 71-120 |
| Styrene | 19.1 | 20.0 | 95 | 70-122 |
| Tetrachloroethene (PCE) | 18.9 | 20.0 | 95 | 69-124 |
| Toluene | 18.7 | 20.0 | 93 | 72-118 |
| trans-1,2-Dichloroethene | 17.6 | 20.0 | 88 | 71-127 |
| trans-1,3-Dichloropropene | 17.6 | 20.0 | 88 | 73-115 |
| Trichloroethene (TCE) | 18.4 | 20.0 | 92 | 70-129 |
| Trichlorofluoromethane | 17.4 | 20.0 | 87 | 67-129 |
| Trichlorotrifluoroethane | 17.7 | 20.0 | 89 | 66-131 |
| Vinyl Chloride | 18.9 | 20.0 | 95 | 62-137 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 13:10

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120330\0330-06.D

**Level:** Low
**Extraction Lot:** JWG1200321

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200321-1 | J:\MS53\DATA\MS53-120330\0330-03.D | 03/30/12 | 11:42 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/12 | 13:40 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/12 | 14:10 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/12 | 14:40 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/12 | 15:09 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/12 | 15:39 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/12 | 16:09 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/12 | 16:39 |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/12 | 17:09 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/12 | 17:39 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/12 | 18:09 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/12 | 18:39 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/12 | 19:09 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/12 | 19:39 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/12 | 20:09 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/12 | 20:39 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/12 | 21:08 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/12 | 21:38 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 11:20

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120402\0402-06.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200325

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200325-1 | J:\MS53\DATA\MS53-120402\0402-03.D | 04/02/12 | 09:51 |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/12 | 11:50 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/12 | 12:20 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/12 | 12:49 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/12 | 13:20 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/12 | 13:50 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/12 | 14:20 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/12 | 14:50 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/12 | 15:19 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/12 | 15:49 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/12 | 16:19 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/12 | 16:49 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/12 | 17:19 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/12 | 17:49 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/12 | 18:19 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/12 | 18:49 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/12 | 19:19 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 13:53

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200333-4

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120403\0403-07.D

**Level:** Low
**Extraction Lot:** JWG1200333

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200333-3 | J:\MS53\DATA\MS53-120403\0403-04.D | 04/03/12 | 12:25 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/12 | 14:23 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/12 | 14:52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/12 | 15:22 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/12 | 15:51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/12 | 16:21 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/12 | 16:50 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/12 | 17:20 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/12 | 18:18 |

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Extracted:** | 03/22/2012 |
| **Sample Matrix:** | Soil | **Date Analyzed:** | 03/22/2012 |
| | | **Time Analyzed:** | 11:28 |

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Instrument ID:** | MS52 |
| **Lab Code:** | JWG1200305-2 | **File ID:** | J:\MS52\DATA\MS52-120322\0322-05.D |
| **Extraction Method:** | EPA 5035 | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | JWG1200305 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200305-1 | J:\MS52\DATA\MS52-120322\0322-03.D | 03/22/12 | 10:14 |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/12 | 18:20 |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/12 | 18:48 |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/12 | 19:17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/12 | 19:45 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 11:42

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200321-1

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120330\0330-03.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200321

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200321-2 | J:\MS53\DATA\MS53-120330\0330-06.D | 03/30/12 | 13:10 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/12 | 13:40 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/12 | 14:10 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/12 | 14:40 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/12 | 15:09 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/12 | 15:39 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/12 | 16:09 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/12 | 16:39 |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/12 | 17:09 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/12 | 17:39 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/12 | 18:09 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/12 | 18:39 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/12 | 19:09 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/12 | 19:39 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/12 | 20:09 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/12 | 20:39 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/12 | 21:08 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/12 | 21:38 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 09:51

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200325-1

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120402\0402-03.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200325

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200325-2 | J:\MS53\DATA\MS53-120402\0402-06.D | 04/02/12 | 11:20 |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/12 | 11:50 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/12 | 12:20 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/12 | 12:49 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/12 | 13:20 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/12 | 13:50 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/12 | 14:20 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/12 | 14:50 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/12 | 15:19 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/12 | 15:49 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/12 | 16:19 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/12 | 16:49 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/12 | 17:19 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/12 | 17:49 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/12 | 18:19 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/12 | 18:49 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/12 | 19:19 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 12:25

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200333-3

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120403\0403-04.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200333

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200333-4 | J:\MS53\DATA\MS53-120403\0403-07.D | 04/03/12 | 13:53 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/12 | 14:23 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/12 | 14:52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/12 | 15:22 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/12 | 15:51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/12 | 16:21 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/12 | 16:50 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/12 | 17:20 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/12 | 18:18 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 10:14

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200305-1

**Instrument ID:** MS52
**File ID:** J:\MS52\DATA\MS52-120322\0322-03.D

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200305

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200305-2 | J:\MS52\DATA\MS52-120322\0322-05.D | 03/22/12 | 11:28 |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/12 | 18:20 |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/12 | 18:48 |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/12 | 19:17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/12 | 19:45 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 09:17

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS52\DATA\MS52-120322\0322-01.D
**Instrument ID:** MS52
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200306

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 15.1 | 3056 | PASS |
| 75 | 95 | 30 | 60 | 44.7 | 9053 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 20275 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 1378 | PASS |
| 173 | 174 | 0 | 2 | 0.4 | 78 | PASS |
| 174 | 95 | 50 | 120 | 93.5 | 18957 | PASS |
| 175 | 174 | 5 | 9 | 7.2 | 1370 | PASS |
| 176 | 174 | 95 | 101 | 98.9 | 18742 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 1226 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200306-2 | J:\MS52\DATA\MS52-120322\0322-02.D | 03/22/2012 | 09:45 | |
| Lab Control Sample | JWG1200305-1 | J:\MS52\DATA\MS52-120322\0322-03.D | 03/22/2012 | 10:14 | |
| Method Blank | JWG1200305-2 | J:\MS52\DATA\MS52-120322\0322-05.D | 03/22/2012 | 11:28 | |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/2012 | 18:20 | |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/2012 | 18:48 | |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/2012 | 19:17 | |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/2012 | 19:45 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 10:42

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120330\0330-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200322

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 15.2 | 25176 | PASS |
| 75 | 95 | 30 | 60 | 33.7 | 55912 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 166080 | PASS |
| 96 | 95 | 5 | 9 | 6.4 | 10595 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 90.7 | 150592 | PASS |
| 175 | 174 | 5 | 9 | 7.5 | 11247 | PASS |
| 176 | 174 | 95 | 101 | 95.4 | 143616 | PASS |
| 177 | 176 | 5 | 9 | 6.0 | 8649 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200322-2 | J:\MS53\DATA\MS53-120330\0330-02.D | 03/30/2012 | 11:12 | |
| Lab Control Sample | JWG1200321-1 | J:\MS53\DATA\MS53-120330\0330-03.D | 03/30/2012 | 11:42 | |
| Method Blank | JWG1200321-2 | J:\MS53\DATA\MS53-120330\0330-06.D | 03/30/2012 | 13:10 | |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/2012 | 13:40 | |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/2012 | 14:10 | |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/2012 | 14:40 | |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/2012 | 15:09 | |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/2012 | 15:39 | |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/2012 | 16:09 | |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/2012 | 16:39 | |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/2012 | 17:09 | |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/2012 | 17:39 | |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/2012 | 18:09 | |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/2012 | 18:39 | |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/2012 | 19:09 | |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/2012 | 19:39 | |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/2012 | 20:09 | |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/2012 | 20:39 | |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/2012 | 21:08 | |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/2012 | 21:38 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 08:51

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120402\0402-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200326

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.4 | 37064 | PASS |
| 75 | 95 | 30 | 60 | 35.7 | 80421 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 225429 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 14647 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 79.9 | 180139 | PASS |
| 175 | 174 | 5 | 9 | 7.7 | 13885 | PASS |
| 176 | 174 | 95 | 101 | 96.2 | 173248 | PASS |
| 177 | 176 | 5 | 9 | 6.3 | 10928 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200326-2 | J:\MS53\DATA\MS53-120402\0402-02.D | 04/02/2012 | 09:21 | |
| Lab Control Sample | JWG1200325-1 | J:\MS53\DATA\MS53-120402\0402-03.D | 04/02/2012 | 09:51 | |
| Method Blank | JWG1200325-2 | J:\MS53\DATA\MS53-120402\0402-06.D | 04/02/2012 | 11:20 | |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/2012 | 11:50 | |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/2012 | 12:20 | |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/2012 | 12:49 | |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/2012 | 13:20 | |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/2012 | 13:50 | |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/2012 | 14:20 | |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/2012 | 14:50 | |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/2012 | 15:19 | |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/2012 | 15:49 | |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/2012 | 16:19 | |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/2012 | 16:49 | |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/2012 | 17:19 | |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/2012 | 17:49 | |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/2012 | 18:19 | |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/2012 | 18:49 | |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/2012 | 19:19 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 10:53

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120403\0403-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200334

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.8 | 34616 | PASS |
| 75 | 95 | 30 | 60 | 36.5 | 75304 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 206165 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 13426 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 74.0 | 152600 | PASS |
| 175 | 174 | 5 | 9 | 8.1 | 12319 | PASS |
| 176 | 174 | 95 | 101 | 95.9 | 146363 | PASS |
| 177 | 176 | 5 | 9 | 6.7 | 9745 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200334-2 | J:\MS53\DATA\MS53-120403\0403-03.D | 04/03/2012 | 11:53 | |
| Lab Control Sample | JWG1200333-3 | J:\MS53\DATA\MS53-120403\0403-04.D | 04/03/2012 | 12:25 | |
| Method Blank | JWG1200333-4 | J:\MS53\DATA\MS53-120403\0403-07.D | 04/03/2012 | 13:53 | |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/2012 | 14:23 | |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/2012 | 14:52 | |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/2012 | 15:22 | |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/2012 | 15:51 | |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/2012 | 16:21 | |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/2012 | 16:50 | |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/2012 | 17:20 | |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/2012 | 18:18 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\MS52\DATA\MS52-120227\0227-04.D | F | J:\MS52\DATA\MS52-120227\0227-09.D |
| B | J:\MS52\DATA\MS52-120227\0227-05.D | G | J:\MS52\DATA\MS52-120227\0227-10.D |
| C | J:\MS52\DATA\MS52-120227\0227-06.D | H | J:\MS52\DATA\MS52-120227\0227-11.D |
| D | J:\MS52\DATA\MS52-120227\0227-07.D | I | J:\MS52\DATA\MS52-120227\0227-12.D |
| E | J:\MS52\DATA\MS52-120227\0227-08.D | | |

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | A | 1.0 | 1.06 | B | 2.0 | 1.07 | C | 5.0 | 1.09 | D | 10 | 1.16 | E | 20 | 1.24 |
| | F | 50 | 1.29 | G | 100 | 1.41 | H | 150 | 1.24 | I | 200 | 1.35 | | | |
| 1,1,1-Trichloroethane (TCA) | A | 1.0 | 0.672 | B | 2.0 | 0.693 | C | 5.0 | 0.706 | D | 10 | 0.709 | E | 20 | 0.843 |
| | F | 50 | 0.863 | G | 100 | 0.927 | H | 150 | 0.774 | I | 200 | 0.890 | | | |
| 1,1,2,2-Tetrachloroethane | A | 1.0 | 0.996 | B | 2.0 | 0.870 | C | 5.0 | 0.993 | D | 10 | 0.943 | E | 20 | 0.984 |
| | F | 50 | 1.03 | G | 100 | 1.16 | H | 150 | 1.08 | I | 200 | 1.03 | | | |
| 1,1,2-Trichloroethane | A | 1.0 | 0.650 | B | 2.0 | 0.651 | C | 5.0 | 0.608 | D | 10 | 0.664 | E | 20 | 0.665 |
| | F | 50 | 0.704 | G | 100 | 0.758 | H | 150 | 0.685 | I | 200 | 0.694 | | | |
| 1,1-Dichloroethane | A | 1.0 | 0.636 | B | 2.0 | 0.665 | C | 5.0 | 0.745 | D | 10 | 0.712 | E | 20 | 0.795 |
| | F | 50 | 0.787 | G | 100 | 0.830 | H | 150 | 0.727 | I | 200 | 0.812 | | | |
| 1,1-Dichloroethene | A | 1.0 | 0.518 | B | 2.0 | 0.546 | C | 5.0 | 0.598 | D | 10 | 0.564 | E | 20 | 0.676 |
| | F | 50 | 0.699 | G | 100 | 0.729 | H | 150 | 0.616 | I | 200 | 0.713 | | | |
| 1,2,3-Trichlorobenzene | | | | | | | C | 5.0 | 1.51 | D | 10 | 1.53 | E | 20 | 1.65 |
| | F | 50 | 1.68 | G | 100 | 1.88 | H | 150 | 1.79 | I | 200 | 1.79 | | | |
| 1,2,4-Trichlorobenzene | | | | | | | C | 5.0 | 1.78 | D | 10 | 1.65 | E | 20 | 1.85 |
| | F | 50 | 1.95 | G | 100 | 2.14 | H | 150 | 2.02 | I | 200 | 2.06 | | | |
| 1,2-Dibromo-3-chloropropane (DBCP | | | | | | | C | 5.0 | 0.201 | D | 10 | 0.207 | E | 20 | 0.215 |
| | F | 50 | 0.224 | G | 100 | 0.265 | H | 150 | 0.268 | I | 200 | 0.246 | | | |
| 1,2-Dibromoethane (EDB) | A | 1.0 | 0.828 | B | 2.0 | 0.746 | C | 5.0 | 0.831 | D | 10 | 0.838 | E | 20 | 0.879 |
| | F | 50 | 0.910 | G | 100 | 1.02 | H | 150 | 0.922 | I | 200 | 0.926 | | | |
| 1,2-Dichlorobenzene | A | 1.0 | 2.20 | B | 2.0 | 2.23 | C | 5.0 | 2.29 | D | 10 | 2.27 | E | 20 | 2.42 |
| | F | 50 | 2.48 | G | 100 | 2.75 | H | 150 | 2.54 | I | 200 | 2.57 | | | |
| 1,2-Dichloroethane (EDC) | A | 1.0 | 0.451 | B | 2.0 | 0.543 | C | 5.0 | 0.534 | D | 10 | 0.526 | E | 20 | 0.550 |
| | F | 50 | 0.559 | G | 100 | 0.594 | H | 150 | 0.529 | I | 200 | 0.541 | | | |
| 1,2-Dichloroethane-d4 | A | 50 | 0.259 | B | 50 | 0.263 | C | 50 | 0.260 | D | 50 | 0.257 | E | 50 | 0.250 |
| | F | 50 | 0.246 | G | 50 | 0.250 | H | 50 | 0.238 | I | 50 | 0.232 | | | |
| 1,2-Dichloropropane | A | 1.0 | 0.317 | B | 2.0 | 0.359 | C | 5.0 | 0.385 | D | 10 | 0.389 | E | 20 | 0.419 |
| | F | 50 | 0.414 | G | 100 | 0.449 | H | 150 | 0.398 | I | 200 | 0.432 | | | |
| 1,3-Dichlorobenzene | A | 1.0 | 2.49 | B | 2.0 | 2.45 | C | 5.0 | 2.50 | D | 10 | 2.50 | E | 20 | 2.68 |
| | F | 50 | 2.78 | G | 100 | 2.98 | H | 150 | 2.75 | I | 200 | 2.89 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | A | 1.0 | 2.55 | B | 2.0 | 2.49 | C | 5.0 | 2.54 | D | 10 | 2.51 | E | 20 | 2.68 |
| | F | 50 | 2.71 | G | 100 | 2.93 | H | 150 | 2.66 | I | 200 | 2.76 | | | |
| 2-Butanone (MEK) | A | 5.0 | 0.110 | B | 10 | 0.121 | C | 25 | 0.134 | D | 50 | 0.129 | E | 100 | 0.122 |
| | F | 250 | 0.126 | G | 500 | 0.137 | H | 750 | 0.133 | I | 1000 | 0.120 | | | |
| 2-Hexanone | A | 5.0 | 0.483 | B | 10 | 0.458 | C | 25 | 0.508 | D | 50 | 0.502 | E | 100 | 0.493 |
| | F | 250 | 0.519 | G | 500 | 0.587 | H | 750 | 0.567 | I | 1000 | 0.513 | | | |
| 4-Bromofluorobenzene | A | 50 | 0.871 | B | 50 | 0.864 | C | 50 | 0.864 | D | 50 | 0.885 | E | 50 | 0.872 |
| | F | 50 | 0.901 | G | 50 | 0.940 | H | 50 | 1.01 | I | 50 | 1.05 | | | |
| 4-Methyl-2-pentanone (MIBK) | A | 5.0 | 0.687 | B | 10 | 0.676 | C | 25 | 0.718 | D | 50 | 0.734 | E | 100 | 0.712 |
| | F | 250 | 0.727 | G | 500 | 0.822 | H | 750 | 0.779 | I | 1000 | 0.708 | | | |
| Acetone | A | 5.0 | 0.109 | B | 10 | 0.114 | C | 25 | 0.0910 | D | 50 | 0.0862 | E | 100 | 0.0760 |
| | F | 250 | 0.0764 | G | 500 | 0.0848 | H | 750 | 0.0801 | I | 1000 | 0.0729 | | | |
| Benzene | A | 1.0 | 1.64 | B | 2.0 | 1.61 | C | 5.0 | 1.72 | D | 10 | 1.63 | E | 20 | 1.81 |
| | F | 50 | 1.84 | G | 100 | 1.93 | H | 150 | 1.66 | I | 200 | 1.84 | | | |
| Bromochloromethane | A | 1.0 | 0.229 | B | 2.0 | 0.251 | C | 5.0 | 0.275 | D | 10 | 0.266 | E | 20 | 0.289 |
| | F | 50 | 0.281 | G | 100 | 0.280 | H | 150 | 0.254 | I | 200 | 0.262 | | | |
| Bromodichloromethane | A | 1.0 | 0.550 | B | 2.0 | 0.529 | C | 5.0 | 0.562 | D | 10 | 0.550 | E | 20 | 0.610 |
| | F | 50 | 0.623 | G | 100 | 0.668 | H | 150 | 0.599 | I | 200 | 0.632 | | | |
| Bromoform | A | 1.0 | 0.578 | B | 2.0 | 0.610 | C | 5.0 | 0.604 | D | 10 | 0.656 | E | 20 | 0.670 |
| | F | 50 | 0.738 | G | 100 | 0.832 | H | 150 | 0.780 | I | 200 | 0.769 | | | |
| Bromomethane | A | 1.0 | 0.210 | B | 2.0 | 0.245 | C | 5.0 | 0.239 | D | 10 | 0.240 | E | 20 | 0.289 |
| | F | 50 | 0.312 | G | 100 | 0.316 | H | 150 | 0.267 | I | 200 | 0.285 | | | |
| Carbon Disulfide | A | 5.0 | 0.950 | B | 10 | 0.925 | C | 25 | 0.995 | D | 50 | 0.961 | E | 100 | 1.11 |
| | F | 250 | 1.12 | G | 500 | 1.16 | H | 750 | 0.967 | I | 1000 | 1.12 | | | |
| Carbon Tetrachloride | A | 1.0 | 0.499 | B | 2.0 | 0.583 | C | 5.0 | 0.602 | D | 10 | 0.603 | E | 20 | 0.705 |
| | F | 50 | 0.755 | G | 100 | 0.804 | H | 150 | 0.676 | I | 200 | 0.775 | | | |
| Chlorobenzene | A | 1.0 | 2.91 | B | 2.0 | 3.04 | C | 5.0 | 3.14 | D | 10 | 3.18 | E | 20 | 3.41 |
| | F | 50 | 3.49 | G | 100 | 3.79 | H | 150 | 3.26 | I | 200 | 3.61 | | | |
| Chloroethane | A | 1.0 | 0.284 | B | 2.0 | 0.292 | C | 5.0 | 0.287 | D | 10 | 0.265 | E | 20 | 0.321 |
| | F | 50 | 0.322 | G | 100 | 0.335 | H | 150 | 0.285 | I | 200 | 0.325 | | | |
| Chloroform | A | 1.0 | 0.865 | B | 2.0 | 0.772 | C | 5.0 | 0.799 | D | 10 | 0.779 | E | 20 | 0.844 |
| | F | 50 | 0.850 | G | 100 | 0.904 | H | 150 | 0.787 | I | 200 | 0.854 | | | |
| Chloromethane | A | 1.0 | 0.480 | B | 2.0 | 0.498 | C | 5.0 | 0.522 | D | 10 | 0.490 | E | 20 | 0.602 |
| | F | 50 | 0.595 | G | 100 | 0.630 | H | 150 | 0.530 | I | 200 | 0.616 | | | |
| cis-1,2-Dichloroethene | A | 1.0 | 0.521 | B | 2.0 | 0.547 | C | 5.0 | 0.560 | D | 10 | 0.524 | E | 20 | 0.600 |
| | F | 50 | 0.608 | G | 100 | 0.638 | H | 150 | 0.550 | I | 200 | 0.612 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | A | 1.0 | 1.59 | B | 2.0 | 1.51 | C | 5.0 | 1.57 | D | 10 | 1.55 | E | 20 | 1.74 |
| | F | 50 | 1.82 | G | 100 | 1.96 | H | 150 | 1.77 | I | 200 | 1.89 | | | |
| Cyclohexane | A | 1.0 | 0.520 | B | 2.0 | 0.584 | C | 5.0 | 0.628 | D | 10 | 0.623 | E | 20 | 0.741 |
| | F | 50 | 0.762 | G | 100 | 0.817 | H | 150 | 0.690 | I | 200 | 0.796 | | | |
| Dibromochloromethane | A | 1.0 | 0.936 | B | 2.0 | 0.974 | C | 5.0 | 1.04 | D | 10 | 1.01 | E | 20 | 1.10 |
| | F | 50 | 1.15 | G | 100 | 1.28 | H | 150 | 1.15 | I | 200 | 1.20 | | | |
| Dibromofluoromethane | A | 50 | 0.243 | B | 50 | 0.248 | C | 50 | 0.245 | D | 50 | 0.244 | E | 50 | 0.243 |
| | F | 50 | 0.240 | G | 50 | 0.232 | H | 50 | 0.237 | I | 50 | 0.232 | | | |
| Dichlorodifluoromethane | A | 1.0 | 0.485 | B | 2.0 | 0.502 | C | 5.0 | 0.513 | D | 10 | 0.488 | E | 20 | 0.600 |
| | F | 50 | 0.618 | G | 100 | 0.650 | H | 150 | 0.531 | I | 200 | 0.602 | | | |
| Ethylbenzene | A | 1.0 | 4.98 | B | 2.0 | 4.98 | C | 5.0 | 5.31 | D | 10 | 5.29 | E | 20 | 6.02 |
| | F | 50 | 6.24 | G | 100 | 6.74 | H | 150 | 5.77 | I | 200 | 6.43 | | | |
| Isopropylbenzene | A | 1.0 | 3.99 | B | 2.0 | 4.07 | C | 5.0 | 4.52 | D | 10 | 4.56 | E | 20 | 5.01 |
| | F | 50 | 5.26 | G | 100 | 5.79 | H | 150 | 5.23 | I | 200 | 5.74 | | | |
| m,p-Xylenes | A | 2.0 | 3.98 | B | 4.0 | 3.87 | C | 10 | 4.20 | D | 20 | 4.25 | E | 40 | 4.83 |
| | F | 100 | 4.88 | G | 200 | 5.27 | H | 300 | 4.48 | I | 400 | 4.97 | | | |
| Methyl Acetate | A | 1.0 | 0.534 | B | 2.0 | 0.515 | C | 5.0 | 0.528 | D | 10 | 0.519 | E | 20 | 0.510 |
| | F | 50 | 0.481 | G | 100 | 0.537 | H | 150 | 0.506 | I | 200 | 0.458 | | | |
| Methyl tert-Butyl Ether | A | 1.0 | 1.04 | B | 2.0 | 1.05 | C | 5.0 | 1.05 | D | 10 | 1.01 | E | 20 | 1.05 |
| | F | 50 | 1.10 | G | 100 | 1.17 | H | 150 | 1.11 | I | 200 | 1.10 | | | |
| Methylene Chloride | A | 1.0 | 0.840 | B | 2.0 | 0.616 | C | 5.0 | 0.514 | D | 10 | 0.453 | E | 20 | 0.512 |
| | F | 50 | 0.493 | G | 100 | 0.481 | H | 150 | 0.436 | I | 200 | 0.449 | | | |
| o-Xylene | A | 1.0 | 4.45 | B | 2.0 | 4.11 | C | 5.0 | 4.44 | D | 10 | 4.38 | E | 20 | 4.91 |
| | F | 50 | 5.04 | G | 100 | 5.37 | H | 150 | 4.67 | I | 200 | 5.10 | | | |
| Styrene | A | 1.0 | 2.66 | B | 2.0 | 3.13 | C | 5.0 | 3.22 | D | 10 | 3.25 | E | 20 | 3.70 |
| | F | 50 | 3.83 | G | 100 | 4.21 | H | 150 | 3.67 | I | 200 | 3.99 | | | |
| Tetrachloroethene (PCE) | A | 1.0 | 0.932 | B | 2.0 | 0.963 | C | 5.0 | 1.08 | D | 10 | 1.05 | E | 20 | 1.21 |
| | F | 50 | 1.23 | G | 100 | 1.32 | H | 150 | 1.11 | I | 200 | 1.27 | | | |
| Toluene | A | 1.0 | 4.59 | B | 2.0 | 4.55 | C | 5.0 | 4.69 | D | 10 | 4.68 | E | 20 | 5.27 |
| | F | 50 | 5.33 | G | 100 | 5.73 | H | 150 | 4.91 | I | 200 | 5.46 | | | |
| Toluene-d8 | A | 50 | 2.51 | B | 50 | 2.46 | C | 50 | 2.44 | D | 50 | 2.46 | E | 50 | 2.50 |
| | F | 50 | 2.47 | G | 50 | 2.52 | H | 50 | 2.45 | I | 50 | 2.52 | | | |
| trans-1,2-Dichloroethene | A | 1.0 | 0.580 | B | 2.0 | 0.560 | C | 5.0 | 0.577 | D | 10 | 0.557 | E | 20 | 0.650 |
| | F | 50 | 0.639 | G | 100 | 0.679 | H | 150 | 0.577 | I | 200 | 0.661 | | | |
| trans-1,3-Dichloropropene | A | 1.0 | 1.40 | B | 2.0 | 1.47 | C | 5.0 | 1.44 | D | 10 | 1.45 | E | 20 | 1.54 |
| | F | 50 | 1.64 | G | 100 | 1.85 | H | 150 | 1.67 | I | 200 | 1.74 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene (TCE) | A | 1.0 | 0.417 | B | 2.0 | 0.448 | C | 5.0 | 0.503 | D | 10 | 0.491 | E | 20 | 0.550 |
| | F | 50 | 0.557 | G | 100 | 0.591 | H | 150 | 0.512 | I | 200 | 0.578 | | | |
| Trichlorofluoromethane | A | 1.0 | 0.748 | B | 2.0 | 0.708 | C | 5.0 | 0.742 | D | 10 | 0.720 | E | 20 | 0.879 |
| | F | 50 | 0.881 | G | 100 | 0.938 | H | 150 | 0.779 | I | 200 | 0.893 | | | |
| Trichlorotrifluoroethane | A | 1.0 | 0.330 | B | 2.0 | 0.332 | C | 5.0 | 0.376 | D | 10 | 0.372 | E | 20 | 0.452 |
| | F | 50 | 0.462 | G | 100 | 0.471 | H | 150 | 0.393 | I | 200 | 0.453 | | | |
| Vinyl Chloride | A | 1.0 | 0.369 | B | 2.0 | 0.439 | C | 5.0 | 0.448 | D | 10 | 0.423 | E | 20 | 0.496 |
| | F | 50 | 0.465 | G | 100 | 0.461 | H | 150 | 0.365 | I | 200 | 0.444 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| 1,1,1,2-Tetrachloroethane | MS | AverageRF | % RSD | 10.3 | | ≤ 15 | 1.21 | | 0.01 |
| 1,1,1-Trichloroethane (TCA) | MS | AverageRF | % RSD | 12.3 | | ≤ 15 | 0.786 | | 0.01 |
| † 1,1,2,2-Tetrachloroethane | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 1.01 | | 0.3 |
| 1,1,2-Trichloroethane | MS | AverageRF | % RSD | 6.2 | | ≤ 15 | 0.675 | | 0.01 |
| † 1,1-Dichloroethane | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 0.745 | | 0.1 |
| ‡ 1,1-Dichloroethene | MS | AverageRF | % RSD | 12.4 | | ≤ 15 | 0.629 | | 0.01 |
| 1,2,3-Trichlorobenzene | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 1.69 | | 0.01 |
| 1,2,4-Trichlorobenzene | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 1.92 | | 0.01 |
| 1,2-Dibromo-3-chloropropane (DBCP) | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.232 | | 0.01 |
| 1,2-Dibromoethane (EDB) | MS | AverageRF | % RSD | 8.9 | | ≤ 15 | 0.878 | | 0.01 |
| 1,2-Dichlorobenzene | MS | AverageRF | % RSD | 7.7 | | ≤ 15 | 2.42 | | 0.01 |
| 1,2-Dichloroethane (EDC) | MS | AverageRF | % RSD | 7.1 | | ≤ 15 | 0.536 | | 0.01 |
| 1,2-Dichloroethane-d4 | SURR | AverageRF | % RSD | 4.2 | | ≤ 15 | 0.251 | | |
| ‡ 1,2-Dichloropropane | MS | AverageRF | % RSD | 10.1 | | ≤ 15 | 0.396 | | 0.01 |
| 1,3-Dichlorobenzene | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 2.67 | | 0.01 |
| 1,4-Dichlorobenzene | MS | AverageRF | % RSD | 5.3 | | ≤ 15 | 2.65 | | 0.01 |
| 2-Butanone (MEK) | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 0.126 | | 0.01 |
| 2-Hexanone | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.514 | | 0.01 |
| 4-Bromofluorobenzene | SURR | AverageRF | % RSD | 7.6 | | ≤ 15 | 0.918 | | |
| 4-Methyl-2-pentanone (MIBK) | MS | AverageRF | % RSD | 6.3 | | ≤ 15 | 0.729 | | 0.01 |
| Acetone | MS | Linear | R2 | 0.994 | | ≥ 0.99 | 0.0878 | | 0.01 |
| Benzene | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 1.74 | | 0.01 |
| Bromochloromethane | MS | AverageRF | % RSD | 7.0 | | ≤ 15 | 0.265 | | 0.01 |
| Bromodichloromethane | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.592 | | 0.01 |
| † Bromoform | MS | AverageRF | % RSD | 12.9 | | ≤ 15 | 0.693 | | 0.1 |
| Bromomethane | MS | AverageRF | % RSD | 13.5 | | ≤ 15 | 0.267 | | 0.01 |
| Carbon Disulfide | MS | AverageRF | % RSD | 8.9 | | ≤ 15 | 1.03 | | 0.01 |
| Carbon Tetrachloride | MS | Linear | R2 | 0.993 | | ≥ 0.99 | 0.667 | | 0.01 |
| † Chlorobenzene | MS | AverageRF | % RSD | 8.6 | | ≤ 15 | 3.32 | | 0.3 |
| Chloroethane | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 0.302 | | 0.01 |
| ‡ Chloroform | MS | AverageRF | % RSD | 5.5 | | ≤ 15 | 0.828 | | 0.01 |
| † Chloromethane | MS | AverageRF | % RSD | 10.7 | | ≤ 15 | 0.551 | | 0.1 |
| cis-1,2-Dichloroethene | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 0.573 | | 0.01 |
| cis-1,3-Dichloropropene | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 1.71 | | 0.01 |
| Cyclohexane | MS | AverageRF | % RSD | 14.9 | | ≤ 15 | 0.684 | | 0.01 |
| Dibromochloromethane | MS | AverageRF | % RSD | 10.2 | | ≤ 15 | 1.09 | | 0.01 |
| Dibromofluoromethane | SURR | AverageRF | % RSD | 2.3 | | ≤ 15 | 0.241 | | |
| Dichlorodifluoromethane | MS | AverageRF | % RSD | 11.4 | | ≤ 15 | 0.554 | | 0.01 |
| ‡ Ethylbenzene | MS | AverageRF | % RSD | 11.2 | | ≤ 15 | 5.75 | | 0.01 |
| Isopropylbenzene | MS | AverageRF | % RSD | 13.5 | | ≤ 15 | 4.91 | | 0.01 |
| m,p-Xylenes | MS | AverageRF | % RSD | 10.7 | | ≤ 15 | 4.53 | | 0.01 |
| Methyl Acetate | MS | AverageRF | % RSD | 5.1 | | ≤ 15 | 0.510 | | 0.01 |
| Methyl tert-Butyl Ether | MS | AverageRF | % RSD | 4.6 | | ≤ 15 | 1.08 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation: Fit Type | Eval. | Eval. Result | Q | Control Criteria | RRF Evaluation: Average RRF | Q | Minimum RRF |
|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | MS | Linear | R2 | 0.998 | | ≥ 0.99 | 0.533 | | 0.01 |
| o-Xylene | MS | AverageRF | % RSD | 8.7 | | ≤ 15 | 4.72 | | 0.01 |
| Styrene | MS | AverageRF | % RSD | 13.9 | | ≤ 15 | 3.52 | | 0.01 |
| Tetrachloroethene (PCE) | MS | AverageRF | % RSD | 12.1 | | ≤ 15 | 1.13 | | 0.01 |
| ‡ Toluene | MS | AverageRF | % RSD | 8.6 | | ≤ 15 | 5.02 | | 0.01 |
| Toluene-d8 | SURR | AverageRF | % RSD | 1.2 | | ≤ 15 | 2.48 | | |
| trans-1,2-Dichloroethene | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.609 | | 0.01 |
| trans-1,3-Dichloropropene | MS | AverageRF | % RSD | 9.7 | | ≤ 15 | 1.58 | | 0.01 |
| Trichloroethene (TCE) | MS | AverageRF | % RSD | 11.4 | | ≤ 15 | 0.516 | | 0.01 |
| Trichlorofluoromethane | MS | AverageRF | % RSD | 10.8 | | ≤ 15 | 0.810 | | 0.01 |
| Trichlorotrifluoroethane | MS | AverageRF | % RSD | 13.9 | | ≤ 15 | 0.405 | | 0.01 |
| ‡ Vinyl Chloride | MS | AverageRF | % RSD | 10.0 | | ≤ 15 | 0.434 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012
**Date Analyzed:** 02/27/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2756
**Units:** ug/L

**File ID:** J:\MS52\DATA\MS52-120227\0227-16.D

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 21 | 1.21 | 1.25 | 3 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 21 | 0.786 | 0.827 | 5 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 1.01 | 1.01 | 0 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 21 | 0.675 | 0.713 | 6 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 22 | 0.745 | 0.819 | 10 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.629 | 0.681 | 8 | NA | ± 30 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 20 | 1.69 | 1.66 | -2 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 19 | 1.92 | 1.85 | -4 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 18 | 0.232 | 0.212 | -9 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 21 | 0.878 | 0.906 | 3 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 20 | 2.42 | 2.47 | 2 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.536 | 0.540 | 1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.396 | 0.425 | 7 | NA | ± 30 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 2.67 | 2.72 | 2 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 21 | 2.65 | 2.73 | 3 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 97 | 0.126 | 0.122 | -3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.514 | 0.515 | 0 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 100 | 0.729 | 0.730 | 0 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.0878 | 0.0775 | NA | -7 | ± 30 % | Linear |
| Benzene | 20 | 21 | 1.74 | 1.85 | 6 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 22 | 0.265 | 0.292 | 10 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.592 | 0.612 | 3 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.693 | 0.665 | -4 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.267 | 0.258 | -3 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 1.03 | 1.12 | 8 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 19 | 0.667 | 0.697 | NA | -3 | ± 30 % | Linear |
| Chlorobenzene | 20 | 21 | 3.32 | 3.51 | 6 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 21 | 0.302 | 0.321 | 7 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.828 | 0.846 | 2 | NA | ± 30 % | AverageRF |
| Chloromethane | 20 | 21 | 0.551 | 0.569 | 3 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.573 | 0.605 | 6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 21 | 1.71 | 1.79 | 5 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 22 | 0.684 | 0.743 | 9 | NA | ± 30 % | AverageRF |
| Dibromochloromethane | 20 | 20 | 1.09 | 1.10 | 1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.554 | 0.589 | 6 | NA | ± 30 % | AverageRF |
| Ethylbenzene | 20 | 21 | 5.75 | 6.10 | 6 | NA | ± 30 % | AverageRF |
| Isopropylbenzene | 20 | 21 | 4.91 | 5.23 | 7 | NA | ± 30 % | AverageRF |
| m,p-Xylenes | 40 | 43 | 4.53 | 4.90 | 8 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.510 | 0.512 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 1.08 | 1.10 | 2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 26 | 0.533 | 0.618 | NA | 29 | ± 30 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012
**Date Analyzed:** 02/27/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2756
**Units:** ug/L

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| o-Xylene | 20 | 21 | 4.72 | 4.99 | 6 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 22 | 3.52 | 3.83 | 9 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 21 | 1.13 | 1.21 | 7 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 21 | 5.02 | 5.34 | 6 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 21 | 0.609 | 0.653 | 7 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 1.58 | 1.57 | 0 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 22 | 0.516 | 0.579 | 12 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 21 | 0.810 | 0.857 | 6 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 21 | 0.405 | 0.435 | 7 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 23 | 0.434 | 0.493 | 13 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Level ID | File ID |
|---|---|
| A | J:\MS53\DATA\MS53-120307\0307-03.D |
| B | J:\MS53\DATA\MS53-120307\0307-04.D |
| C | J:\MS53\DATA\MS53-120307\0307-05.D |
| D | J:\MS53\DATA\MS53-120307\0307-06.D |
| E | J:\MS53\DATA\MS53-120307\0307-08.D |
| F | J:\MS53\DATA\MS53-120307\0307-09.D |
| G | J:\MS53\DATA\MS53-120307\0307-10.D |
| H | J:\MS53\DATA\MS53-120307\0307-11.D |
| I | J:\MS53\DATA\MS53-120307\0307-15.D |

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | A | 1.0 | 0.493 | B | 2.0 | 0.424 | C | 5.0 | 0.487 | D | 10 | 0.500 | E | 50 | 0.524 |
| | F | 100 | 0.512 | G | 150 | 0.473 | H | 200 | 0.463 | I | 20 | 0.523 | | | |
| 1,1,1-Trichloroethane (TCA) | A | 1.0 | 0.186 | B | 2.0 | 0.173 | C | 5.0 | 0.216 | D | 10 | 0.207 | E | 50 | 0.253 |
| | F | 100 | 0.246 | G | 150 | 0.241 | H | 200 | 0.241 | I | 20 | 0.227 | | | |
| 1,1,2,2-Tetrachloroethane | A | 1.0 | 0.721 | B | 2.0 | 0.736 | C | 5.0 | 0.779 | D | 10 | 0.812 | E | 50 | 0.777 |
| | F | 100 | 0.734 | G | 150 | 0.659 | H | 200 | 0.569 | I | 20 | 0.763 | | | |
| 1,1,2-Trichloroethane | A | 1.0 | 0.374 | B | 2.0 | 0.341 | C | 5.0 | 0.369 | D | 10 | 0.374 | E | 50 | 0.363 |
| | F | 100 | 0.380 | G | 150 | 0.348 | H | 200 | 0.339 | I | 20 | 0.381 | | | |
| 1,1-Dichloroethane | A | 1.0 | 0.341 | B | 2.0 | 0.323 | C | 5.0 | 0.390 | D | 10 | 0.382 | E | 50 | 0.427 |
| | F | 100 | 0.421 | G | 150 | 0.422 | H | 200 | 0.411 | I | 20 | 0.406 | | | |
| 1,1-Dichloroethene | A | 1.0 | 0.218 | B | 2.0 | 0.195 | C | 5.0 | 0.247 | D | 10 | 0.227 | E | 50 | 0.266 |
| | F | 100 | 0.240 | G | 150 | 0.219 | H | 200 | 0.206 | I | 20 | 0.257 | | | |
| 1,2,3-Trichlorobenzene | | | | | | | | | | D | 10 | 0.342 | E | 50 | 0.343 |
| | F | 100 | 0.373 | G | 150 | 0.354 | H | 200 | 0.354 | I | 20 | 0.337 | | | |
| 1,2,4-Trichlorobenzene | | | | | | | | | | D | 10 | 0.485 | E | 50 | 0.533 |
| | F | 100 | 0.564 | G | 150 | 0.552 | H | 200 | 0.552 | I | 20 | 0.505 | | | |
| 1,2-Dibromo-3-chloropropane (DBCP | | | | | | | C | 5.0 | 0.0716 | D | 10 | 0.0723 | E | 50 | 0.0750 |
| | F | 100 | 0.0823 | G | 150 | 0.0817 | H | 200 | 0.0823 | I | 20 | 0.0665 | | | |
| 1,2-Dibromoethane (EDB) | A | 1.0 | 0.375 | B | 2.0 | 0.367 | C | 5.0 | 0.413 | D | 10 | 0.423 | E | 50 | 0.415 |
| | F | 100 | 0.425 | G | 150 | 0.406 | H | 200 | 0.382 | I | 20 | 0.421 | | | |
| 1,2-Dichlorobenzene | A | 1.0 | 1.10 | B | 2.0 | 0.997 | C | 5.0 | 1.15 | D | 10 | 1.09 | E | 50 | 1.12 |
| | F | 100 | 1.12 | G | 150 | 1.03 | H | 200 | 1.01 | I | 20 | 1.16 | | | |
| 1,2-Dichloroethane (EDC) | A | 1.0 | 0.136 | B | 2.0 | 0.117 | C | 5.0 | 0.138 | D | 10 | 0.137 | E | 50 | 0.147 |
| | F | 100 | 0.145 | G | 150 | 0.145 | H | 200 | 0.143 | I | 20 | 0.141 | | | |
| 1,2-Dichloroethane-d4 | A | 50 | 0.147 | B | 50 | 0.149 | C | 50 | 0.145 | D | 50 | 0.148 | E | 50 | 0.146 |
| | F | 50 | 0.144 | G | 50 | 0.146 | H | 50 | 0.141 | I | 50 | 0.141 | | | |
| 1,2-Dichloropropane | A | 1.0 | 0.207 | B | 2.0 | 0.201 | C | 5.0 | 0.223 | D | 10 | 0.224 | E | 50 | 0.245 |
| | F | 100 | 0.240 | G | 150 | 0.233 | H | 200 | 0.230 | I | 20 | 0.234 | | | |
| 1,3-Dichlorobenzene | A | 1.0 | 1.27 | B | 2.0 | 1.14 | C | 5.0 | 1.33 | D | 10 | 1.26 | E | 50 | 1.26 |
| | F | 100 | 1.16 | G | 150 | 1.06 | H | 200 | 0.987 | I | 20 | 1.31 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | A | 1.0 | 1.21 | B | 2.0 | 1.11 | C | 5.0 | 1.28 | D | 10 | 1.25 | E | 50 | 1.31 |
| | F | 100 | 1.24 | G | 150 | 1.18 | H | 200 | 1.09 | I | 20 | 1.36 | | | |
| 2-Butanone (MEK) | A | 5.0 | 0.00960 | B | 10 | 0.0116 | C | 25 | 0.0117 | D | 50 | 0.0121 | E | 250 | 0.0134 |
| | F | 500 | 0.0126 | G | 750 | 0.0128 | H | 1000 | 0.0131 | I | 100 | 0.0122 | | | |
| 2-Hexanone | | | | B | 10 | 0.293 | C | 25 | 0.288 | D | 50 | 0.283 | E | 250 | 0.263 |
| | F | 500 | 0.273 | G | 750 | 0.250 | H | 1000 | 0.238 | I | 100 | 0.278 | | | |
| 4-Bromofluorobenzene | A | 50 | 1.02 | B | 50 | 0.970 | C | 50 | 0.993 | D | 50 | 0.952 | E | 50 | 0.907 |
| | F | 50 | 0.857 | G | 50 | 0.815 | H | 50 | 0.793 | I | 50 | 0.954 | | | |
| 4-Methyl-2-pentanone (MIBK) | A | 5.0 | 0.422 | B | 10 | 0.421 | C | 25 | 0.431 | D | 50 | 0.435 | E | 250 | 0.405 |
| | F | 500 | 0.401 | G | 750 | 0.380 | H | 1000 | 0.364 | I | 100 | 0.428 | | | |
| Acetone | A | 5.0 | 0.0341 | B | 10 | 0.0312 | C | 25 | 0.0313 | D | 50 | 0.0309 | E | 250 | 0.0284 |
| | F | 500 | 0.0286 | G | 750 | 0.0280 | H | 1000 | 0.0265 | I | 100 | 0.0274 | | | |
| Benzene | A | 1.0 | 0.820 | B | 2.0 | 0.794 | C | 5.0 | 0.904 | D | 10 | 0.885 | E | 50 | 0.990 |
| | F | 100 | 0.952 | G | 150 | 0.913 | H | 200 | 0.875 | I | 20 | 0.955 | | | |
| Bromochloromethane | A | 1.0 | 0.114 | B | 2.0 | 0.111 | C | 5.0 | 0.133 | D | 10 | 0.136 | E | 50 | 0.146 |
| | F | 100 | 0.145 | G | 150 | 0.148 | H | 200 | 0.145 | I | 20 | 0.142 | | | |
| Bromodichloromethane | A | 1.0 | 0.207 | B | 2.0 | 0.202 | C | 5.0 | 0.227 | D | 10 | 0.231 | E | 50 | 0.252 |
| | F | 100 | 0.246 | G | 150 | 0.244 | H | 200 | 0.233 | I | 20 | 0.241 | | | |
| Bromoform | A | 1.0 | 0.172 | B | 2.0 | 0.166 | C | 5.0 | 0.209 | D | 10 | 0.224 | E | 50 | 0.249 |
| | F | 100 | 0.246 | G | 150 | 0.236 | H | 200 | 0.224 | I | 20 | 0.232 | | | |
| Bromomethane | A | 1.0 | 0.172 | B | 2.0 | 0.160 | C | 5.0 | 0.182 | D | 10 | 0.184 | E | 50 | 0.217 |
| | F | 100 | 0.173 | G | 150 | 0.157 | H | 200 | 0.147 | I | 20 | 0.190 | | | |
| Carbon Disulfide | A | 5.0 | 0.669 | B | 10 | 0.622 | C | 25 | 0.755 | D | 50 | 0.708 | E | 250 | 0.796 |
| | F | 500 | 0.685 | G | 750 | 0.613 | H | 1000 | 0.560 | I | 100 | 0.787 | | | |
| Carbon Tetrachloride | A | 1.0 | 0.132 | B | 2.0 | 0.133 | C | 5.0 | 0.168 | D | 10 | 0.158 | E | 50 | 0.198 |
| | F | 100 | 0.195 | G | 150 | 0.190 | H | 200 | 0.193 | I | 20 | 0.178 | | | |
| Chlorobenzene | A | 1.0 | 1.44 | B | 2.0 | 1.39 | C | 5.0 | 1.57 | D | 10 | 1.54 | E | 50 | 1.56 |
| | F | 100 | 1.52 | G | 150 | 1.37 | H | 200 | 1.29 | I | 20 | 1.64 | | | |
| Chloroethane | A | 1.0 | 0.154 | B | 2.0 | 0.143 | C | 5.0 | 0.161 | D | 10 | 0.167 | E | 50 | 0.188 |
| | F | 100 | 0.162 | G | 150 | 0.150 | H | 200 | 0.143 | I | 20 | 0.178 | | | |
| Chloroform | A | 1.0 | 0.323 | B | 2.0 | 0.293 | C | 5.0 | 0.343 | D | 10 | 0.328 | E | 50 | 0.370 |
| | F | 100 | 0.368 | G | 150 | 0.370 | H | 200 | 0.357 | I | 20 | 0.350 | | | |
| Chloromethane | A | 1.0 | 0.306 | B | 2.0 | 0.286 | C | 5.0 | 0.324 | D | 10 | 0.314 | E | 50 | 0.389 |
| | F | 100 | 0.331 | G | 150 | 0.310 | H | 200 | 0.296 | I | 20 | 0.350 | | | |
| cis-1,2-Dichloroethene | A | 1.0 | 0.246 | B | 2.0 | 0.242 | C | 5.0 | 0.291 | D | 10 | 0.285 | E | 50 | 0.315 |
| | F | 100 | 0.310 | G | 150 | 0.308 | H | 200 | 0.301 | I | 20 | 0.307 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | A | 1.0 | 0.867 | B | 2.0 | 0.838 | C | 5.0 | 0.964 | D | 10 | 0.976 | E | 50 | 0.970 |
| | F | 100 | 1.01 | G | 150 | 0.946 | H | 200 | 0.861 | I | 20 | 0.984 | | | |
| Cyclohexane | A | 1.0 | 0.302 | B | 2.0 | 0.267 | C | 5.0 | 0.366 | D | 10 | 0.311 | E | 50 | 0.419 |
| | F | 100 | 0.412 | G | 150 | 0.404 | H | 200 | 0.413 | I | 20 | 0.389 | | | |
| Dibromochloromethane | A | 1.0 | 0.442 | B | 2.0 | 0.394 | C | 5.0 | 0.445 | D | 10 | 0.461 | E | 50 | 0.462 |
| | F | 100 | 0.473 | G | 150 | 0.437 | H | 200 | 0.412 | I | 20 | 0.476 | | | |
| Dibromofluoromethane | A | 50 | 0.255 | B | 50 | 0.258 | C | 50 | 0.256 | D | 50 | 0.256 | E | 50 | 0.258 |
| | F | 50 | 0.260 | G | 50 | 0.261 | H | 50 | 0.255 | I | 50 | 0.256 | | | |
| Dichlorodifluoromethane | A | 1.0 | 0.110 | B | 2.0 | 0.138 | C | 5.0 | 0.165 | D | 10 | 0.155 | E | 50 | 0.201 |
| | F | 100 | 0.180 | G | 150 | 0.172 | H | 200 | 0.171 | I | 20 | 0.181 | | | |
| Ethylbenzene | A | 1.0 | 2.47 | B | 2.0 | 2.16 | C | 5.0 | 2.70 | D | 10 | 2.58 | E | 50 | 2.63 |
| | F | 100 | 2.56 | G | 150 | 2.23 | H | 200 | 2.03 | I | 20 | 2.78 | | | |
| Isopropylbenzene | A | 1.0 | 2.13 | B | 2.0 | 1.81 | C | 5.0 | 2.30 | D | 10 | 2.11 | E | 50 | 2.35 |
| | F | 100 | 2.21 | G | 150 | 2.04 | H | 200 | 1.94 | I | 20 | 2.39 | | | |
| m,p-Xylenes | A | 2.0 | 1.84 | B | 4.0 | 1.65 | C | 10 | 1.94 | D | 20 | 1.91 | E | 100 | 1.86 |
| | F | 200 | 1.67 | G | 300 | 1.42 | H | 400 | 1.26 | I | 40 | 2.04 | | | |
| Methyl Acetate | A | 1.0 | 0.314 | B | 2.0 | 0.285 | C | 5.0 | 0.285 | D | 10 | 0.294 | E | 50 | 0.296 |
| | F | 100 | 0.291 | G | 150 | 0.285 | H | 200 | 0.270 | I | 20 | 0.287 | | | |
| Methyl tert-Butyl Ether | A | 1.0 | 0.310 | B | 2.0 | 0.317 | C | 5.0 | 0.363 | D | 10 | 0.361 | E | 50 | 0.381 |
| | F | 100 | 0.376 | G | 150 | 0.374 | H | 200 | 0.377 | I | 20 | 0.359 | | | |
| Methylene Chloride | A | 1.0 | 0.228 | B | 2.0 | 0.210 | C | 5.0 | 0.255 | D | 10 | 0.243 | E | 50 | 0.278 |
| | F | 100 | 0.266 | G | 150 | 0.259 | H | 200 | 0.256 | I | 20 | 0.264 | | | |
| o-Xylene | A | 1.0 | 1.82 | B | 2.0 | 1.66 | C | 5.0 | 2.00 | D | 10 | 1.97 | E | 50 | 1.96 |
| | F | 100 | 1.85 | G | 150 | 1.63 | H | 200 | 1.43 | I | 20 | 2.02 | | | |
| Styrene | A | 1.0 | 1.51 | B | 2.0 | 1.37 | C | 5.0 | 1.63 | D | 10 | 1.63 | E | 50 | 1.61 |
| | F | 100 | 1.58 | G | 150 | 1.37 | H | 200 | 1.28 | I | 20 | 1.68 | | | |
| Tetrachloroethene (PCE) | A | 1.0 | 0.392 | B | 2.0 | 0.356 | C | 5.0 | 0.466 | D | 10 | 0.436 | E | 50 | 0.492 |
| | F | 100 | 0.500 | G | 150 | 0.461 | H | 200 | 0.441 | I | 20 | 0.511 | | | |
| Toluene | A | 1.0 | 2.37 | B | 2.0 | 2.18 | C | 5.0 | 2.58 | D | 10 | 2.43 | E | 50 | 2.54 |
| | F | 100 | 2.47 | G | 150 | 2.16 | H | 200 | 1.99 | I | 20 | 2.73 | | | |
| Toluene-d8 | A | 50 | 2.41 | B | 50 | 2.43 | C | 50 | 2.45 | D | 50 | 2.48 | E | 50 | 2.35 |
| | F | 50 | 2.44 | G | 50 | 2.41 | H | 50 | 2.34 | I | 50 | 2.48 | | | |
| trans-1,2-Dichloroethene | A | 1.0 | 0.258 | B | 2.0 | 0.248 | C | 5.0 | 0.305 | D | 10 | 0.285 | E | 50 | 0.345 |
| | F | 100 | 0.338 | G | 150 | 0.333 | H | 200 | 0.326 | I | 20 | 0.324 | | | |
| trans-1,3-Dichloropropene | A | 1.0 | 0.620 | B | 2.0 | 0.584 | C | 5.0 | 0.677 | D | 10 | 0.694 | E | 50 | 0.674 |
| | F | 100 | 0.714 | G | 150 | 0.664 | H | 200 | 0.623 | I | 20 | 0.697 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene (TCE) | A | 1.0 | 0.181 | B | 2.0 | 0.172 | C | 5.0 | 0.213 | D | 10 | 0.204 | E | 50 | 0.233 |
| | F | 100 | 0.228 | G | 150 | 0.221 | H | 200 | 0.209 | I | 20 | 0.224 | | | |
| Trichlorofluoromethane | | | | B | 2.0 | 0.137 | C | 5.0 | 0.190 | D | 10 | 0.176 | E | 50 | 0.225 |
| | F | 100 | 0.216 | G | 150 | 0.209 | H | 200 | 0.206 | I | 20 | 0.205 | | | |
| Trichlorotrifluoroethane | A | 1.0 | 0.154 | B | 2.0 | 0.138 | C | 5.0 | 0.181 | D | 10 | 0.175 | E | 50 | 0.223 |
| | F | 100 | 0.197 | G | 150 | 0.186 | H | 200 | 0.187 | I | 20 | 0.202 | | | |
| Vinyl Chloride | A | 1.0 | 0.208 | B | 2.0 | 0.198 | C | 5.0 | 0.254 | D | 10 | 0.242 | E | 50 | 0.277 |
| | | | | | | | | | | I | 20 | 0.272 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| 1,1,1,2-Tetrachloroethane | MS | AverageRF | % RSD | 6.6 | | ≤ 15 | 0.489 | | 0.01 |
| 1,1,1-Trichloroethane (TCA) | MS | AverageRF | % RSD | 12.6 | | ≤ 15 | 0.221 | | 0.01 |
| † 1,1,2,2-Tetrachloroethane | MS | AverageRF | % RSD | 10.1 | | ≤ 15 | 0.728 | | 0.3 |
| 1,1,2-Trichloroethane | MS | AverageRF | % RSD | 4.6 | | ≤ 15 | 0.363 | | 0.01 |
| † 1,1-Dichloroethane | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 0.391 | | 0.1 |
| ‡ 1,1-Dichloroethene | MS | AverageRF | % RSD | 10.3 | | ≤ 15 | 0.230 | | 0.01 |
| 1,2,3-Trichlorobenzene | MS | AverageRF | % RSD | 3.7 | | ≤ 15 | 0.351 | | 0.01 |
| 1,2,4-Trichlorobenzene | MS | AverageRF | % RSD | 5.8 | | ≤ 15 | 0.532 | | 0.01 |
| 1,2-Dibromo-3-chloropropane (DBCP) | MS | AverageRF | % RSD | 8.3 | | ≤ 15 | 0.0760 | | 0.01 |
| 1,2-Dibromoethane (EDB) | MS | AverageRF | % RSD | 5.6 | | ≤ 15 | 0.403 | | 0.01 |
| 1,2-Dichlorobenzene | MS | AverageRF | % RSD | 5.5 | | ≤ 15 | 1.09 | | 0.01 |
| 1,2-Dichloroethane (EDC) | MS | AverageRF | % RSD | 6.6 | | ≤ 15 | 0.139 | | 0.01 |
| 1,2-Dichloroethane-d4 | SURR | AverageRF | % RSD | 1.8 | | ≤ 15 | 0.145 | | |
| ‡ 1,2-Dichloropropane | MS | AverageRF | % RSD | 6.4 | | ≤ 15 | 0.227 | | 0.01 |
| 1,3-Dichlorobenzene | MS | AverageRF | % RSD | 9.8 | | ≤ 15 | 1.20 | | 0.01 |
| 1,4-Dichlorobenzene | MS | AverageRF | % RSD | 7.2 | | ≤ 15 | 1.22 | | 0.01 |
| 2-Butanone (MEK) | MS | AverageRF | % RSD | 9.2 | | ≤ 15 | 0.0121 | | 0.01 |
| 2-Hexanone | MS | AverageRF | % RSD | 7.0 | | ≤ 15 | 0.271 | | 0.01 |
| 4-Bromofluorobenzene | SURR | AverageRF | % RSD | 8.7 | | ≤ 15 | 0.917 | | |
| 4-Methyl-2-pentanone (MIBK) | MS | AverageRF | % RSD | 6.0 | | ≤ 15 | 0.410 | | 0.01 |
| Acetone | MS | AverageRF | % RSD | 8.2 | | ≤ 15 | 0.0296 | | 0.01 |
| Benzene | MS | AverageRF | % RSD | 7.1 | | ≤ 15 | 0.899 | | 0.01 |
| Bromochloromethane | MS | AverageRF | % RSD | 10.2 | | ≤ 15 | 0.135 | | 0.01 |
| Bromodichloromethane | MS | AverageRF | % RSD | 7.5 | | ≤ 15 | 0.231 | | 0.01 |
| † Bromoform | MS | AverageRF | % RSD | 13.8 | | ≤ 15 | 0.218 | | 0.1 |
| Bromomethane | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.176 | | 0.01 |
| Carbon Disulfide | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.689 | | 0.01 |
| Carbon Tetrachloride | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.172 | | 0.01 |
| † Chlorobenzene | MS | AverageRF | % RSD | 7.7 | | ≤ 15 | 1.48 | | 0.3 |
| Chloroethane | MS | AverageRF | % RSD | 9.6 | | ≤ 15 | 0.161 | | 0.01 |
| ‡ Chloroform | MS | AverageRF | % RSD | 7.5 | | ≤ 15 | 0.345 | | 0.01 |
| † Chloromethane | MS | AverageRF | % RSD | 9.7 | | ≤ 15 | 0.323 | | 0.1 |
| cis-1,2-Dichloroethene | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 0.290 | | 0.01 |
| cis-1,3-Dichloropropene | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 0.935 | | 0.01 |
| Cyclohexane | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.365 | | 0.01 |
| Dibromochloromethane | MS | AverageRF | % RSD | 6.2 | | ≤ 15 | 0.445 | | 0.01 |
| Dibromofluoromethane | SURR | AverageRF | % RSD | 0.8 | | ≤ 15 | 0.257 | | |
| Dichlorodifluoromethane | MS | Linear | R2 | 0.998 | | ≥ 0.99 | 0.164 | | 0.01 |
| ‡ Ethylbenzene | MS | AverageRF | % RSD | 10.6 | | ≤ 15 | 2.46 | | 0.01 |
| Isopropylbenzene | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 2.14 | | 0.01 |
| m,p-Xylenes | MS | AverageRF | % RSD | 14.9 | | ≤ 15 | 1.73 | | 0.01 |
| Methyl Acetate | MS | AverageRF | % RSD | 4.1 | | ≤ 15 | 0.290 | | 0.01 |
| Methyl tert-Butyl Ether | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 0.358 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| Methylene Chloride | MS | AverageRF | % RSD | 8.3 | | ≤ 15 | 0.251 | | 0.01 |
| o-Xylene | MS | AverageRF | % RSD | 11.2 | | ≤ 15 | 1.81 | | 0.01 |
| Styrene | MS | AverageRF | % RSD | 9.4 | | ≤ 15 | 1.52 | | 0.01 |
| Tetrachloroethene (PCE) | MS | AverageRF | % RSD | 11.3 | | ≤ 15 | 0.451 | | 0.01 |
| ‡ Toluene | MS | AverageRF | % RSD | 9.9 | | ≤ 15 | 2.38 | | 0.01 |
| Toluene-d8 | SURR | AverageRF | % RSD | 2.1 | | ≤ 15 | 2.42 | | |
| trans-1,2-Dichloroethene | MS | AverageRF | % RSD | 11.5 | | ≤ 15 | 0.307 | | 0.01 |
| trans-1,3-Dichloropropene | MS | AverageRF | % RSD | 6.5 | | ≤ 15 | 0.661 | | 0.01 |
| Trichloroethene (TCE) | MS | AverageRF | % RSD | 10.0 | | ≤ 15 | 0.209 | | 0.01 |
| Trichlorofluoromethane | MS | AverageRF | % RSD | 14.3 | | ≤ 15 | 0.196 | | 0.01 |
| Trichlorotrifluoroethane | MS | AverageRF | % RSD | 13.8 | | ≤ 15 | 0.183 | | 0.01 |
| ‡ Vinyl Chloride | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.242 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012
**Date Analyzed:** 03/07/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2752
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120307\0307-16.D

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 21 | 0.489 | 0.523 | 7 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 21 | 0.221 | 0.234 | 6 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 22 | 0.728 | 0.785 | 8 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 21 | 0.363 | 0.386 | 6 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 21 | 0.391 | 0.419 | 7 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 23 | 0.230 | 0.261 | 13 | NA | ± 30 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 20 | 0.351 | 0.349 | 0 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 20 | 0.532 | 0.523 | -2 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 19 | 0.0760 | 0.0717 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 21 | 0.403 | 0.427 | 6 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 22 | 1.09 | 1.19 | 10 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 21 | 0.139 | 0.142 | 3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.227 | 0.240 | 6 | NA | ± 30 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 22 | 1.20 | 1.35 | 12 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 22 | 1.22 | 1.33 | 9 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 110 | 0.0121 | 0.0131 | 8 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.271 | 0.280 | 3 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 110 | 0.410 | 0.432 | 5 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.0296 | 0.0276 | -7 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 22 | 0.899 | 0.979 | 9 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 21 | 0.135 | 0.143 | 6 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.231 | 0.244 | 5 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 22 | 0.218 | 0.239 | 10 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 22 | 0.176 | 0.192 | 9 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.689 | 0.795 | 15 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 19 | 0.172 | 0.181 | NA | -3 | ± 30 % | Linear |
| Chlorobenzene | 20 | 22 | 1.48 | 1.62 | 10 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 22 | 0.161 | 0.175 | 9 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 21 | 0.345 | 0.364 | 6 | NA | ± 30 % | AverageRF |
| Chloromethane | 20 | 22 | 0.323 | 0.351 | 9 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.290 | 0.306 | 6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 21 | 0.935 | 0.996 | 6 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.365 | 0.398 | NA | 0 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 21 | 0.445 | 0.478 | 7 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 18 | 0.164 | 0.164 | NA | -11 | ± 30 % | Linear |
| Ethylbenzene | 20 | 23 | 2.46 | 2.81 | 14 | NA | ± 30 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 2.14 | 2.41 | 13 | NA | ± 30 % | AverageRF |
| m,p-Xylenes | 40 | 47 | 1.73 | 2.03 | 17 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 21 | 0.290 | 0.301 | 4 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.358 | 0.363 | 2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 22 | 0.251 | 0.271 | 8 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012
**Date Analyzed:** 03/07/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2752
**Units:** ug/L

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| o-Xylene | 20 | 23 | 1.81 | 2.07 | 14 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 22 | 1.52 | 1.70 | 12 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 23 | 0.451 | 0.515 | 14 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 23 | 2.38 | 2.71 | 14 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 21 | 0.307 | 0.328 | 7 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 21 | 0.661 | 0.696 | 5 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 22 | 0.209 | 0.229 | 10 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 21 | 0.196 | 0.206 | 5 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 22 | 0.183 | 0.199 | 9 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.242 | 0.264 | NA | -2 | ± 30 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 02/27/2012
**ICAL ID:** CAL2756
**Analysis Lot:** JWG1200306
**Units:** ug/L

**File ID:** J:\MS52\DATA\MS52-120322\0322-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 18 | 0.01 | 1.21 | 1.10 | -9 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 18 | 0.01 | 0.786 | 0.715 | -9 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 1.01 | 0.998 | -1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.675 | 0.656 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 19 | 0.1 | 0.745 | 0.708 | -5 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 17 | 0.01 | 0.629 | 0.526 | -16 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 1.69 | 1.63 | -4 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 19 | 0.01 | 1.92 | 1.86 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 18 | 0.01 | 0.232 | 0.213 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.878 | 0.824 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 18 | 0.01 | 2.42 | 2.22 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 18 | 0.01 | 0.536 | 0.491 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 50 | | 0.251 | 0.251 | 0 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 19 | 0.01 | 0.396 | 0.378 | -4 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 19 | 0.01 | 2.67 | 2.49 | -7 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 18 | 0.01 | 2.65 | 2.44 | -8 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.126 | 0.129 | 3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.01 | 0.514 | 0.521 | 1 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 47 | | 0.918 | 0.861 | -6 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 100 | 0.01 | 0.729 | 0.733 | 1 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 98 | 0.01 | 0.0878 | 0.0782 | NA | -2 | ± 30 % | Linear |
| Benzene | 20 | 19 | 0.01 | 1.74 | 1.63 | -6 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 20 | 0.01 | 0.265 | 0.260 | -2 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 18 | 0.01 | 0.592 | 0.536 | -9 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 18 | 0.1 | 0.693 | 0.631 | -9 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.01 | 0.267 | 0.247 | -7 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.01 | 1.03 | 1.20 | 16 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 17 | 0.01 | 0.667 | 0.591 | NA | -17 | ± 30 % | Linear |
| Chlorobenzene | 20 | 19 | 0.3 | 3.32 | 3.19 | -4 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 19 | 0.01 | 0.302 | 0.288 | -4 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 18 | 0.01 | 0.828 | 0.729 | -12 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 17 | 0.1 | 0.551 | 0.480 | -13 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 19 | 0.01 | 0.573 | 0.541 | -6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 19 | 0.01 | 1.71 | 1.63 | -5 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.684 | 0.674 | -2 | NA | ± 30 % | AverageRF |
| Dibromochloromethane | 20 | 18 | 0.01 | 1.09 | 0.995 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 50 | | 0.241 | 0.238 | -1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 18 | 0.01 | 0.554 | 0.489 | -12 | NA | ± 30 % | AverageRF |
| Ethylbenzene | 20 | 19 | 0.01 | 5.75 | 5.57 | -3 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 21 | 0.01 | 4.91 | 5.09 | 4 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 02/27/2012
**ICAL ID:** CAL2756
**Analysis Lot:** JWG1200306
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 39 | 0.01 | 4.53 | 4.39 | -3 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.510 | 0.509 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 1.08 | 1.05 | -2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 17 | 0.01 | 0.533 | 0.395 | NA | -17 | ± 30 % | Linear |
| o-Xylene | 20 | 19 | 0.01 | 4.72 | 4.49 | -5 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 3.52 | 3.47 | -1 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 20 | 0.01 | 1.13 | 1.12 | -1 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 19 | 0.01 | 5.02 | 4.81 | -4 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 51 | | 2.48 | 2.51 | 1 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 18 | 0.01 | 0.609 | 0.556 | -9 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 18 | 0.01 | 1.58 | 1.46 | -8 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 19 | 0.01 | 0.516 | 0.490 | -5 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 18 | 0.01 | 0.810 | 0.722 | -11 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 17 | 0.01 | 0.405 | 0.353 | -13 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.01 | 0.434 | 0.432 | -1 | NA | ± 20 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200322
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120330\0330-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 19 | 0.01 | 0.489 | 0.459 | -6 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.208 | -6 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.719 | -1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.354 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 20 | 0.1 | 0.391 | 0.398 | 2 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.01 | 0.230 | 0.256 | 11 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 18 | 0.01 | 0.351 | 0.323 | -8 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.468 | -12 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 15 | 0.01 | 0.0760 | 0.0577 | -24 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.403 | 0.373 | -7 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 20 | 0.01 | 1.09 | 1.08 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.01 | 0.139 | 0.136 | -2 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 49 | | 0.145 | 0.144 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.238 | 5 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 0.01 | 1.20 | 1.22 | 2 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 21 | 0.01 | 1.22 | 1.26 | 3 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.0121 | 0.0127 | 5 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 94 | 0.01 | 0.271 | 0.254 | -6 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 54 | | 0.917 | 0.993 | 8 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.384 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.01 | 0.0296 | 0.0274 | -7 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 21 | 0.01 | 0.899 | 0.927 | 3 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.132 | -3 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 20 | 0.01 | 0.231 | 0.228 | -2 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 18 | 0.1 | 0.218 | 0.201 | -8 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 18 | 0.01 | 0.176 | 0.162 | -8 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 0.01 | 0.689 | 0.769 | 12 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 17 | 0.01 | 0.172 | 0.159 | NA | -15 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.45 | -2 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 20 | 0.01 | 0.161 | 0.160 | 0 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.01 | 0.345 | 0.338 | -2 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.378 | 17 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.290 | 0.296 | 2 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.934 | 0 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.387 | NA | -2 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 19 | 0.01 | 0.445 | 0.411 | -8 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 49 | | 0.257 | 0.254 | -1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.194 | NA | 6 | ± 30 % | Linear |
| Ethylbenzene | 20 | 20 | 0.01 | 2.46 | 2.49 | 1 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 0.01 | 2.14 | 2.50 | 17 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200322
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.76 | 2 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.290 | 0.290 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.357 | 0 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 20 | 0.01 | 0.251 | 0.252 | 0 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 20 | 0.01 | 1.81 | 1.80 | -1 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.50 | -1 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.428 | -5 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.33 | -2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.32 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.299 | -2 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 19 | 0.01 | 0.661 | 0.637 | -4 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.207 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.191 | -2 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 20 | 0.01 | 0.183 | 0.183 | 0 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 21 | 0.01 | 0.242 | 0.278 | NA | 3 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200326
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120402\0402-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 19 | 0.01 | 0.489 | 0.460 | -6 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.212 | -4 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.729 | 0 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.352 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 20 | 0.1 | 0.391 | 0.399 | 2 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 23 | 0.01 | 0.230 | 0.263 | 14 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 0.351 | 0.329 | -6 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.470 | -12 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 16 | 0.01 | 0.0760 | 0.0614 | -19 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 18 | 0.01 | 0.403 | 0.371 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 19 | 0.01 | 1.09 | 1.02 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 19 | 0.01 | 0.139 | 0.132 | -5 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 47 | | 0.145 | 0.137 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.237 | 5 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 0.01 | 1.20 | 1.21 | 1 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 20 | 0.01 | 1.22 | 1.21 | -1 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 97 | 0.01 | 0.0121 | 0.0118 | -3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 92 | 0.01 | 0.271 | 0.249 | -8 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 53 | | 0.917 | 0.967 | 5 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.386 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 88 | 0.01 | 0.0296 | 0.0261 | -12 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 21 | 0.01 | 0.899 | 0.965 | 7 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.129 | -5 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 20 | 0.01 | 0.231 | 0.234 | 1 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.1 | 0.218 | 0.211 | -3 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.01 | 0.176 | 0.165 | -6 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.01 | 0.689 | 0.804 | 17 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 18 | 0.01 | 0.172 | 0.170 | NA | -9 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.46 | -1 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 20 | 0.01 | 0.161 | 0.163 | 1 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.01 | 0.345 | 0.336 | -2 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.375 | 16 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.01 | 0.290 | 0.305 | 5 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.946 | 1 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.392 | NA | -1 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 18 | 0.01 | 0.445 | 0.407 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 50 | | 0.257 | 0.259 | 1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.191 | NA | 5 | ± 30 % | Linear |
| Ethylbenzene | 20 | 19 | 0.01 | 2.46 | 2.36 | -4 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 0.01 | 2.14 | 2.43 | 13 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200326
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.76 | 2 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.290 | 0.283 | -2 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.360 | 1 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 21 | 0.01 | 0.251 | 0.261 | 4 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 21 | 0.01 | 1.81 | 1.87 | 3 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.52 | 0 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.429 | -5 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.42 | 2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.32 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.309 | 1 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.661 | 0.653 | -1 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.208 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.194 | -1 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 20 | 0.01 | 0.183 | 0.186 | 2 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.01 | 0.242 | 0.276 | NA | 2 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200334
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120403\0403-03.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 18 | 0.01 | 0.489 | 0.451 | -8 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.210 | -5 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.734 | 1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.354 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 21 | 0.1 | 0.391 | 0.401 | 3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.01 | 0.230 | 0.251 | 9 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 0.351 | 0.329 | -6 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.481 | -10 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 16 | 0.01 | 0.0760 | 0.0607 | -20 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.403 | 0.375 | -7 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 19 | 0.01 | 1.09 | 1.05 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.01 | 0.139 | 0.137 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 48 | | 0.145 | 0.140 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.233 | 3 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 21 | 0.01 | 1.20 | 1.23 | 3 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 20 | 0.01 | 1.22 | 1.20 | -2 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.0121 | 0.0124 | 2 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 93 | 0.01 | 0.271 | 0.252 | -7 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 51 | | 0.917 | 0.942 | 3 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.385 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 92 | 0.01 | 0.0296 | 0.0273 | -8 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 20 | 0.01 | 0.899 | 0.915 | 2 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.128 | -5 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.01 | 0.231 | 0.238 | 3 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.1 | 0.218 | 0.202 | -7 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 18 | 0.01 | 0.176 | 0.157 | -11 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 0.01 | 0.689 | 0.769 | 12 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 18 | 0.01 | 0.172 | 0.166 | NA | -11 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.45 | -2 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 21 | 0.01 | 0.161 | 0.165 | 3 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 19 | 0.01 | 0.345 | 0.329 | -5 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.369 | 14 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.290 | 0.289 | 0 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.922 | -1 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.392 | NA | -1 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 18 | 0.01 | 0.445 | 0.406 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 48 | | 0.257 | 0.248 | -4 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.189 | NA | 4 | ± 30 % | Linear |
| Ethylbenzene | 20 | 20 | 0.01 | 2.46 | 2.51 | 2 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 22 | 0.01 | 2.14 | 2.38 | 11 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200334
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.78 | 3 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 19 | 0.01 | 0.290 | 0.272 | -6 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.358 | 0 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 20 | 0.01 | 0.251 | 0.246 | -2 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 20 | 0.01 | 1.81 | 1.82 | 0 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.51 | 0 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.420 | -7 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.44 | 2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.31 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.304 | -1 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.661 | 0.651 | -2 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.206 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.191 | -2 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 21 | 0.01 | 0.183 | 0.192 | 5 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 21 | 0.01 | 0.242 | 0.280 | NA | 3 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360

## Analysis Run Log
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260B

**Analysis Lot:** JWG1200306
**Instrument ID:** MS52

| File ID | Sample Name | Lab Code | Date Analysis Started | Start Time | Q | Date Analysis Finished | Finish Time |
|---|---|---|---|---|---|---|---|
| \0322-01.D | GC/MS Tuning - Bromofluorobenzene | JWG1200306-1 | 3/22/2012 | 09:17 | | 3/22/2012 | 09:32 |
| \0322-02.D | Continuing Calibration Verification | JWG1200306-2 | 3/22/2012 | 09:45 | | 3/22/2012 | 10:00 |
| \0322-03.D | Lab Control Sample | JWG1200305-1 | 3/22/2012 | 10:14 | | 3/22/2012 | 10:29 |
| \0322-05.D | Method Blank | JWG1200305-2 | 3/22/2012 | 11:28 | | 3/22/2012 | 11:43 |
| \0322-19.D | CRHE-188849-IDW-03212012 | J1201360-025 | 3/22/2012 | 18:20 | | 3/22/2012 | 18:35 |
| \0322-20.D | CRHE-188797-IDW-03212012 | J1201360-026 | 3/22/2012 | 18:48 | | 3/22/2012 | 19:03 |
| \0322-21.D | CRHE-188842-IDW-03212012 | J1201360-027 | 3/22/2012 | 19:17 | | 3/22/2012 | 19:32 |
| \0322-22.D | CRHE-188838-IDW-03212012 | J1201360-028 | 3/22/2012 | 19:45 | | 3/22/2012 | 20:00 |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360

## Analysis Run Log
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260B

**Analysis Lot:** JWG1200322
**Instrument ID:** MS53

| File ID | Sample Name | Lab Code | Date Analysis Started | Start Time | Q | Date Analysis Finished | Finish Time |
|---|---|---|---|---|---|---|---|
| \0330-01.D | GC/MS Tuning - Bromofluorobenzene | JWG1200322-1 | 3/30/2012 | 10:42 | | 3/30/2012 | 10:57 |
| \0330-02.D | Continuing Calibration Verification | JWG1200322-2 | 3/30/2012 | 11:12 | | 3/30/2012 | 11:27 |
| \0330-03.D | Lab Control Sample | JWG1200321-1 | 3/30/2012 | 11:42 | | 3/30/2012 | 11:57 |
| \0330-06.D | Method Blank | JWG1200321-2 | 3/30/2012 | 13:10 | | 3/30/2012 | 13:25 |
| \0330-07.D | CRHE-MW0032-045.0-03192012 | J1201360-001 | 3/30/2012 | 13:40 | | 3/30/2012 | 13:55 |
| \0330-08.D | CRHE-MW0030-010.0-03192012 | J1201360-002 | 3/30/2012 | 14:10 | | 3/30/2012 | 14:25 |
| \0330-09.D | CRHE-MW0023-065.0-03192012 | J1201360-003 | 3/30/2012 | 14:40 | | 3/30/2012 | 14:55 |
| \0330-10.D | CRHE-MW0031-045.0-03192012 | J1201360-004 | 3/30/2012 | 15:09 | | 3/30/2012 | 15:24 |
| \0330-11.D | CRHE-IW0020I-045.0-03192012 | J1201360-005 | 3/30/2012 | 15:39 | | 3/30/2012 | 15:54 |
| \0330-12.D | CRHE-MW0039-030.0-03192012 | J1201360-006 | 3/30/2012 | 16:09 | | 3/30/2012 | 16:24 |
| \0330-13.D | CRHE-MW0038-010.0-03192012 | J1201360-007 | 3/30/2012 | 16:39 | | 3/30/2012 | 16:54 |
| \0330-14.D | EB01-03192012 | J1201360-008 | 3/30/2012 | 17:09 | | 3/30/2012 | 17:24 |
| \0330-15.D | CRHE-IW0015I-040.0-03192012 | J1201360-009 | 3/30/2012 | 17:39 | | 3/30/2012 | 17:54 |
| \0330-16.D | CRHE-MW0034-038.5-03202012 | J1201360-010 | 3/30/2012 | 18:09 | | 3/30/2012 | 18:24 |
| \0330-17.D | CRHE-IW0019I-040.0-03202012 | J1201360-011 | 3/30/2012 | 18:39 | | 3/30/2012 | 18:54 |
| \0330-18.D | CRHE-MW0033-048.5-03202012 | J1201360-012 | 3/30/2012 | 19:09 | | 3/30/2012 | 19:24 |
| \0330-19.D | CRHE-IW0021I-045.0-03202012 | J1201360-013 | 3/30/2012 | 19:39 | | 3/30/2012 | 19:54 |
| \0330-20.D | CRHE-MW0035-045.0-03202012 | J1201360-014 | 3/30/2012 | 20:09 | | 3/30/2012 | 20:24 |
| \0330-21.D | CRHE-MW0028-040.0-03202012 | J1201360-015 | 3/30/2012 | 20:39 | | 3/30/2012 | 20:54 |
| \0330-22.D | CRHE-MW0037-030.0-03202012 | J1201360-016 | 3/30/2012 | 21:08 | | 3/30/2012 | 21:23 |
| \0330-23.D | CRHE-IW0017I-030.0-03202012 | J1201360-017 | 3/30/2012 | 21:38 | | 3/30/2012 | 21:53 |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Service Request:** J1201360

## Analysis Run Log
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200326
**Instrument ID:** MS53

| File ID | Sample Name | Lab Code | Date Analysis Started | Start Time | Q | Date Analysis Finished | Finish Time |
|---|---|---|---|---|---|---|---|
| \0402-01.D | GC/MS Tuning - Bromofluorobenzene | JWG1200326-1 | 4/2/2012 | 08:51 | | 4/2/2012 | 09:06 |
| \0402-02.D | Continuing Calibration Verification | JWG1200326-2 | 4/2/2012 | 09:21 | | 4/2/2012 | 09:36 |
| \0402-03.D | Lab Control Sample | JWG1200325-1 | 4/2/2012 | 09:51 | | 4/2/2012 | 10:06 |
| \0402-06.D | Method Blank | JWG1200325-2 | 4/2/2012 | 11:20 | | 4/2/2012 | 11:35 |
| \0402-07.D | Trip Blank | J1201360-029 | 4/2/2012 | 11:50 | | 4/2/2012 | 12:05 |
| \0402-08.D | CRHE-MW0032-045.0-03192012 | J1201360-001 | 4/2/2012 | 12:20 | | 4/2/2012 | 12:35 |
| \0402-09.D | CRHE-MW0031-045.0-03192012 | J1201360-004 | 4/2/2012 | 12:49 | | 4/2/2012 | 13:04 |
| \0402-10.D | CRHE-IW0020I-045.0-03192012 | J1201360-005 | 4/2/2012 | 13:20 | | 4/2/2012 | 13:35 |
| \0402-11.D | CRHE-MW0039-030.0-03192012 | J1201360-006 | 4/2/2012 | 13:50 | | 4/2/2012 | 14:05 |
| \0402-12.D | CRHE-MW0034-038.5-03202012 | J1201360-010 | 4/2/2012 | 14:20 | | 4/2/2012 | 14:35 |
| \0402-13.D | CRHE-IW0019I-040.0-03202012 | J1201360-011 | 4/2/2012 | 14:50 | | 4/2/2012 | 15:05 |
| \0402-14.D | CRHE-MW0035-045.0-03202012 | J1201360-014 | 4/2/2012 | 15:19 | | 4/2/2012 | 15:34 |
| \0402-15.D | CRHE-MW0028-040.0-03202012 | J1201360-015 | 4/2/2012 | 15:49 | | 4/2/2012 | 16:04 |
| \0402-16.D | CRHE-IW0017I-030.0-03202012 | J1201360-017 | 4/2/2012 | 16:19 | | 4/2/2012 | 16:34 |
| \0402-17.D | CRHE-MW0027-045.0-03212012 | J1201360-022 | 4/2/2012 | 16:49 | | 4/2/2012 | 17:04 |
| \0402-18.D | CRHE-MW0022-065.0-03212012 | J1201360-021 | 4/2/2012 | 17:19 | | 4/2/2012 | 17:34 |
| \0402-19.D | CRHE-MW0026-035.0-03212012 | J1201360-020 | 4/2/2012 | 17:49 | | 4/2/2012 | 18:04 |
| \0402-20.D | CRHE-MW0029-045.0-03212012 | J1201360-019 | 4/2/2012 | 18:19 | | 4/2/2012 | 18:34 |
| \0402-21.D | CRHE-IW0014I-040.0-03212012 | J1201360-018 | 4/2/2012 | 18:49 | | 4/2/2012 | 19:04 |
| \0402-22.D | CRHE-MW0024-010.0-03212012 | J1201360-023 | 4/2/2012 | 19:19 | | 4/2/2012 | 19:34 |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360

## Analysis Run Log
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260B

**Analysis Lot:** JWG1200334
**Instrument ID:** MS53

| File ID | Sample Name | Lab Code | Date Analysis Started | Start Time | Q | Date Analysis Finished | Finish Time |
|---|---|---|---|---|---|---|---|
| \0403-01.D | GC/MS Tuning - Bromofluorobenzene | JWG1200334-1 | 4/3/2012 | 10:53 | | 4/3/2012 | 11:08 |
| \0403-03.D | Continuing Calibration Verification | JWG1200334-2 | 4/3/2012 | 11:53 | | 4/3/2012 | 12:08 |
| \0403-04.D | Lab Control Sample | JWG1200333-3 | 4/3/2012 | 12:25 | | 4/3/2012 | 12:40 |
| \0403-07.D | Method Blank | JWG1200333-4 | 4/3/2012 | 13:53 | | 4/3/2012 | 14:08 |
| \0403-08.D | CRHE-IW0014I-040.0-03212012 | J1201360-018 | 4/3/2012 | 14:23 | | 4/3/2012 | 14:38 |
| \0403-09.D | CRHE-MW0022-065.0-03212012 | J1201360-021 | 4/3/2012 | 14:52 | | 4/3/2012 | 15:07 |
| \0403-10.D | CRHE-MW0029-045.0-03212012 | J1201360-019 | 4/3/2012 | 15:22 | | 4/3/2012 | 15:37 |
| \0403-11.D | CRHE-MW0026-035.0-03212012 | J1201360-020 | 4/3/2012 | 15:51 | | 4/3/2012 | 16:06 |
| \0403-12.D | CRHE-MW0027-045.0-03212012 | J1201360-022 | 4/3/2012 | 16:21 | | 4/3/2012 | 16:36 |
| \0403-13.D | CHRE-MW0036-010.0-03202012 | J1201360-030 | 4/3/2012 | 16:50 | | 4/3/2012 | 17:05 |
| \0403-14.D | CRHE-MW0025-030.0-03212012 | J1201360-024 | 4/3/2012 | 17:20 | | 4/3/2012 | 17:35 |
| \0403-16.D | CRHE-MW0025-030.0-03212012 | J1201360-024 | 4/3/2012 | 18:18 | | 4/3/2012 | 18:33 |
| \0403-17.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 18:48 | | 4/3/2012 | 19:03 |
| \0403-18.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 19:17 | | 4/3/2012 | 19:32 |
| \0403-19.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 19:46 | | 4/3/2012 | 20:01 |
| \0403-20.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 20:16 | | 4/3/2012 | 20:31 |
| \0403-21.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 20:46 | | 4/3/2012 | 21:01 |
| \0403-22.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 21:15 | | 4/3/2012 | 21:30 |
| \0403-23.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 21:45 | | 4/3/2012 | 22:00 |
| \0403-24.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 22:15 | | 4/3/2012 | 22:30 |
| \0403-26.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 23:14 | | 4/3/2012 | 23:29 |
| \0403-27.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 23:44 | | 4/3/2012 | 23:59 |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012

## Extraction Prep Log
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Extraction Lot:** JWG1200321
**Level:** Low

| Sample Name | Lab Code | Date Collected | Date Received | Sample Amount | Final Volume | % Solids | Note |
|---|---|---|---|---|---|---|---|
| CRHE-MW0032-045.0-03192( | J1201360-001 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0030-010.0-03192( | J1201360-002 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0023-065.0-03192( | J1201360-003 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0031-045.0-03192( | J1201360-004 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0020I-045.0-031920 | J1201360-005 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0039-030.0-03192( | J1201360-006 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0038-010.0-03192( | J1201360-007 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| EB01-03192012 | J1201360-008 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0015I-040.0-031920 | J1201360-009 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0034-038.5-03202( | J1201360-010 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0019I-040.0-032020 | J1201360-011 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0033-048.5-03202( | J1201360-012 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0021I-045.0-032020 | J1201360-013 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0035-045.0-03202( | J1201360-014 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0028-040.0-03202( | J1201360-015 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0037-030.0-03202( | J1201360-016 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0017I-030.0-032020 | J1201360-017 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| Method Blank | JWG1200321-2 | NA | NA | 10ml | 10ml | NA | |
| Lab Control Sample | JWG1200321-1 | NA | NA | 10ml | 10ml | NA | |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012

## Extraction Prep Log
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Extraction Lot:** JWG1200325
**Level:** Low

| Sample Name | Lab Code | Date Collected | Date Received | Sample Amount | Final Volume | % Solids | Note |
|---|---|---|---|---|---|---|---|
| CRHE-MW0032-045.0-03192( | J1201360-001 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0031-045.0-03192( | J1201360-004 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0020I-045.0-031920 | J1201360-005 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0039-030.0-03192( | J1201360-006 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0034-038.5-03202( | J1201360-010 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0019I-040.0-032020 | J1201360-011 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0035-045.0-03202( | J1201360-014 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0028-040.0-03202( | J1201360-015 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0017I-030.0-032020 | J1201360-017 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0014I-040.0-032120 | J1201360-018 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0029-045.0-03212( | J1201360-019 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0026-035.0-03212( | J1201360-020 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0022-065.0-03212( | J1201360-021 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0027-045.0-03212( | J1201360-022 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0024-010.0-03212( | J1201360-023 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| Trip Blank | J1201360-029 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| Method Blank | JWG1200325-2 | NA | NA | 10ml | 10ml | NA | |
| Lab Control Sample | JWG1200325-1 | NA | NA | 10ml | 10ml | NA | |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012

## Extraction Prep Log
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Extraction Lot:** JWG1200333
**Level:** Low

| Sample Name | Lab Code | Date Collected | Date Received | Sample Amount | Final Volume | % Solids | Note |
|---|---|---|---|---|---|---|---|
| CRHE-IW0014I-040.0-032120 | J1201360-018 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0029-045.0-03212C | J1201360-019 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0026-035.0-03212C | J1201360-020 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0022-065.0-03212C | J1201360-021 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0027-045.0-03212C | J1201360-022 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0025-030.0-03212C | J1201360-024 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0025-030.0-03212C | J1201360-024 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CHRE-MW0036-010.0-03202C | J1201360-030 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| Method Blank | JWG1200333-4 | NA | NA | 10ml | 10ml | NA | |
| Lab Control Sample | JWG1200333-3 | NA | NA | 10ml | 10ml | NA | |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012

## Extraction Prep Log
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Extraction Lot:** JWG1200305
**Level:** Low

| Sample Name | Lab Code | Date Collected | Date Received | Sample Amount | Final Volume | % Solids | Note |
|---|---|---|---|---|---|---|---|
| CRHE-188849-IDW-03212012 | J1201360-025 | 03/21/12 | 03/22/12 | 5.9300g | 5mL | 84 | |
| CRHE-188797-IDW-03212012 | J1201360-026 | 03/21/12 | 03/22/12 | 5.1200g | 5mL | 88 | |
| CRHE-188842-IDW-03212012 | J1201360-027 | 03/21/12 | 03/22/12 | 5.9600g | 5mL | 83 | |
| CRHE-188838-IDW-03212012 | J1201360-028 | 03/21/12 | 03/22/12 | 5.3500g | 5mL | 81 | |
| Method Blank | JWG1200305-2 | NA | NA | 5.00g | 5ml | 100 | |
| Lab Control Sample | JWG1200305-1 | NA | NA | 5.00g | 5ml | 100 | |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

Columbia Analytical Services™

# Validation Package

9143 Philips Highway, Suite 200
Jacksonville, Florida 32256
Phone: (904) 739-2277 Fax (904) 739-2011
www.caslab.com

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Validation Package



p:\Stealth\Crystal.rpt\DividerB.rpt

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Validation Package

## QC Reports



p:\Stealth\Crystal.rpt\DividerC.rpt

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360

## Surrogate Recovery Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 | Sur2 | Sur3 | Sur4 |
|---|---|---|---|---|---|
| CRHE-MW0032-045.0-03192012 | J1201360-001 | 97 | 109 | 99 | 98 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | 98 | 106 | 98 | 101 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | 100 | 107 | 99 | 96 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | 97 | 106 | 100 | 98 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | 96 | 107 | 100 | 99 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | 99 | 113 | 99 | 97 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | 100 | 109 | 100 | 100 |
| EB01-03192012 | J1201360-008 | 97 | 106 | 99 | 101 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | 101 | 107 | 99 | 100 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | 99 | 109 | 101 | 98 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | 98 | 105 | 97 | 102 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | 96 | 109 | 96 | 103 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | 99 | 109 | 99 | 99 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | 99 | 108 | 98 | 96 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | 95 | 110 | 98 | 98 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | 97 | 107 | 99 | 98 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | 97 | 108 | 99 | 100 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | 94 | 107 | 97 | 99 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | 98 | 112 | 99 | 100 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | 99 | 108 | 95 | 96 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | 99 | 107 | 99 | 98 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | 96 | 107 | 98 | 96 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | 98 | 107 | 99 | 98 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | 97 | 111 | 92 | 98 |
| Trip Blank | J1201360-029 | 94 | 111 | 97 | 96 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | 97 | 111 | 97 | 100 |
| Method Blank | JWG1200321-2 | 98 | 105 | 100 | 95 |
| Method Blank | JWG1200325-2 | 99 | 105 | 99 | 98 |
| Method Blank | JWG1200333-4 | 96 | 103 | 97 | 96 |
| Lab Control Sample | JWG1200321-1 | 99 | 107 | 99 | 100 |
| Lab Control Sample | JWG1200325-1 | 94 | 104 | 98 | 97 |
| Lab Control Sample | JWG1200333-3 | 95 | 109 | 97 | 96 |

**Surrogate Recovery Control Limits (%)**

| | | |
|---|---|---|
| Sur1 = | 1,2-Dichloroethane-d4 | 72-121 |
| Sur2 = | 4-Bromofluorobenzene | 86-113 |
| Sur3 = | Dibromofluoromethane | 86-112 |
| Sur4 = | Toluene-d8 | 88-115 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360

## Surrogate Recovery Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 | Sur2 | Sur3 | Sur4 |
|---|---|---|---|---|---|
| CRHE-188849-IDW-03212012 | J1201360-025 | 94 | 99 | 96 | 101 |
| CRHE-188797-IDW-03212012 | J1201360-026 | 92 | 102 | 96 | 105 |
| CRHE-188842-IDW-03212012 | J1201360-027 | 90 | 103 | 91 | 105 |
| CRHE-188838-IDW-03212012 | J1201360-028 | 94 | 116 | 99 | 108 |
| Method Blank | JWG1200305-2 | 94 | 95 | 96 | 102 |
| Lab Control Sample | JWG1200305-1 | 94 | 97 | 98 | 101 |

**Surrogate Recovery Control Limits (%)**

| | |
|---|---|
| Sur1 = 1,2-Dichloroethane-d4 | 80-120 |
| Sur2 = 4-Bromofluorobenzene | 64-135 |
| Sur3 = Dibromofluoromethane | 74-125 |
| Sur4 = Toluene-d8 | 46-156 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 09:45

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS52\DATA\MS52-120322\0322-02.D
**Instrument ID:** MS52
**Analysis Method:** 8260B

**Lab Code:** JWG1200306-2
**Analysis Lot:** JWG1200306

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 53,457 | 11.60 | 47,863 | 9.16 | 122,997 | 6.17 |
| | **Upper Limit ==>** | 106,914 | 12.10 | 95,726 | 9.66 | 245,994 | 6.67 |
| | **Lower Limit ==>** | 26,729 | 11.10 | 23,932 | 8.66 | 61,499 | 5.67 |
| | **ICAL Result ==>** | 48,766 | 11.60 | 43,592 | 9.16 | 110,750 | 6.17 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200305-1 | 52,658 | 11.60 | 48,614 | 9.16 | 125,564 | 6.17 |
| Method Blank | JWG1200305-2 | 50,853 | 11.59 | 47,975 | 9.16 | 125,218 | 6.17 |
| CRHE-188849-IDW-03212012 | J1201360-025 | 45,168 | 11.60 | 46,360 | 9.16 | 121,432 | 6.17 |
| CRHE-188797-IDW-03212012 | J1201360-026 | 40,555 | 11.60 | 43,358 | 9.16 | 116,772 | 6.17 |
| CRHE-188842-IDW-03212012 | J1201360-027 | 40,415 | 11.60 | 42,767 | 9.17 | 117,887 | 6.17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | 35,955 | 11.60 | 42,626 | 9.16 | 118,248 | 6.18 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 11:12

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120330\0330-02.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200322-2
**Analysis Lot:** JWG1200322

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 328,039 | 11.12 | 413,475 | 8.80 | 1,184,883 | 5.51 |
| | **Upper Limit ==>** | 656,078 | 11.62 | 826,950 | 9.30 | 2,369,766 | 6.01 |
| | **Lower Limit ==>** | 164,020 | 10.62 | 206,738 | 8.30 | 592,442 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200321-1 | 318,654 | 11.12 | 397,222 | 8.80 | 1,171,291 | 5.51 |
| Method Blank | JWG1200321-2 | 337,907 | 11.13 | 403,441 | 8.80 | 1,145,808 | 5.51 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | 315,754 | 11.13 | 399,126 | 8.80 | 1,148,047 | 5.51 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | 323,166 | 11.13 | 392,864 | 8.80 | 1,177,874 | 5.51 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | 322,551 | 11.13 | 384,128 | 8.80 | 1,104,427 | 5.52 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | 331,420 | 11.13 | 396,550 | 8.80 | 1,156,645 | 5.51 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | 322,585 | 11.13 | 393,897 | 8.80 | 1,164,407 | 5.51 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | 319,516 | 11.13 | 401,946 | 8.80 | 1,172,242 | 5.51 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | 327,430 | 11.13 | 405,589 | 8.80 | 1,173,486 | 5.51 |
| EB01-03192012 | J1201360-008 | 330,521 | 11.13 | 389,632 | 8.80 | 1,146,764 | 5.51 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | 332,367 | 11.13 | 389,217 | 8.80 | 1,147,109 | 5.52 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | 321,006 | 11.13 | 397,996 | 8.80 | 1,125,602 | 5.52 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | 316,893 | 11.13 | 382,659 | 8.80 | 1,133,176 | 5.51 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | 324,878 | 11.13 | 388,136 | 8.80 | 1,169,094 | 5.52 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | 320,327 | 11.13 | 393,071 | 8.80 | 1,149,686 | 5.51 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | 330,706 | 11.12 | 409,470 | 8.80 | 1,174,443 | 5.52 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | 319,532 | 11.13 | 409,711 | 8.80 | 1,202,891 | 5.51 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | 322,399 | 11.13 | 400,508 | 8.80 | 1,144,939 | 5.51 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | 326,036 | 11.12 | 400,878 | 8.80 | 1,158,793 | 5.51 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 09:21

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120402\0402-02.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200326-2
**Analysis Lot:** JWG1200326

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 338,282 | 11.13 | 419,066 | 8.80 | 1,182,437 | 5.51 |
| | **Upper Limit ==>** | 676,564 | 11.63 | 838,132 | 9.30 | 2,364,874 | 6.01 |
| | **Lower Limit ==>** | 169,141 | 10.63 | 209,533 | 8.30 | 591,219 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200325-1 | 322,206 | 11.13 | 386,918 | 8.80 | 1,106,267 | 5.51 |
| Method Blank | JWG1200325-2 | 322,051 | 11.13 | 383,241 | 8.80 | 1,093,788 | 5.51 |
| Trip Blank | J1201360-029 | 314,454 | 11.13 | 402,969 | 8.80 | 1,172,678 | 5.51 |
| CRHE-MW0032-045.0-03192012D | J1201360-001 | 317,812 | 11.13 | 379,377 | 8.80 | 1,119,988 | 5.51 |
| CRHE-MW0031-045.0-03192012D | J1201360-004 | 322,770 | 11.13 | 395,883 | 8.80 | 1,159,224 | 5.51 |
| CRHE-IW0020I-045.0-03192012D | J1201360-005 | 319,432 | 11.13 | 390,271 | 8.80 | 1,120,582 | 5.51 |
| CRHE-MW0039-030.0-03192012D | J1201360-006 | 325,142 | 11.13 | 389,370 | 8.80 | 1,108,624 | 5.51 |
| CRHE-MW0034-038.5-03202012D | J1201360-010 | 327,008 | 11.13 | 395,803 | 8.80 | 1,096,028 | 5.51 |
| CRHE-IW0019I-040.0-03202012D | J1201360-011 | 319,532 | 11.13 | 392,191 | 8.80 | 1,116,694 | 5.51 |
| CRHE-MW0035-045.0-03202012D | J1201360-014 | 317,749 | 11.13 | 383,466 | 8.80 | 1,119,903 | 5.52 |
| CRHE-MW0028-040.0-03202012D | J1201360-015 | 320,292 | 11.13 | 385,204 | 8.80 | 1,151,728 | 5.51 |
| CRHE-IW0017I-030.0-03202012D | J1201360-017 | 313,536 | 11.13 | 395,840 | 8.80 | 1,123,689 | 5.51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | 316,218 | 11.13 | 402,165 | 8.80 | 1,116,092 | 5.52 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | 332,100 | 11.13 | 405,929 | 8.80 | 1,179,725 | 5.52 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | 326,026 | 11.13 | 414,330 | 8.80 | 1,170,714 | 5.52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | 314,676 | 11.13 | 399,293 | 8.80 | 1,157,084 | 5.52 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | 324,993 | 11.13 | 393,830 | 8.80 | 1,133,953 | 5.52 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | 318,409 | 11.13 | 384,678 | 8.80 | 1,105,383 | 5.52 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 11:53

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120403\0403-03.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200334-2
**Analysis Lot:** JWG1200334

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| | **Results ==>** | 317,277 | 11.13 | 383,361 | 8.80 | 1,079,939 | 5.51 |
| | **Upper Limit ==>** | 634,554 | 11.63 | 766,722 | 9.30 | 2,159,878 | 6.01 |
| | **Lower Limit ==>** | 158,639 | 10.63 | 191,681 | 8.30 | 539,970 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200333-3 | 309,433 | 11.13 | 402,331 | 8.80 | 1,130,474 | 5.51 |
| Method Blank | JWG1200333-4 | 316,138 | 11.13 | 389,420 | 8.80 | 1,095,457 | 5.51 |
| CRHE-IW0014I-040.0-03212012RI | J1201360-018 | 316,659 | 11.13 | 370,802 | 8.80 | 1,091,211 | 5.51 |
| CRHE-MW0022-065.0-03212012R | J1201360-021 | 315,576 | 11.13 | 390,002 | 8.80 | 1,108,138 | 5.51 |
| CRHE-MW0029-045.0-03212012D | J1201360-019 | 301,400 | 11.13 | 375,955 | 8.80 | 1,085,571 | 5.51 |
| CRHE-MW0026-035.0-03212012D | J1201360-020 | 304,045 | 11.12 | 375,196 | 8.80 | 1,067,834 | 5.51 |
| CRHE-MW0027-045.0-03212012D | J1201360-022 | 304,830 | 11.12 | 381,443 | 8.80 | 1,056,074 | 5.51 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | 307,096 | 11.13 | 380,864 | 8.80 | 1,120,196 | 5.51 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | 305,472 | 11.13 | 384,814 | 8.80 | 1,106,582 | 5.51 |
| CRHE-MW0025-030.0-03212012D | J1201360-024 | 313,276 | 11.13 | 402,002 | 8.80 | 1,159,827 | 5.52 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200321

| | Lab Control Sample JWG1200321-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| 1,1,1,2-Tetrachloroethane | 19.8 | 20.0 | 99 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 19.6 | 20.0 | 98 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 20.3 | 20.0 | 102 | 66-135 |
| 1,1,2-Trichloroethane | 19.6 | 20.0 | 98 | 75-122 |
| 1,1-Dichloroethane | 20.5 | 20.0 | 103 | 79-117 |
| 1,1-Dichloroethene | 23.0 | 20.0 | 115 | 72-128 |
| 1,2,3-Trichlorobenzene | 20.7 | 20.0 | 104 | 62-136 |
| 1,2,4-Trichlorobenzene | 19.2 | 20.0 | 96 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.5 | 20.0 | 82 | 60-122 |
| 1,2-Dibromoethane (EDB) | 18.7 | 20.0 | 93 | 76-118 |
| 1,2-Dichlorobenzene | 20.5 | 20.0 | 103 | 81-115 |
| 1,2-Dichloroethane (EDC) | 19.9 | 20.0 | 100 | 70-117 |
| 1,2-Dichloropropane | 21.6 | 20.0 | 108 | 79-117 |
| 1,3-Dichlorobenzene | 21.5 | 20.0 | 107 | 82-116 |
| 1,4-Dichlorobenzene | 20.9 | 20.0 | 105 | 82-115 |
| 2-Butanone (MEK) | 102 | 100 | 102 | 62-138 |
| 2-Hexanone | 93.2 | 100 | 93 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 96.1 | 100 | 96 | 77-120 |
| Acetone | 88.3 | 100 | 88 | 42-161 |
| Benzene | 21.4 | 20.0 | 107 | 80-117 |
| Bromochloromethane | 19.6 | 20.0 | 98 | 78-118 |
| Bromodichloromethane | 20.2 | 20.0 | 101 | 75-118 |
| Bromoform | 19.2 | 20.0 | 96 | 63-121 |
| Bromomethane | 19.1 | 20.0 | 95 | 31-153 |
| Carbon Disulfide | 119 | 100 | 119 | 72-128 |
| Carbon Tetrachloride | 18.3 | 20.0 | 91 | 67-124 |
| Chlorobenzene | 20.7 | 20.0 | 103 | 83-118 |
| Chloroethane | 21.5 | 20.0 | 107 | 68-132 |
| Chloroform | 19.6 | 20.0 | 98 | 77-116 |
| Chloromethane | 24.8 | 20.0 | 124 | 60-128 |
| cis-1,2-Dichloroethene | 21.5 | 20.0 | 108 | 78-117 |
| cis-1,3-Dichloropropene | 20.9 | 20.0 | 105 | 80-119 |
| Cyclohexane | 20.3 | 20.0 | 102 | 75-124 |
| Dibromochloromethane | 19.4 | 20.0 | 97 | 74-121 |
| Dichlorodifluoromethane | 22.1 | 20.0 | 111 | 49-132 |
| Ethylbenzene | 21.8 | 20.0 | 109 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200321

| Analyte Name | Lab Control Sample JWG1200321-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| Isopropylbenzene | 24.0 | 20.0 | 120 * | 78-119 |
| m,p-Xylenes | 44.3 | 40.0 | 111 | 79-122 |
| Methyl Acetate | 19.4 | 20.0 | 97 | 50-137 |
| Methyl tert-Butyl Ether | 20.0 | 20.0 | 100 | 73-118 |
| Methylene Chloride | 20.5 | 20.0 | 103 | 75-123 |
| o-Xylene | 21.3 | 20.0 | 106 | 80-119 |
| Styrene | 20.9 | 20.0 | 105 | 80-121 |
| Tetrachloroethene (PCE) | 20.2 | 20.0 | 101 | 75-126 |
| Toluene | 21.1 | 20.0 | 105 | 52-152 |
| trans-1,2-Dichloroethene | 20.9 | 20.0 | 104 | 75-121 |
| trans-1,3-Dichloropropene | 19.7 | 20.0 | 98 | 76-118 |
| Trichloroethene (TCE) | 20.6 | 20.0 | 103 | 78-122 |
| Trichlorofluoromethane | 20.3 | 20.0 | 101 | 58-134 |
| Trichlorotrifluoroethane | 21.4 | 20.0 | 107 | 77-128 |
| Vinyl Chloride | 21.4 | 20.0 | 107 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200325

| | Lab Control Sample JWG1200325-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| 1,1,1,2-Tetrachloroethane | 19.4 | 20.0 | 97 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 20.2 | 20.0 | 101 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 21.1 | 20.0 | 106 | 66-135 |
| 1,1,2-Trichloroethane | 19.6 | 20.0 | 98 | 75-122 |
| 1,1-Dichloroethane | 21.2 | 20.0 | 106 | 79-117 |
| 1,1-Dichloroethene | 23.6 | 20.0 | 118 | 72-128 |
| 1,2,3-Trichlorobenzene | 19.5 | 20.0 | 98 | 62-136 |
| 1,2,4-Trichlorobenzene | 18.7 | 20.0 | 93 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.7 | 20.0 | 83 | 60-122 |
| 1,2-Dibromoethane (EDB) | 19.1 | 20.0 | 96 | 76-118 |
| 1,2-Dichlorobenzene | 20.3 | 20.0 | 101 | 81-115 |
| 1,2-Dichloroethane (EDC) | 19.8 | 20.0 | 99 | 70-117 |
| 1,2-Dichloropropane | 21.5 | 20.0 | 108 | 79-117 |
| 1,3-Dichlorobenzene | 21.0 | 20.0 | 105 | 82-116 |
| 1,4-Dichlorobenzene | 21.0 | 20.0 | 105 | 82-115 |
| 2-Butanone (MEK) | 99.8 | 100 | 100 | 62-138 |
| 2-Hexanone | 94.3 | 100 | 94 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 95.0 | 100 | 95 | 77-120 |
| Acetone | 86.2 | 100 | 86 | 42-161 |
| Benzene | 21.4 | 20.0 | 107 | 80-117 |
| Bromochloromethane | 19.4 | 20.0 | 97 | 78-118 |
| Bromodichloromethane | 20.9 | 20.0 | 104 | 75-118 |
| Bromoform | 20.2 | 20.0 | 101 | 63-121 |
| Bromomethane | 19.4 | 20.0 | 97 | 31-153 |
| Carbon Disulfide | 121 | 100 | 121 | 72-128 |
| Carbon Tetrachloride | 19.3 | 20.0 | 96 | 67-124 |
| Chlorobenzene | 20.3 | 20.0 | 101 | 83-118 |
| Chloroethane | 22.3 | 20.0 | 112 | 68-132 |
| Chloroform | 20.5 | 20.0 | 102 | 77-116 |
| Chloromethane | 25.2 | 20.0 | 126 | 60-128 |
| cis-1,2-Dichloroethene | 21.7 | 20.0 | 108 | 78-117 |
| cis-1,3-Dichloropropene | 20.7 | 20.0 | 104 | 80-119 |
| Cyclohexane | 20.8 | 20.0 | 104 | 75-124 |
| Dibromochloromethane | 19.5 | 20.0 | 97 | 74-121 |
| Dichlorodifluoromethane | 22.3 | 20.0 | 111 | 49-132 |
| Ethylbenzene | 21.1 | 20.0 | 105 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200325

| Analyte Name | Lab Control Sample JWG1200325-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| Isopropylbenzene | 23.8 | 20.0 | 119 | 78-119 |
| m,p-Xylenes | 44.3 | 40.0 | 111 | 79-122 |
| Methyl Acetate | 18.4 | 20.0 | 92 | 50-137 |
| Methyl tert-Butyl Ether | 20.8 | 20.0 | 104 | 73-118 |
| Methylene Chloride | 21.2 | 20.0 | 106 | 75-123 |
| o-Xylene | 21.4 | 20.0 | 107 | 80-119 |
| Styrene | 21.2 | 20.0 | 106 | 80-121 |
| Tetrachloroethene (PCE) | 20.2 | 20.0 | 101 | 75-126 |
| Toluene | 21.1 | 20.0 | 105 | 52-152 |
| trans-1,2-Dichloroethene | 21.2 | 20.0 | 106 | 75-121 |
| trans-1,3-Dichloropropene | 19.9 | 20.0 | 100 | 76-118 |
| Trichloroethene (TCE) | 20.8 | 20.0 | 104 | 78-122 |
| Trichlorofluoromethane | 21.2 | 20.0 | 106 | 58-134 |
| Trichlorotrifluoroethane | 22.4 | 20.0 | 112 | 77-128 |
| Vinyl Chloride | 22.0 | 20.0 | 110 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200333

| Analyte Name | Lab Control Sample JWG1200333-3 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.9 | 20.0 | 95 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 19.5 | 20.0 | 97 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 19.6 | 20.0 | 98 | 66-135 |
| 1,1,2-Trichloroethane | 19.4 | 20.0 | 97 | 75-122 |
| 1,1-Dichloroethane | 20.4 | 20.0 | 102 | 79-117 |
| 1,1-Dichloroethene | 22.4 | 20.0 | 112 | 72-128 |
| 1,2,3-Trichlorobenzene | 19.2 | 20.0 | 96 | 62-136 |
| 1,2,4-Trichlorobenzene | 17.9 | 20.0 | 89 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.1 | 20.0 | 81 | 60-122 |
| 1,2-Dibromoethane (EDB) | 18.2 | 20.0 | 91 | 76-118 |
| 1,2-Dichlorobenzene | 19.6 | 20.0 | 98 | 81-115 |
| 1,2-Dichloroethane (EDC) | 20.0 | 20.0 | 100 | 70-117 |
| 1,2-Dichloropropane | 21.1 | 20.0 | 105 | 79-117 |
| 1,3-Dichlorobenzene | 20.9 | 20.0 | 105 | 82-116 |
| 1,4-Dichlorobenzene | 20.4 | 20.0 | 102 | 82-115 |
| 2-Butanone (MEK) | 98.5 | 100 | 99 | 62-138 |
| 2-Hexanone | 91.0 | 100 | 91 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 92.1 | 100 | 92 | 77-120 |
| Acetone | 90.0 | 100 | 90 | 42-161 |
| Benzene | 20.5 | 20.0 | 102 | 80-117 |
| Bromochloromethane | 18.7 | 20.0 | 94 | 78-118 |
| Bromodichloromethane | 20.6 | 20.0 | 103 | 75-118 |
| Bromoform | 18.3 | 20.0 | 92 | 63-121 |
| Bromomethane | 17.8 | 20.0 | 89 | 31-153 |
| Carbon Disulfide | 114 | 100 | 114 | 72-128 |
| Carbon Tetrachloride | 17.7 | 20.0 | 88 | 67-124 |
| Chlorobenzene | 19.7 | 20.0 | 98 | 83-118 |
| Chloroethane | 19.9 | 20.0 | 100 | 68-132 |
| Chloroform | 19.7 | 20.0 | 98 | 77-116 |
| Chloromethane | 21.6 | 20.0 | 108 | 60-128 |
| cis-1,2-Dichloroethene | 20.9 | 20.0 | 104 | 78-117 |
| cis-1,3-Dichloropropene | 19.6 | 20.0 | 98 | 80-119 |
| Cyclohexane | 19.8 | 20.0 | 99 | 75-124 |
| Dibromochloromethane | 18.4 | 20.0 | 92 | 74-121 |
| Dichlorodifluoromethane | 19.8 | 20.0 | 99 | 49-132 |
| Ethylbenzene | 20.8 | 20.0 | 104 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200333

| | Lab Control Sample JWG1200333-3 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| Isopropylbenzene | 24.1 | 20.0 | 120 * | 78-119 |
| m,p-Xylenes | 41.0 | 40.0 | 102 | 79-122 |
| Methyl Acetate | 19.1 | 20.0 | 95 | 50-137 |
| Methyl tert-Butyl Ether | 19.8 | 20.0 | 99 | 73-118 |
| Methylene Chloride | 20.0 | 20.0 | 100 | 75-123 |
| o-Xylene | 20.2 | 20.0 | 101 | 80-119 |
| Styrene | 19.9 | 20.0 | 99 | 80-121 |
| Tetrachloroethene (PCE) | 18.9 | 20.0 | 94 | 75-126 |
| Toluene | 20.0 | 20.0 | 100 | 52-152 |
| trans-1,2-Dichloroethene | 20.1 | 20.0 | 100 | 75-121 |
| trans-1,3-Dichloropropene | 19.3 | 20.0 | 96 | 76-118 |
| Trichloroethene (TCE) | 20.3 | 20.0 | 101 | 78-122 |
| Trichlorofluoromethane | 18.9 | 20.0 | 95 | 58-134 |
| Trichlorotrifluoroethane | 20.0 | 20.0 | 100 | 77-128 |
| Vinyl Chloride | 19.6 | 20.0 | 98 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry
**Level:** Low
**Extraction Lot:** JWG1200305

| | Lab Control Sample JWG1200305-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| 1,1,1,2-Tetrachloroethane | 18.1 | 20.0 | 90 | 71-124 |
| 1,1,1-Trichloroethane (TCA) | 17.4 | 20.0 | 87 | 72-131 |
| 1,1,2,2-Tetrachloroethane | 17.4 | 20.0 | 87 | 51-136 |
| 1,1,2-Trichloroethane | 18.4 | 20.0 | 92 | 74-113 |
| 1,1-Dichloroethane | 18.3 | 20.0 | 92 | 74-124 |
| 1,1-Dichloroethene | 16.0 | 20.0 | 80 | 67-128 |
| 1,2,3-Trichlorobenzene | 18.9 | 20.0 | 94 | 64-129 |
| 1,2,4-Trichlorobenzene | 18.7 | 20.0 | 93 | 61-135 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 17.4 | 20.0 | 87 | 54-129 |
| 1,2-Dibromoethane (EDB) | 18.2 | 20.0 | 91 | 74-114 |
| 1,2-Dichlorobenzene | 18.6 | 20.0 | 93 | 74-111 |
| 1,2-Dichloroethane (EDC) | 17.7 | 20.0 | 88 | 74-120 |
| 1,2-Dichloropropane | 18.3 | 20.0 | 91 | 77-119 |
| 1,3-Dichlorobenzene | 18.5 | 20.0 | 93 | 74-114 |
| 1,4-Dichlorobenzene | 18.7 | 20.0 | 93 | 72-112 |
| 2-Butanone (MEK) | 87.5 | 100 | 87 | 55-136 |
| 2-Hexanone | 88.0 | 100 | 88 | 60-127 |
| 4-Methyl-2-pentanone (MIBK) | 90.1 | 100 | 90 | 64-122 |
| Acetone | 83.4 | 100 | 83 | 30-164 |
| Benzene | 18.2 | 20.0 | 91 | 76-123 |
| Bromochloromethane | 19.0 | 20.0 | 95 | 75-124 |
| Bromodichloromethane | 17.1 | 20.0 | 85 | 74-124 |
| Bromoform | 16.8 | 20.0 | 84 | 58-126 |
| Bromomethane | 18.5 | 20.0 | 92 | 25-175 |
| Carbon Disulfide | 110 | 100 | 110 | 62-134 |
| Carbon Tetrachloride | 16.0 | 20.0 | 80 | 68-134 |
| Chlorobenzene | 19.0 | 20.0 | 95 | 74-116 |
| Chloroethane | 17.5 | 20.0 | 88 | 64-131 |
| Chloroform | 17.1 | 20.0 | 86 | 75-120 |
| Chloromethane | 16.6 | 20.0 | 83 | 59-138 |
| cis-1,2-Dichloroethene | 18.4 | 20.0 | 92 | 74-122 |
| cis-1,3-Dichloropropene | 18.5 | 20.0 | 93 | 75-115 |
| Cyclohexane | 19.3 | 20.0 | 96 | 70-127 |
| Dibromochloromethane | 16.7 | 20.0 | 83 | 67-123 |
| Dichlorodifluoromethane | 17.1 | 20.0 | 86 | 51-150 |
| Ethylbenzene | 18.9 | 20.0 | 95 | 71-122 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry
**Level:** Low
**Extraction Lot:** JWG1200305

| Analyte Name | Lab Control Sample JWG1200305-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| Isopropylbenzene | 20.9 | 20.0 | 105 | 67-124 |
| m,p-Xylenes | 38.0 | 40.0 | 95 | 71-122 |
| Methyl Acetate | 16.6 | 20.0 | 83 | 25-160 |
| Methyl tert-Butyl Ether | 18.1 | 20.0 | 90 | 72-121 |
| Methylene Chloride | 16.6 | 20.0 | 83 | 60-140 |
| o-Xylene | 18.3 | 20.0 | 92 | 71-120 |
| Styrene | 19.1 | 20.0 | 95 | 70-122 |
| Tetrachloroethene (PCE) | 18.9 | 20.0 | 95 | 69-124 |
| Toluene | 18.7 | 20.0 | 93 | 72-118 |
| trans-1,2-Dichloroethene | 17.6 | 20.0 | 88 | 71-127 |
| trans-1,3-Dichloropropene | 17.6 | 20.0 | 88 | 73-115 |
| Trichloroethene (TCE) | 18.4 | 20.0 | 92 | 70-129 |
| Trichlorofluoromethane | 17.4 | 20.0 | 87 | 67-129 |
| Trichlorotrifluoroethane | 17.7 | 20.0 | 89 | 66-131 |
| Vinyl Chloride | 18.9 | 20.0 | 95 | 62-137 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 13:10

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120330\0330-06.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200321

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200321-1 | J:\MS53\DATA\MS53-120330\0330-03.D | 03/30/12 | 11:42 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/12 | 13:40 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/12 | 14:10 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/12 | 14:40 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/12 | 15:09 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/12 | 15:39 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/12 | 16:09 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/12 | 16:39 |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/12 | 17:09 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/12 | 17:39 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/12 | 18:09 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/12 | 18:39 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/12 | 19:09 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/12 | 19:39 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/12 | 20:09 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/12 | 20:39 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/12 | 21:08 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/12 | 21:38 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 11:20

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120402\0402-06.D

**Level:** Low
**Extraction Lot:** JWG1200325

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200325-1 | J:\MS53\DATA\MS53-120402\0402-03.D | 04/02/12 | 09:51 |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/12 | 11:50 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/12 | 12:20 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/12 | 12:49 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/12 | 13:20 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/12 | 13:50 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/12 | 14:20 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/12 | 14:50 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/12 | 15:19 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/12 | 15:49 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/12 | 16:19 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/12 | 16:49 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/12 | 17:19 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/12 | 17:49 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/12 | 18:19 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/12 | 18:49 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/12 | 19:19 |

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Extracted:** | 04/03/2012 |
| **Sample Matrix:** | Water | **Date Analyzed:** | 04/03/2012 |
| | | **Time Analyzed:** | 13:53 |

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Instrument ID:** | MS53 |
| **Lab Code:** | JWG1200333-4 | **File ID:** | J:\MS53\DATA\MS53-120403\0403-07.D |
| **Extraction Method:** | EPA 5030B | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | JWG1200333 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200333-3 | J:\MS53\DATA\MS53-120403\0403-04.D | 04/03/12 | 12:25 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/12 | 14:23 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/12 | 14:52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/12 | 15:22 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/12 | 15:51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/12 | 16:21 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/12 | 16:50 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/12 | 17:20 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/12 | 18:18 |

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Extracted:** | 03/22/2012 |
| **Sample Matrix:** | Soil | **Date Analyzed:** | 03/22/2012 |
| | | **Time Analyzed:** | 11:28 |

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Instrument ID:** | MS52 |
| **Lab Code:** | JWG1200305-2 | **File ID:** | J:\MS52\DATA\MS52-120322\0322-05.D |
| **Extraction Method:** | EPA 5035 | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | JWG1200305 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200305-1 | J:\MS52\DATA\MS52-120322\0322-03.D | 03/22/12 | 10:14 |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/12 | 18:20 |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/12 | 18:48 |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/12 | 19:17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/12 | 19:45 |

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Extracted:** | 03/30/2012 |
| **Sample Matrix:** | Water | **Date Analyzed:** | 03/30/2012 |
| | | **Time Analyzed:** | 11:42 |

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | Lab Control Sample | **Instrument ID:** | MS53 |
| **Lab Code:** | JWG1200321-1 | **File ID:** | J:\MS53\DATA\MS53-120330\0330-03.D |
| **Extraction Method:** | EPA 5030B | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | JWG1200321 |

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200321-2 | J:\MS53\DATA\MS53-120330\0330-06.D | 03/30/12 | 13:10 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/12 | 13:40 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/12 | 14:10 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/12 | 14:40 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/12 | 15:09 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/12 | 15:39 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/12 | 16:09 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/12 | 16:39 |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/12 | 17:09 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/12 | 17:39 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/12 | 18:09 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/12 | 18:39 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/12 | 19:09 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/12 | 19:39 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/12 | 20:09 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/12 | 20:39 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/12 | 21:08 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/12 | 21:38 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 09:51

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200325-1

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120402\0402-03.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200325

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200325-2 | J:\MS53\DATA\MS53-120402\0402-06.D | 04/02/12 | 11:20 |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/12 | 11:50 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/12 | 12:20 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/12 | 12:49 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/12 | 13:20 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/12 | 13:50 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/12 | 14:20 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/12 | 14:50 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/12 | 15:19 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/12 | 15:49 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/12 | 16:19 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/12 | 16:49 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/12 | 17:19 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/12 | 17:49 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/12 | 18:19 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/12 | 18:49 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/12 | 19:19 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 12:25

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200333-3

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120403\0403-04.D

**Level:** Low
**Extraction Lot:** JWG1200333

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200333-4 | J:\MS53\DATA\MS53-120403\0403-07.D | 04/03/12 | 13:53 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/12 | 14:23 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/12 | 14:52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/12 | 15:22 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/12 | 15:51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/12 | 16:21 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/12 | 16:50 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/12 | 17:20 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/12 | 18:18 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 10:14

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200305-1

**Instrument ID:** MS52
**File ID:** J:\MS52\DATA\MS52-120322\0322-03.D

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200305

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200305-2 | J:\MS52\DATA\MS52-120322\0322-05.D | 03/22/12 | 11:28 |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/12 | 18:20 |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/12 | 18:48 |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/12 | 19:17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/12 | 19:45 |

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Validation Package

## Raw Data



p:\Stealth\Crystal.rpt\DividerD.rpt

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0032-045.0-03192012
**Lab Code:** J1201360-001

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.54** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | **0.57** | I | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.62** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **6.6** | | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **13** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | **0.31** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0032-045.0-03192012
**Lab Code:** J1201360-001

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.30** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.71** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **8.2** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **83** | | 20 | 4.4 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0030-010.0-03192012
**Lab Code:** J1201360-002

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | **5.9** | I | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0030-010.0-03192012
**Lab Code:** J1201360-002

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 101 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0023-065.0-03192012
**Lab Code:** J1201360-003

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **0.70** | I | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.46** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0023-065.0-03192012
**Lab Code:** J1201360-003

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.21** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0031-045.0-03192012
**Lab Code:** J1201360-004

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **59** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0031-045.0-03192012
**Lab Code:** J1201360-004

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **6.0** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | **1.5** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **200** | | 10 | 2.2 | 10 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0020I-045.0-03192012
**Lab Code:** J1201360-005

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.25** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.49** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **33** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **0.92** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **79** | | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0020I-045.0-03192012
**Lab Code:** J1201360-005

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.27** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **130** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0039-030.0-03192012
**Lab Code:** J1201360-006

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.49** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **0.96** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0039-030.0-03192012
**Lab Code:** J1201360-006

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.50** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.43** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **92** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 113 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 97 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0038-010.0-03192012
**Lab Code:** J1201360-007

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0038-010.0-03192012
**Lab Code:** J1201360-007

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** EB01-03192012
**Lab Code:** J1201360-008

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** EB01-03192012
**Lab Code:** J1201360-008

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 101 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0015I-040.0-03192012
**Lab Code:** J1201360-009

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **2.0** | | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.21** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **76** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0015I-040.0-03192012
**Lab Code:** J1201360-009

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **27** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0034-038.5-03202012
**Lab Code:** J1201360-010

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.36** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **3.4** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **12** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **1.2** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **140** | | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0034-038.5-03202012
**Lab Code:** J1201360-010

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **150** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 101 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0019I-040.0-03202012
**Lab Code:** J1201360-011

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | **4.1** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.48** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **1.3** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **1000** | | 20 | 7.2 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **1.3** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0019I-040.0-03202012
**Lab Code:** J1201360-011

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.25** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **18** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **530** | | 20 | 4.4 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 102 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0033-048.5-03202012
**Lab Code:** J1201360-012

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.92** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | **9.9** | I | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.42** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **99** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **3.0** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0033-048.5-03202012
**Lab Code:** J1201360-012

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **1.4** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | **0.52** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **33** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 96 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 103 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0021I-045.0-03202012
**Lab Code:** J1201360-013

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.98** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0021I-045.0-03202012
**Lab Code:** J1201360-013

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0035-045.0-03202012
**Lab Code:** J1201360-014

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.26** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.55** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0035-045.0-03202012
**Lab Code:** J1201360-014

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.23** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.44** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **130** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0028-040.0-03202012
**Lab Code:** J1201360-015

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.59** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.31** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **4.2** | | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **3.5** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0028-040.0-03202012
**Lab Code:** J1201360-015

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.55** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **4.1** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **180** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 95 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 110 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0037-030.0-03202012
**Lab Code:** J1201360-016

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.25** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **1.2** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.44** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **8.0** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Collected:** | 03/20/2012 |
| **Sample Matrix:** | Water | **Date Received:** | 03/22/2012 |

## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | CRHE-MW0037-030.0-03202012 | **Units:** | ug/L |
| **Lab Code:** | J1201360-016 | **Basis:** | NA |
| **Extraction Method:** | EPA 5030B | **Level:** | Low |
| **Analysis Method:** | 8260B | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.20** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **19** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0017I-030.0-03202012
**Lab Code:** J1201360-017

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.32** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.52** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0017I-030.0-03202012
**Lab Code:** J1201360-017

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.27** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **90** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0014I-040.0-03212012
**Lab Code:** J1201360-018

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | **4.0** | I | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0014I-040.0-03212012
**Lab Code:** J1201360-018

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | **3.6** | | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0029-045.0-03212012
**Lab Code:** J1201360-019

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **1.4** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | **1.4** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **420** | | 10 | 3.6 | 10 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0029-045.0-03212012
**Lab Code:** J1201360-019

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **13** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **140** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **100** | | 10 | 2.2 | 10 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 112 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0026-035.0-03212012
**Lab Code:** J1201360-020

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | **3.5** | | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **9.1** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | **6.4** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | **0.41** | I | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **3600** | | 100 | 36 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0026-035.0-03212012
**Lab Code:** J1201360-020

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | **0.22** | I | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | **0.36** | I | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **34** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **1000** | | 100 | 16 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **2000** | | 100 | 22 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 95 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0022-065.0-03212012
**Lab Code:** J1201360-021

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | **0.51** | I | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | **1.5** | | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0022-065.0-03212012
**Lab Code:** J1201360-021

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | **0.22** | I | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0027-045.0-03212012
**Lab Code:** J1201360-022

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | **0.96** | I | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **2.7** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **790** | | 100 | 36 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0027-045.0-03212012
**Lab Code:** J1201360-022

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | **0.22** | I | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **14** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **1.3** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **1700** | | 100 | 22 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0024-010.0-03212012
**Lab Code:** J1201360-023

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | 11 | | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0024-010.0-03212012
**Lab Code:** J1201360-023

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **0.74** | I | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **13** | | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0025-030.0-03212012
**Lab Code:** J1201360-024

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | **2.2** | | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | **15** | | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | **9700** | | 200 | 72 | 200 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0025-030.0-03212012
**Lab Code:** J1201360-024

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | **0.41** | I | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | **75** | | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | **0.60** | I | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | **7600** | | 200 | 44 | 200 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 92 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** Trip Blank
**Lab Code:** J1201360-029

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** Trip Blank
**Lab Code:** J1201360-029

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CHRE-MW0036-010.0-03202012
**Lab Code:** J1201360-030

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CHRE-MW0036-010.0-03202012
**Lab Code:** J1201360-030

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 95 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200333-4

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200333-4

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 103 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200321-1

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | **19.8** | | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | **19.6** | | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | **20.3** | | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | **19.6** | | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **20.5** | | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | **23.0** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | **20.7** | | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | **19.2** | | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | **16.5** | | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | **18.7** | | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | **20.5** | | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | **19.9** | | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | **21.6** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | **21.5** | | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | **20.9** | | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | **102** | | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | **93.2** | | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | **96.1** | | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | **88.3** | | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **21.4** | | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | **19.6** | | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | **20.2** | | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | **19.2** | | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | **19.1** | | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | **119** | | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | **18.3** | | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **20.7** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | **21.5** | | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **19.6** | | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | **24.8** | | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **21.5** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | **20.9** | | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **20.3** | | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | **19.4** | | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **22.1** | | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200321-1

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | **21.8** | | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | **24.0** | | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| m,p-Xylenes | **44.3** | | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | **19.4** | | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | **20.0** | | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **20.5** | | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | **21.3** | | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | **20.9** | | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | **20.2** | | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **21.1** | | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **20.9** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | **19.7** | | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | **20.6** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | **20.3** | | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | **21.4** | | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **21.4** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200325-1

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | **19.4** | | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | **20.2** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | **21.1** | | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | **19.6** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | **21.2** | | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **23.6** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | **19.5** | | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | **18.7** | | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | **16.7** | | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | **19.1** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | **20.3** | | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | **19.8** | | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | **21.5** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | **21.0** | | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | **21.0** | | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | **99.8** | | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | **94.3** | | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | **95.0** | | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | **86.2** | | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | **21.4** | | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | **19.4** | | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | **20.9** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | **20.2** | | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | **19.4** | | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | **121** | | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | **19.3** | | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | **20.3** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | **22.3** | | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | **20.5** | | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | **25.2** | | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **21.7** | | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | **20.7** | | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | **20.8** | | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | **19.5** | | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | **22.3** | | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200325-1

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | **21.1** | | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | **23.8** | | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | **44.3** | | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | **18.4** | | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | **20.8** | | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | **21.2** | | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | **21.4** | | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | **21.2** | | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | **20.2** | | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | **21.1** | | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **21.2** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | **19.9** | | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **20.8** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | **21.2** | | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | **22.4** | | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **22.0** | | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 104 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 97 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200333-3

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | **18.9** | | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | **19.5** | | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | **19.6** | | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | **19.4** | | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | **20.4** | | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | **22.4** | | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | **19.2** | | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | **17.9** | | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | **16.1** | | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | **18.2** | | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | **19.6** | | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | **20.0** | | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | **21.1** | | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | **20.9** | | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | **20.4** | | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | **98.5** | | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | **91.0** | | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | **92.1** | | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | **90.0** | | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | **20.5** | | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | **18.7** | | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | **20.6** | | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | **18.3** | | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | **17.8** | | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | **114** | | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | **17.7** | | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | **19.7** | | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | **19.9** | | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | **19.7** | | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | **21.6** | | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | **20.9** | | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | **19.6** | | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | **19.8** | | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | **18.4** | | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | **19.8** | I | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200333-3

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | **20.8** | | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | **24.1** | | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| m,p-Xylenes | **41.0** | | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | **19.1** | | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | **19.8** | | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | **20.0** | | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | **20.2** | | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | **19.9** | | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | **18.9** | | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | **20.0** | | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | **20.1** | | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | **19.3** | | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | **20.3** | | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | **18.9** | I | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | **20.0** | | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | **19.6** | | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 95 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188849-IDW-03212012
**Lab Code:** J1201360-025

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.1 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.1 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.1 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 11 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 11 | 0.40 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 26 | 0.91 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 11 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 11 | 0.59 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 130 | 3.6 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.1 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 11 | 0.42 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.1 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.1 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 11 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 110 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188849-IDW-03212012
**Lab Code:** J1201360-025

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 11 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.1 | 0.064 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 51 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.1 | 0.074 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.1 | 0.51 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.1 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 21 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 21 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.1 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 99 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 101 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188797-IDW-03212012
**Lab Code:** J1201360-026

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.6 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.6 | 0.33 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.6 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 12 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 12 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 12 | 0.44 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.6 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.6 | 0.067 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.6 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 28 | 1.0 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 12 | 0.62 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 12 | 0.65 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 140 | 3.9 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.6 | 0.077 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 12 | 0.46 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.6 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.6 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.6 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 12 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 120 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188797-IDW-03212012
**Lab Code:** J1201360-026

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.6 | 0.067 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 12 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 12 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.6 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | **2.0** | I | 56 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.6 | 0.082 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.6 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.6 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.6 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 23 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 23 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.6 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 92 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 102 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 105 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188842-IDW-03212012
**Lab Code:** J1201360-027

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.1 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.1 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.1 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 11 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 11 | 0.40 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 26 | 0.91 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 11 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 11 | 0.59 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | **22** | I | 130 | 3.6 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.1 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 11 | 0.42 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.1 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.1 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 11 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 110 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188842-IDW-03212012
**Lab Code:** J1201360-027

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 11 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.1 | 0.064 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 51 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.1 | 0.074 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.1 | 0.51 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.1 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 21 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 21 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.1 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 90 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 103 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 91 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 105 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188838-IDW-03212012
**Lab Code:** J1201360-028

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.8 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.8 | 0.34 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.8 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 12 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 12 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 12 | 0.45 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.8 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.8 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.8 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 29 | 1.1 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 12 | 0.64 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 12 | 0.67 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | **17** | I | 150 | 4.1 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.8 | 0.080 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | **2.1** | I | 12 | 0.48 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.8 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.8 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.8 | 0.32 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 12 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 120 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188838-IDW-03212012
**Lab Code:** J1201360-028

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.8 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 12 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 12 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.8 | 0.073 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 58 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.8 | 0.085 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.8 | 0.58 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.8 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.8 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 24 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 24 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.8 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 116 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 99 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 108 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200305-2

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.0 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.0 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.0 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 10 | 0.39 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 25 | 0.90 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 10 | 0.55 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 10 | 0.58 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 130 | 3.5 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.0 | 0.069 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 10 | 0.41 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.0 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.0 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 10 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 100 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200305-2

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 10 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.0 | 0.063 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 50 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.0 | 0.073 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.0 | 0.50 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.0 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 20 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.0 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 95 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 102 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200305-1

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | **18.1** | | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | **17.4** | | 5.0 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | **17.4** | | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | **18.4** | | 5.0 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | **18.3** | | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | **16.0** | | 5.0 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | **18.9** | | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | **18.7** | | 10 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | **17.4** | | 10 | 0.39 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | **18.2** | | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | **18.6** | | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | **17.7** | | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | **18.3** | | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | **18.5** | | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | **18.7** | | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | **87.5** | | 25 | 0.90 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | **88.0** | | 10 | 0.55 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | **90.1** | | 10 | 0.58 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | **83.4** | I | 130 | 3.5 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | **18.2** | | 5.0 | 0.069 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | **19.0** | | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | **17.1** | | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | **16.8** | | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | **18.5** | | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | **110** | | 10 | 0.41 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | **16.0** | | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | **19.0** | | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | **17.5** | | 5.0 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | **17.1** | | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | **16.6** | | 5.0 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | **18.4** | | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | **18.5** | | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | **19.3** | | 10 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | **16.7** | | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | **17.1** | I | 100 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200305-1

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | **18.9** | | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | **20.9** | | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | **38.0** | | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | **16.6** | | 10 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | **18.1** | | 5.0 | 0.063 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | **16.6** | I | 50 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | **18.3** | | 5.0 | 0.073 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | **19.1** | | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | **18.9** | | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | **18.7** | | 5.0 | 0.50 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | **17.6** | | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | **17.6** | | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | **18.4** | | 5.0 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | **17.4** | I | 20 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | **17.7** | I | 20 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | **18.9** | | 5.0 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 97 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 98 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 101 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Validation Package

### Standards Data



n:\Stealth\Crystal.rpt\DividerE.rpt

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 09:17

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS52\DATA\MS52-120322\0322-01.D
**Instrument ID:** MS52
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200306

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 15.1 | 3056 | PASS |
| 75 | 95 | 30 | 60 | 44.7 | 9053 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 20275 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 1378 | PASS |
| 173 | 174 | 0 | 2 | 0.4 | 78 | PASS |
| 174 | 95 | 50 | 120 | 93.5 | 18957 | PASS |
| 175 | 174 | 5 | 9 | 7.2 | 1370 | PASS |
| 176 | 174 | 95 | 101 | 98.9 | 18742 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 1226 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200306-2 | J:\MS52\DATA\MS52-120322\0322-02.D | 03/22/2012 | 09:45 | |
| Lab Control Sample | JWG1200305-1 | J:\MS52\DATA\MS52-120322\0322-03.D | 03/22/2012 | 10:14 | |
| Method Blank | JWG1200305-2 | J:\MS52\DATA\MS52-120322\0322-05.D | 03/22/2012 | 11:28 | |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/2012 | 18:20 | |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/2012 | 18:48 | |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/2012 | 19:17 | |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/2012 | 19:45 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 10:42

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120330\0330-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200322

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 15.2 | 25176 | PASS |
| 75 | 95 | 30 | 60 | 33.7 | 55912 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 166080 | PASS |
| 96 | 95 | 5 | 9 | 6.4 | 10595 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 90.7 | 150592 | PASS |
| 175 | 174 | 5 | 9 | 7.5 | 11247 | PASS |
| 176 | 174 | 95 | 101 | 95.4 | 143616 | PASS |
| 177 | 176 | 5 | 9 | 6.0 | 8649 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200322-2 | J:\MS53\DATA\MS53-120330\0330-02.D | 03/30/2012 | 11:12 | |
| Lab Control Sample | JWG1200321-1 | J:\MS53\DATA\MS53-120330\0330-03.D | 03/30/2012 | 11:42 | |
| Method Blank | JWG1200321-2 | J:\MS53\DATA\MS53-120330\0330-06.D | 03/30/2012 | 13:10 | |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/2012 | 13:40 | |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/2012 | 14:10 | |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/2012 | 14:40 | |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/2012 | 15:09 | |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/2012 | 15:39 | |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/2012 | 16:09 | |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/2012 | 16:39 | |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/2012 | 17:09 | |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/2012 | 17:39 | |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/2012 | 18:09 | |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/2012 | 18:39 | |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/2012 | 19:09 | |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/2012 | 19:39 | |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/2012 | 20:09 | |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/2012 | 20:39 | |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/2012 | 21:08 | |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/2012 | 21:38 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 08:51

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120402\0402-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200326

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.4 | 37064 | PASS |
| 75 | 95 | 30 | 60 | 35.7 | 80421 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 225429 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 14647 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 79.9 | 180139 | PASS |
| 175 | 174 | 5 | 9 | 7.7 | 13885 | PASS |
| 176 | 174 | 95 | 101 | 96.2 | 173248 | PASS |
| 177 | 176 | 5 | 9 | 6.3 | 10928 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200326-2 | J:\MS53\DATA\MS53-120402\0402-02.D | 04/02/2012 | 09:21 | |
| Lab Control Sample | JWG1200325-1 | J:\MS53\DATA\MS53-120402\0402-03.D | 04/02/2012 | 09:51 | |
| Method Blank | JWG1200325-2 | J:\MS53\DATA\MS53-120402\0402-06.D | 04/02/2012 | 11:20 | |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/2012 | 11:50 | |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/2012 | 12:20 | |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/2012 | 12:49 | |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/2012 | 13:20 | |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/2012 | 13:50 | |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/2012 | 14:20 | |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/2012 | 14:50 | |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/2012 | 15:19 | |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/2012 | 15:49 | |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/2012 | 16:19 | |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/2012 | 16:49 | |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/2012 | 17:19 | |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/2012 | 17:49 | |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/2012 | 18:19 | |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/2012 | 18:49 | |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/2012 | 19:19 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 10:53

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120403\0403-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200334

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.8 | 34616 | PASS |
| 75 | 95 | 30 | 60 | 36.5 | 75304 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 206165 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 13426 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 74.0 | 152600 | PASS |
| 175 | 174 | 5 | 9 | 8.1 | 12319 | PASS |
| 176 | 174 | 95 | 101 | 95.9 | 146363 | PASS |
| 177 | 176 | 5 | 9 | 6.7 | 9745 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200334-2 | J:\MS53\DATA\MS53-120403\0403-03.D | 04/03/2012 | 11:53 | |
| Lab Control Sample | JWG1200333-3 | J:\MS53\DATA\MS53-120403\0403-04.D | 04/03/2012 | 12:25 | |
| Method Blank | JWG1200333-4 | J:\MS53\DATA\MS53-120403\0403-07.D | 04/03/2012 | 13:53 | |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/2012 | 14:23 | |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/2012 | 14:52 | |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/2012 | 15:22 | |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/2012 | 15:51 | |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/2012 | 16:21 | |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/2012 | 16:50 | |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/2012 | 17:20 | |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/2012 | 18:18 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\MS52\DATA\MS52-120227\0227-04.D | F | J:\MS52\DATA\MS52-120227\0227-09.D |
| B | J:\MS52\DATA\MS52-120227\0227-05.D | G | J:\MS52\DATA\MS52-120227\0227-10.D |
| C | J:\MS52\DATA\MS52-120227\0227-06.D | H | J:\MS52\DATA\MS52-120227\0227-11.D |
| D | J:\MS52\DATA\MS52-120227\0227-07.D | I | J:\MS52\DATA\MS52-120227\0227-12.D |
| E | J:\MS52\DATA\MS52-120227\0227-08.D | | |

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | A | 1.0 | 1.06 | B | 2.0 | 1.07 | C | 5.0 | 1.09 | D | 10 | 1.16 | E | 20 | 1.24 |
| | F | 50 | 1.29 | G | 100 | 1.41 | H | 150 | 1.24 | I | 200 | 1.35 | | | |
| 1,1,1-Trichloroethane (TCA) | A | 1.0 | 0.672 | B | 2.0 | 0.693 | C | 5.0 | 0.706 | D | 10 | 0.709 | E | 20 | 0.843 |
| | F | 50 | 0.863 | G | 100 | 0.927 | H | 150 | 0.774 | I | 200 | 0.890 | | | |
| 1,1,2,2-Tetrachloroethane | A | 1.0 | 0.996 | B | 2.0 | 0.870 | C | 5.0 | 0.993 | D | 10 | 0.943 | E | 20 | 0.984 |
| | F | 50 | 1.03 | G | 100 | 1.16 | H | 150 | 1.08 | I | 200 | 1.03 | | | |
| 1,1,2-Trichloroethane | A | 1.0 | 0.650 | B | 2.0 | 0.651 | C | 5.0 | 0.608 | D | 10 | 0.664 | E | 20 | 0.665 |
| | F | 50 | 0.704 | G | 100 | 0.758 | H | 150 | 0.685 | I | 200 | 0.694 | | | |
| 1,1-Dichloroethane | A | 1.0 | 0.636 | B | 2.0 | 0.665 | C | 5.0 | 0.745 | D | 10 | 0.712 | E | 20 | 0.795 |
| | F | 50 | 0.787 | G | 100 | 0.830 | H | 150 | 0.727 | I | 200 | 0.812 | | | |
| 1,1-Dichloroethene | A | 1.0 | 0.518 | B | 2.0 | 0.546 | C | 5.0 | 0.598 | D | 10 | 0.564 | E | 20 | 0.676 |
| | F | 50 | 0.699 | G | 100 | 0.729 | H | 150 | 0.616 | I | 200 | 0.713 | | | |
| 1,2,3-Trichlorobenzene | | | | | | | C | 5.0 | 1.51 | D | 10 | 1.53 | E | 20 | 1.65 |
| | F | 50 | 1.68 | G | 100 | 1.88 | H | 150 | 1.79 | I | 200 | 1.79 | | | |
| 1,2,4-Trichlorobenzene | | | | | | | C | 5.0 | 1.78 | D | 10 | 1.65 | E | 20 | 1.85 |
| | F | 50 | 1.95 | G | 100 | 2.14 | H | 150 | 2.02 | I | 200 | 2.06 | | | |
| 1,2-Dibromo-3-chloropropane (DBCP | | | | | | | C | 5.0 | 0.201 | D | 10 | 0.207 | E | 20 | 0.215 |
| | F | 50 | 0.224 | G | 100 | 0.265 | H | 150 | 0.268 | I | 200 | 0.246 | | | |
| 1,2-Dibromoethane (EDB) | A | 1.0 | 0.828 | B | 2.0 | 0.746 | C | 5.0 | 0.831 | D | 10 | 0.838 | E | 20 | 0.879 |
| | F | 50 | 0.910 | G | 100 | 1.02 | H | 150 | 0.922 | I | 200 | 0.926 | | | |
| 1,2-Dichlorobenzene | A | 1.0 | 2.20 | B | 2.0 | 2.23 | C | 5.0 | 2.29 | D | 10 | 2.27 | E | 20 | 2.42 |
| | F | 50 | 2.48 | G | 100 | 2.75 | H | 150 | 2.54 | I | 200 | 2.57 | | | |
| 1,2-Dichloroethane (EDC) | A | 1.0 | 0.451 | B | 2.0 | 0.543 | C | 5.0 | 0.534 | D | 10 | 0.526 | E | 20 | 0.550 |
| | F | 50 | 0.559 | G | 100 | 0.594 | H | 150 | 0.529 | I | 200 | 0.541 | | | |
| 1,2-Dichloroethane-d4 | A | 50 | 0.259 | B | 50 | 0.263 | C | 50 | 0.260 | D | 50 | 0.257 | E | 50 | 0.250 |
| | F | 50 | 0.246 | G | 50 | 0.250 | H | 50 | 0.238 | I | 50 | 0.232 | | | |
| 1,2-Dichloropropane | A | 1.0 | 0.317 | B | 2.0 | 0.359 | C | 5.0 | 0.385 | D | 10 | 0.389 | E | 20 | 0.419 |
| | F | 50 | 0.414 | G | 100 | 0.449 | H | 150 | 0.398 | I | 200 | 0.432 | | | |
| 1,3-Dichlorobenzene | A | 1.0 | 2.49 | B | 2.0 | 2.45 | C | 5.0 | 2.50 | D | 10 | 2.50 | E | 20 | 2.68 |
| | F | 50 | 2.78 | G | 100 | 2.98 | H | 150 | 2.75 | I | 200 | 2.89 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | A | 1.0 | 2.55 | B | 2.0 | 2.49 | C | 5.0 | 2.54 | D | 10 | 2.51 | E | 20 | 2.68 |
| | F | 50 | 2.71 | G | 100 | 2.93 | H | 150 | 2.66 | I | 200 | 2.76 | | | |
| 2-Butanone (MEK) | A | 5.0 | 0.110 | B | 10 | 0.121 | C | 25 | 0.134 | D | 50 | 0.129 | E | 100 | 0.122 |
| | F | 250 | 0.126 | G | 500 | 0.137 | H | 750 | 0.133 | I | 1000 | 0.120 | | | |
| 2-Hexanone | A | 5.0 | 0.483 | B | 10 | 0.458 | C | 25 | 0.508 | D | 50 | 0.502 | E | 100 | 0.493 |
| | F | 250 | 0.519 | G | 500 | 0.587 | H | 750 | 0.567 | I | 1000 | 0.513 | | | |
| 4-Bromofluorobenzene | A | 50 | 0.871 | B | 50 | 0.864 | C | 50 | 0.864 | D | 50 | 0.885 | E | 50 | 0.872 |
| | F | 50 | 0.901 | G | 50 | 0.940 | H | 50 | 1.01 | I | 50 | 1.05 | | | |
| 4-Methyl-2-pentanone (MIBK) | A | 5.0 | 0.687 | B | 10 | 0.676 | C | 25 | 0.718 | D | 50 | 0.734 | E | 100 | 0.712 |
| | F | 250 | 0.727 | G | 500 | 0.822 | H | 750 | 0.779 | I | 1000 | 0.708 | | | |
| Acetone | A | 5.0 | 0.109 | B | 10 | 0.114 | C | 25 | 0.0910 | D | 50 | 0.0862 | E | 100 | 0.0760 |
| | F | 250 | 0.0764 | G | 500 | 0.0848 | H | 750 | 0.0801 | I | 1000 | 0.0729 | | | |
| Benzene | A | 1.0 | 1.64 | B | 2.0 | 1.61 | C | 5.0 | 1.72 | D | 10 | 1.63 | E | 20 | 1.81 |
| | F | 50 | 1.84 | G | 100 | 1.93 | H | 150 | 1.66 | I | 200 | 1.84 | | | |
| Bromochloromethane | A | 1.0 | 0.229 | B | 2.0 | 0.251 | C | 5.0 | 0.275 | D | 10 | 0.266 | E | 20 | 0.289 |
| | F | 50 | 0.281 | G | 100 | 0.280 | H | 150 | 0.254 | I | 200 | 0.262 | | | |
| Bromodichloromethane | A | 1.0 | 0.550 | B | 2.0 | 0.529 | C | 5.0 | 0.562 | D | 10 | 0.550 | E | 20 | 0.610 |
| | F | 50 | 0.623 | G | 100 | 0.668 | H | 150 | 0.599 | I | 200 | 0.632 | | | |
| Bromoform | A | 1.0 | 0.578 | B | 2.0 | 0.610 | C | 5.0 | 0.604 | D | 10 | 0.656 | E | 20 | 0.670 |
| | F | 50 | 0.738 | G | 100 | 0.832 | H | 150 | 0.780 | I | 200 | 0.769 | | | |
| Bromomethane | A | 1.0 | 0.210 | B | 2.0 | 0.245 | C | 5.0 | 0.239 | D | 10 | 0.240 | E | 20 | 0.289 |
| | F | 50 | 0.312 | G | 100 | 0.316 | H | 150 | 0.267 | I | 200 | 0.285 | | | |
| Carbon Disulfide | A | 5.0 | 0.950 | B | 10 | 0.925 | C | 25 | 0.995 | D | 50 | 0.961 | E | 100 | 1.11 |
| | F | 250 | 1.12 | G | 500 | 1.16 | H | 750 | 0.967 | I | 1000 | 1.12 | | | |
| Carbon Tetrachloride | A | 1.0 | 0.499 | B | 2.0 | 0.583 | C | 5.0 | 0.602 | D | 10 | 0.603 | E | 20 | 0.705 |
| | F | 50 | 0.755 | G | 100 | 0.804 | H | 150 | 0.676 | I | 200 | 0.775 | | | |
| Chlorobenzene | A | 1.0 | 2.91 | B | 2.0 | 3.04 | C | 5.0 | 3.14 | D | 10 | 3.18 | E | 20 | 3.41 |
| | F | 50 | 3.49 | G | 100 | 3.79 | H | 150 | 3.26 | I | 200 | 3.61 | | | |
| Chloroethane | A | 1.0 | 0.284 | B | 2.0 | 0.292 | C | 5.0 | 0.287 | D | 10 | 0.265 | E | 20 | 0.321 |
| | F | 50 | 0.322 | G | 100 | 0.335 | H | 150 | 0.285 | I | 200 | 0.325 | | | |
| Chloroform | A | 1.0 | 0.865 | B | 2.0 | 0.772 | C | 5.0 | 0.799 | D | 10 | 0.779 | E | 20 | 0.844 |
| | F | 50 | 0.850 | G | 100 | 0.904 | H | 150 | 0.787 | I | 200 | 0.854 | | | |
| Chloromethane | A | 1.0 | 0.480 | B | 2.0 | 0.498 | C | 5.0 | 0.522 | D | 10 | 0.490 | E | 20 | 0.602 |
| | F | 50 | 0.595 | G | 100 | 0.630 | H | 150 | 0.530 | I | 200 | 0.616 | | | |
| cis-1,2-Dichloroethene | A | 1.0 | 0.521 | B | 2.0 | 0.547 | C | 5.0 | 0.560 | D | 10 | 0.524 | E | 20 | 0.600 |
| | F | 50 | 0.608 | G | 100 | 0.638 | H | 150 | 0.550 | I | 200 | 0.612 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | A | 1.0 | 1.59 | B | 2.0 | 1.51 | C | 5.0 | 1.57 | D | 10 | 1.55 | E | 20 | 1.74 |
| | F | 50 | 1.82 | G | 100 | 1.96 | H | 150 | 1.77 | I | 200 | 1.89 | | | |
| Cyclohexane | A | 1.0 | 0.520 | B | 2.0 | 0.584 | C | 5.0 | 0.628 | D | 10 | 0.623 | E | 20 | 0.741 |
| | F | 50 | 0.762 | G | 100 | 0.817 | H | 150 | 0.690 | I | 200 | 0.796 | | | |
| Dibromochloromethane | A | 1.0 | 0.936 | B | 2.0 | 0.974 | C | 5.0 | 1.04 | D | 10 | 1.01 | E | 20 | 1.10 |
| | F | 50 | 1.15 | G | 100 | 1.28 | H | 150 | 1.15 | I | 200 | 1.20 | | | |
| Dibromofluoromethane | A | 50 | 0.243 | B | 50 | 0.248 | C | 50 | 0.245 | D | 50 | 0.244 | E | 50 | 0.243 |
| | F | 50 | 0.240 | G | 50 | 0.232 | H | 50 | 0.237 | I | 50 | 0.232 | | | |
| Dichlorodifluoromethane | A | 1.0 | 0.485 | B | 2.0 | 0.502 | C | 5.0 | 0.513 | D | 10 | 0.488 | E | 20 | 0.600 |
| | F | 50 | 0.618 | G | 100 | 0.650 | H | 150 | 0.531 | I | 200 | 0.602 | | | |
| Ethylbenzene | A | 1.0 | 4.98 | B | 2.0 | 4.98 | C | 5.0 | 5.31 | D | 10 | 5.29 | E | 20 | 6.02 |
| | F | 50 | 6.24 | G | 100 | 6.74 | H | 150 | 5.77 | I | 200 | 6.43 | | | |
| Isopropylbenzene | A | 1.0 | 3.99 | B | 2.0 | 4.07 | C | 5.0 | 4.52 | D | 10 | 4.56 | E | 20 | 5.01 |
| | F | 50 | 5.26 | G | 100 | 5.79 | H | 150 | 5.23 | I | 200 | 5.74 | | | |
| m,p-Xylenes | A | 2.0 | 3.98 | B | 4.0 | 3.87 | C | 10 | 4.20 | D | 20 | 4.25 | E | 40 | 4.83 |
| | F | 100 | 4.88 | G | 200 | 5.27 | H | 300 | 4.48 | I | 400 | 4.97 | | | |
| Methyl Acetate | A | 1.0 | 0.534 | B | 2.0 | 0.515 | C | 5.0 | 0.528 | D | 10 | 0.519 | E | 20 | 0.510 |
| | F | 50 | 0.481 | G | 100 | 0.537 | H | 150 | 0.506 | I | 200 | 0.458 | | | |
| Methyl tert-Butyl Ether | A | 1.0 | 1.04 | B | 2.0 | 1.05 | C | 5.0 | 1.05 | D | 10 | 1.01 | E | 20 | 1.05 |
| | F | 50 | 1.10 | G | 100 | 1.17 | H | 150 | 1.11 | I | 200 | 1.10 | | | |
| Methylene Chloride | A | 1.0 | 0.840 | B | 2.0 | 0.616 | C | 5.0 | 0.514 | D | 10 | 0.453 | E | 20 | 0.512 |
| | F | 50 | 0.493 | G | 100 | 0.481 | H | 150 | 0.436 | I | 200 | 0.449 | | | |
| o-Xylene | A | 1.0 | 4.45 | B | 2.0 | 4.11 | C | 5.0 | 4.44 | D | 10 | 4.38 | E | 20 | 4.91 |
| | F | 50 | 5.04 | G | 100 | 5.37 | H | 150 | 4.67 | I | 200 | 5.10 | | | |
| Styrene | A | 1.0 | 2.66 | B | 2.0 | 3.13 | C | 5.0 | 3.22 | D | 10 | 3.25 | E | 20 | 3.70 |
| | F | 50 | 3.83 | G | 100 | 4.21 | H | 150 | 3.67 | I | 200 | 3.99 | | | |
| Tetrachloroethene (PCE) | A | 1.0 | 0.932 | B | 2.0 | 0.963 | C | 5.0 | 1.08 | D | 10 | 1.05 | E | 20 | 1.21 |
| | F | 50 | 1.23 | G | 100 | 1.32 | H | 150 | 1.11 | I | 200 | 1.27 | | | |
| Toluene | A | 1.0 | 4.59 | B | 2.0 | 4.55 | C | 5.0 | 4.69 | D | 10 | 4.68 | E | 20 | 5.27 |
| | F | 50 | 5.33 | G | 100 | 5.73 | H | 150 | 4.91 | I | 200 | 5.46 | | | |
| Toluene-d8 | A | 50 | 2.51 | B | 50 | 2.46 | C | 50 | 2.44 | D | 50 | 2.46 | E | 50 | 2.50 |
| | F | 50 | 2.47 | G | 50 | 2.52 | H | 50 | 2.45 | I | 50 | 2.52 | | | |
| trans-1,2-Dichloroethene | A | 1.0 | 0.580 | B | 2.0 | 0.560 | C | 5.0 | 0.577 | D | 10 | 0.557 | E | 20 | 0.650 |
| | F | 50 | 0.639 | G | 100 | 0.679 | H | 150 | 0.577 | I | 200 | 0.661 | | | |
| trans-1,3-Dichloropropene | A | 1.0 | 1.40 | B | 2.0 | 1.47 | C | 5.0 | 1.44 | D | 10 | 1.45 | E | 20 | 1.54 |
| | F | 50 | 1.64 | G | 100 | 1.85 | H | 150 | 1.67 | I | 200 | 1.74 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene (TCE) | A | 1.0 | 0.417 | B | 2.0 | 0.448 | C | 5.0 | 0.503 | D | 10 | 0.491 | E | 20 | 0.550 |
| | F | 50 | 0.557 | G | 100 | 0.591 | H | 150 | 0.512 | I | 200 | 0.578 | | | |
| Trichlorofluoromethane | A | 1.0 | 0.748 | B | 2.0 | 0.708 | C | 5.0 | 0.742 | D | 10 | 0.720 | E | 20 | 0.879 |
| | F | 50 | 0.881 | G | 100 | 0.938 | H | 150 | 0.779 | I | 200 | 0.893 | | | |
| Trichlorotrifluoroethane | A | 1.0 | 0.330 | B | 2.0 | 0.332 | C | 5.0 | 0.376 | D | 10 | 0.372 | E | 20 | 0.452 |
| | F | 50 | 0.462 | G | 100 | 0.471 | H | 150 | 0.393 | I | 200 | 0.453 | | | |
| Vinyl Chloride | A | 1.0 | 0.369 | B | 2.0 | 0.439 | C | 5.0 | 0.448 | D | 10 | 0.423 | E | 20 | 0.496 |
| | F | 50 | 0.465 | G | 100 | 0.461 | H | 150 | 0.365 | I | 200 | 0.444 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| 1,1,1,2-Tetrachloroethane | MS | AverageRF | % RSD | 10.3 | | ≤ 15 | 1.21 | | 0.01 |
| 1,1,1-Trichloroethane (TCA) | MS | AverageRF | % RSD | 12.3 | | ≤ 15 | 0.786 | | 0.01 |
| † 1,1,2,2-Tetrachloroethane | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 1.01 | | 0.3 |
| 1,1,2-Trichloroethane | MS | AverageRF | % RSD | 6.2 | | ≤ 15 | 0.675 | | 0.01 |
| † 1,1-Dichloroethane | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 0.745 | | 0.1 |
| ‡ 1,1-Dichloroethene | MS | AverageRF | % RSD | 12.4 | | ≤ 15 | 0.629 | | 0.01 |
| 1,2,3-Trichlorobenzene | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 1.69 | | 0.01 |
| 1,2,4-Trichlorobenzene | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 1.92 | | 0.01 |
| 1,2-Dibromo-3-chloropropane (DBCP) | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.232 | | 0.01 |
| 1,2-Dibromoethane (EDB) | MS | AverageRF | % RSD | 8.9 | | ≤ 15 | 0.878 | | 0.01 |
| 1,2-Dichlorobenzene | MS | AverageRF | % RSD | 7.7 | | ≤ 15 | 2.42 | | 0.01 |
| 1,2-Dichloroethane (EDC) | MS | AverageRF | % RSD | 7.1 | | ≤ 15 | 0.536 | | 0.01 |
| 1,2-Dichloroethane-d4 | SURR | AverageRF | % RSD | 4.2 | | ≤ 15 | 0.251 | | |
| ‡ 1,2-Dichloropropane | MS | AverageRF | % RSD | 10.1 | | ≤ 15 | 0.396 | | 0.01 |
| 1,3-Dichlorobenzene | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 2.67 | | 0.01 |
| 1,4-Dichlorobenzene | MS | AverageRF | % RSD | 5.3 | | ≤ 15 | 2.65 | | 0.01 |
| 2-Butanone (MEK) | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 0.126 | | 0.01 |
| 2-Hexanone | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.514 | | 0.01 |
| 4-Bromofluorobenzene | SURR | AverageRF | % RSD | 7.6 | | ≤ 15 | 0.918 | | |
| 4-Methyl-2-pentanone (MIBK) | MS | AverageRF | % RSD | 6.3 | | ≤ 15 | 0.729 | | 0.01 |
| Acetone | MS | Linear | R2 | 0.994 | | ≥ 0.99 | 0.0878 | | 0.01 |
| Benzene | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 1.74 | | 0.01 |
| Bromochloromethane | MS | AverageRF | % RSD | 7.0 | | ≤ 15 | 0.265 | | 0.01 |
| Bromodichloromethane | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.592 | | 0.01 |
| † Bromoform | MS | AverageRF | % RSD | 12.9 | | ≤ 15 | 0.693 | | 0.1 |
| Bromomethane | MS | AverageRF | % RSD | 13.5 | | ≤ 15 | 0.267 | | 0.01 |
| Carbon Disulfide | MS | AverageRF | % RSD | 8.9 | | ≤ 15 | 1.03 | | 0.01 |
| Carbon Tetrachloride | MS | Linear | R2 | 0.993 | | ≥ 0.99 | 0.667 | | 0.01 |
| † Chlorobenzene | MS | AverageRF | % RSD | 8.6 | | ≤ 15 | 3.32 | | 0.3 |
| Chloroethane | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 0.302 | | 0.01 |
| ‡ Chloroform | MS | AverageRF | % RSD | 5.5 | | ≤ 15 | 0.828 | | 0.01 |
| † Chloromethane | MS | AverageRF | % RSD | 10.7 | | ≤ 15 | 0.551 | | 0.1 |
| cis-1,2-Dichloroethene | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 0.573 | | 0.01 |
| cis-1,3-Dichloropropene | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 1.71 | | 0.01 |
| Cyclohexane | MS | AverageRF | % RSD | 14.9 | | ≤ 15 | 0.684 | | 0.01 |
| Dibromochloromethane | MS | AverageRF | % RSD | 10.2 | | ≤ 15 | 1.09 | | 0.01 |
| Dibromofluoromethane | SURR | AverageRF | % RSD | 2.3 | | ≤ 15 | 0.241 | | |
| Dichlorodifluoromethane | MS | AverageRF | % RSD | 11.4 | | ≤ 15 | 0.554 | | 0.01 |
| ‡ Ethylbenzene | MS | AverageRF | % RSD | 11.2 | | ≤ 15 | 5.75 | | 0.01 |
| Isopropylbenzene | MS | AverageRF | % RSD | 13.5 | | ≤ 15 | 4.91 | | 0.01 |
| m,p-Xylenes | MS | AverageRF | % RSD | 10.7 | | ≤ 15 | 4.53 | | 0.01 |
| Methyl Acetate | MS | AverageRF | % RSD | 5.1 | | ≤ 15 | 0.510 | | 0.01 |
| Methyl tert-Butyl Ether | MS | AverageRF | % RSD | 4.6 | | ≤ 15 | 1.08 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| Methylene Chloride | MS | Linear | R2 | 0.998 | | ≥ 0.99 | 0.533 | | 0.01 |
| o-Xylene | MS | AverageRF | % RSD | 8.7 | | ≤ 15 | 4.72 | | 0.01 |
| Styrene | MS | AverageRF | % RSD | 13.9 | | ≤ 15 | 3.52 | | 0.01 |
| Tetrachloroethene (PCE) | MS | AverageRF | % RSD | 12.1 | | ≤ 15 | 1.13 | | 0.01 |
| ‡ Toluene | MS | AverageRF | % RSD | 8.6 | | ≤ 15 | 5.02 | | 0.01 |
| Toluene-d8 | SURR | AverageRF | % RSD | 1.2 | | ≤ 15 | 2.48 | | |
| trans-1,2-Dichloroethene | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.609 | | 0.01 |
| trans-1,3-Dichloropropene | MS | AverageRF | % RSD | 9.7 | | ≤ 15 | 1.58 | | 0.01 |
| Trichloroethene (TCE) | MS | AverageRF | % RSD | 11.4 | | ≤ 15 | 0.516 | | 0.01 |
| Trichlorofluoromethane | MS | AverageRF | % RSD | 10.8 | | ≤ 15 | 0.810 | | 0.01 |
| Trichlorotrifluoroethane | MS | AverageRF | % RSD | 13.9 | | ≤ 15 | 0.405 | | 0.01 |
| ‡ Vinyl Chloride | MS | AverageRF | % RSD | 10.0 | | ≤ 15 | 0.434 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012
**Date Analyzed:** 02/27/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2756
**Units:** ug/L

**File ID:** J:\MS52\DATA\MS52-120227\0227-16.D

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 21 | 1.21 | 1.25 | 3 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 21 | 0.786 | 0.827 | 5 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 1.01 | 1.01 | 0 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 21 | 0.675 | 0.713 | 6 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 22 | 0.745 | 0.819 | 10 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.629 | 0.681 | 8 | NA | ± 30 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 20 | 1.69 | 1.66 | -2 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 19 | 1.92 | 1.85 | -4 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 18 | 0.232 | 0.212 | -9 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 21 | 0.878 | 0.906 | 3 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 20 | 2.42 | 2.47 | 2 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.536 | 0.540 | 1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.396 | 0.425 | 7 | NA | ± 30 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 2.67 | 2.72 | 2 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 21 | 2.65 | 2.73 | 3 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 97 | 0.126 | 0.122 | -3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.514 | 0.515 | 0 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 100 | 0.729 | 0.730 | 0 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.0878 | 0.0775 | NA | -7 | ± 30 % | Linear |
| Benzene | 20 | 21 | 1.74 | 1.85 | 6 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 22 | 0.265 | 0.292 | 10 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.592 | 0.612 | 3 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.693 | 0.665 | -4 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.267 | 0.258 | -3 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 1.03 | 1.12 | 8 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 19 | 0.667 | 0.697 | NA | -3 | ± 30 % | Linear |
| Chlorobenzene | 20 | 21 | 3.32 | 3.51 | 6 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 21 | 0.302 | 0.321 | 7 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.828 | 0.846 | 2 | NA | ± 30 % | AverageRF |
| Chloromethane | 20 | 21 | 0.551 | 0.569 | 3 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.573 | 0.605 | 6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 21 | 1.71 | 1.79 | 5 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 22 | 0.684 | 0.743 | 9 | NA | ± 30 % | AverageRF |
| Dibromochloromethane | 20 | 20 | 1.09 | 1.10 | 1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.554 | 0.589 | 6 | NA | ± 30 % | AverageRF |
| Ethylbenzene | 20 | 21 | 5.75 | 6.10 | 6 | NA | ± 30 % | AverageRF |
| Isopropylbenzene | 20 | 21 | 4.91 | 5.23 | 7 | NA | ± 30 % | AverageRF |
| m,p-Xylenes | 40 | 43 | 4.53 | 4.90 | 8 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.510 | 0.512 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 1.08 | 1.10 | 2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 26 | 0.533 | 0.618 | NA | 29 | ± 30 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012
**Date Analyzed:** 02/27/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2756
**Units:** ug/L

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| o-Xylene | 20 | 21 | 4.72 | 4.99 | 6 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 22 | 3.52 | 3.83 | 9 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 21 | 1.13 | 1.21 | 7 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 21 | 5.02 | 5.34 | 6 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 21 | 0.609 | 0.653 | 7 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 1.58 | 1.57 | 0 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 22 | 0.516 | 0.579 | 12 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 21 | 0.810 | 0.857 | 6 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 21 | 0.405 | 0.435 | 7 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 23 | 0.434 | 0.493 | 13 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**† SPCC Compound** **‡ CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\MS53\DATA\MS53-120307\0307-03.D | F | J:\MS53\DATA\MS53-120307\0307-09.D |
| B | J:\MS53\DATA\MS53-120307\0307-04.D | G | J:\MS53\DATA\MS53-120307\0307-10.D |
| C | J:\MS53\DATA\MS53-120307\0307-05.D | H | J:\MS53\DATA\MS53-120307\0307-11.D |
| D | J:\MS53\DATA\MS53-120307\0307-06.D | I | J:\MS53\DATA\MS53-120307\0307-15.D |
| E | J:\MS53\DATA\MS53-120307\0307-08.D | | |

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | A | 1.0 | 0.493 | B | 2.0 | 0.424 | C | 5.0 | 0.487 | D | 10 | 0.500 | E | 50 | 0.524 |
| | F | 100 | 0.512 | G | 150 | 0.473 | H | 200 | 0.463 | I | 20 | 0.523 | | | |
| 1,1,1-Trichloroethane (TCA) | A | 1.0 | 0.186 | B | 2.0 | 0.173 | C | 5.0 | 0.216 | D | 10 | 0.207 | E | 50 | 0.253 |
| | F | 100 | 0.246 | G | 150 | 0.241 | H | 200 | 0.241 | I | 20 | 0.227 | | | |
| 1,1,2,2-Tetrachloroethane | A | 1.0 | 0.721 | B | 2.0 | 0.736 | C | 5.0 | 0.779 | D | 10 | 0.812 | E | 50 | 0.777 |
| | F | 100 | 0.734 | G | 150 | 0.659 | H | 200 | 0.569 | I | 20 | 0.763 | | | |
| 1,1,2-Trichloroethane | A | 1.0 | 0.374 | B | 2.0 | 0.341 | C | 5.0 | 0.369 | D | 10 | 0.374 | E | 50 | 0.363 |
| | F | 100 | 0.380 | G | 150 | 0.348 | H | 200 | 0.339 | I | 20 | 0.381 | | | |
| 1,1-Dichloroethane | A | 1.0 | 0.341 | B | 2.0 | 0.323 | C | 5.0 | 0.390 | D | 10 | 0.382 | E | 50 | 0.427 |
| | F | 100 | 0.421 | G | 150 | 0.422 | H | 200 | 0.411 | I | 20 | 0.406 | | | |
| 1,1-Dichloroethene | A | 1.0 | 0.218 | B | 2.0 | 0.195 | C | 5.0 | 0.247 | D | 10 | 0.227 | E | 50 | 0.266 |
| | F | 100 | 0.240 | G | 150 | 0.219 | H | 200 | 0.206 | I | 20 | 0.257 | | | |
| 1,2,3-Trichlorobenzene | | | | | | | | | | D | 10 | 0.342 | E | 50 | 0.343 |
| | F | 100 | 0.373 | G | 150 | 0.354 | H | 200 | 0.354 | I | 20 | 0.337 | | | |
| 1,2,4-Trichlorobenzene | | | | | | | | | | D | 10 | 0.485 | E | 50 | 0.533 |
| | F | 100 | 0.564 | G | 150 | 0.552 | H | 200 | 0.552 | I | 20 | 0.505 | | | |
| 1,2-Dibromo-3-chloropropane (DBCP | | | | | | | C | 5.0 | 0.0716 | D | 10 | 0.0723 | E | 50 | 0.0750 |
| | F | 100 | 0.0823 | G | 150 | 0.0817 | H | 200 | 0.0823 | I | 20 | 0.0665 | | | |
| 1,2-Dibromoethane (EDB) | A | 1.0 | 0.375 | B | 2.0 | 0.367 | C | 5.0 | 0.413 | D | 10 | 0.423 | E | 50 | 0.415 |
| | F | 100 | 0.425 | G | 150 | 0.406 | H | 200 | 0.382 | I | 20 | 0.421 | | | |
| 1,2-Dichlorobenzene | A | 1.0 | 1.10 | B | 2.0 | 0.997 | C | 5.0 | 1.15 | D | 10 | 1.09 | E | 50 | 1.12 |
| | F | 100 | 1.12 | G | 150 | 1.03 | H | 200 | 1.01 | I | 20 | 1.16 | | | |
| 1,2-Dichloroethane (EDC) | A | 1.0 | 0.136 | B | 2.0 | 0.117 | C | 5.0 | 0.138 | D | 10 | 0.137 | E | 50 | 0.147 |
| | F | 100 | 0.145 | G | 150 | 0.145 | H | 200 | 0.143 | I | 20 | 0.141 | | | |
| 1,2-Dichloroethane-d4 | A | 50 | 0.147 | B | 50 | 0.149 | C | 50 | 0.145 | D | 50 | 0.148 | E | 50 | 0.146 |
| | F | 50 | 0.144 | G | 50 | 0.146 | H | 50 | 0.141 | I | 50 | 0.141 | | | |
| 1,2-Dichloropropane | A | 1.0 | 0.207 | B | 2.0 | 0.201 | C | 5.0 | 0.223 | D | 10 | 0.224 | E | 50 | 0.245 |
| | F | 100 | 0.240 | G | 150 | 0.233 | H | 200 | 0.230 | I | 20 | 0.234 | | | |
| 1,3-Dichlorobenzene | A | 1.0 | 1.27 | B | 2.0 | 1.14 | C | 5.0 | 1.33 | D | 10 | 1.26 | E | 50 | 1.26 |
| | F | 100 | 1.16 | G | 150 | 1.06 | H | 200 | 0.987 | I | 20 | 1.31 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | A | 1.0 | 1.21 | B | 2.0 | 1.11 | C | 5.0 | 1.28 | D | 10 | 1.25 | E | 50 | 1.31 |
| | F | 100 | 1.24 | G | 150 | 1.18 | H | 200 | 1.09 | I | 20 | 1.36 | | | |
| 2-Butanone (MEK) | A | 5.0 | 0.00960 | B | 10 | 0.0116 | C | 25 | 0.0117 | D | 50 | 0.0121 | E | 250 | 0.0134 |
| | F | 500 | 0.0126 | G | 750 | 0.0128 | H | 1000 | 0.0131 | I | 100 | 0.0122 | | | |
| 2-Hexanone | | | | B | 10 | 0.293 | C | 25 | 0.288 | D | 50 | 0.283 | E | 250 | 0.263 |
| | F | 500 | 0.273 | G | 750 | 0.250 | H | 1000 | 0.238 | I | 100 | 0.278 | | | |
| 4-Bromofluorobenzene | A | 50 | 1.02 | B | 50 | 0.970 | C | 50 | 0.993 | D | 50 | 0.952 | E | 50 | 0.907 |
| | F | 50 | 0.857 | G | 50 | 0.815 | H | 50 | 0.793 | I | 50 | 0.954 | | | |
| 4-Methyl-2-pentanone (MIBK) | A | 5.0 | 0.422 | B | 10 | 0.421 | C | 25 | 0.431 | D | 50 | 0.435 | E | 250 | 0.405 |
| | F | 500 | 0.401 | G | 750 | 0.380 | H | 1000 | 0.364 | I | 100 | 0.428 | | | |
| Acetone | A | 5.0 | 0.0341 | B | 10 | 0.0312 | C | 25 | 0.0313 | D | 50 | 0.0309 | E | 250 | 0.0284 |
| | F | 500 | 0.0286 | G | 750 | 0.0280 | H | 1000 | 0.0265 | I | 100 | 0.0274 | | | |
| Benzene | A | 1.0 | 0.820 | B | 2.0 | 0.794 | C | 5.0 | 0.904 | D | 10 | 0.885 | E | 50 | 0.990 |
| | F | 100 | 0.952 | G | 150 | 0.913 | H | 200 | 0.875 | I | 20 | 0.955 | | | |
| Bromochloromethane | A | 1.0 | 0.114 | B | 2.0 | 0.111 | C | 5.0 | 0.133 | D | 10 | 0.136 | E | 50 | 0.146 |
| | F | 100 | 0.145 | G | 150 | 0.148 | H | 200 | 0.145 | I | 20 | 0.142 | | | |
| Bromodichloromethane | A | 1.0 | 0.207 | B | 2.0 | 0.202 | C | 5.0 | 0.227 | D | 10 | 0.231 | E | 50 | 0.252 |
| | F | 100 | 0.246 | G | 150 | 0.244 | H | 200 | 0.233 | I | 20 | 0.241 | | | |
| Bromoform | A | 1.0 | 0.172 | B | 2.0 | 0.166 | C | 5.0 | 0.209 | D | 10 | 0.224 | E | 50 | 0.249 |
| | F | 100 | 0.246 | G | 150 | 0.236 | H | 200 | 0.224 | I | 20 | 0.232 | | | |
| Bromomethane | A | 1.0 | 0.172 | B | 2.0 | 0.160 | C | 5.0 | 0.182 | D | 10 | 0.184 | E | 50 | 0.217 |
| | F | 100 | 0.173 | G | 150 | 0.157 | H | 200 | 0.147 | I | 20 | 0.190 | | | |
| Carbon Disulfide | A | 5.0 | 0.669 | B | 10 | 0.622 | C | 25 | 0.755 | D | 50 | 0.708 | E | 250 | 0.796 |
| | F | 500 | 0.685 | G | 750 | 0.613 | H | 1000 | 0.560 | I | 100 | 0.787 | | | |
| Carbon Tetrachloride | A | 1.0 | 0.132 | B | 2.0 | 0.133 | C | 5.0 | 0.168 | D | 10 | 0.158 | E | 50 | 0.198 |
| | F | 100 | 0.195 | G | 150 | 0.190 | H | 200 | 0.193 | I | 20 | 0.178 | | | |
| Chlorobenzene | A | 1.0 | 1.44 | B | 2.0 | 1.39 | C | 5.0 | 1.57 | D | 10 | 1.54 | E | 50 | 1.56 |
| | F | 100 | 1.52 | G | 150 | 1.37 | H | 200 | 1.29 | I | 20 | 1.64 | | | |
| Chloroethane | A | 1.0 | 0.154 | B | 2.0 | 0.143 | C | 5.0 | 0.161 | D | 10 | 0.167 | E | 50 | 0.188 |
| | F | 100 | 0.162 | G | 150 | 0.150 | H | 200 | 0.143 | I | 20 | 0.178 | | | |
| Chloroform | A | 1.0 | 0.323 | B | 2.0 | 0.293 | C | 5.0 | 0.343 | D | 10 | 0.328 | E | 50 | 0.370 |
| | F | 100 | 0.368 | G | 150 | 0.370 | H | 200 | 0.357 | I | 20 | 0.350 | | | |
| Chloromethane | A | 1.0 | 0.306 | B | 2.0 | 0.286 | C | 5.0 | 0.324 | D | 10 | 0.314 | E | 50 | 0.389 |
| | F | 100 | 0.331 | G | 150 | 0.310 | H | 200 | 0.296 | I | 20 | 0.350 | | | |
| cis-1,2-Dichloroethene | A | 1.0 | 0.246 | B | 2.0 | 0.242 | C | 5.0 | 0.291 | D | 10 | 0.285 | E | 50 | 0.315 |
| | F | 100 | 0.310 | G | 150 | 0.308 | H | 200 | 0.301 | I | 20 | 0.307 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | A | 1.0 | 0.867 | B | 2.0 | 0.838 | C | 5.0 | 0.964 | D | 10 | 0.976 | E | 50 | 0.970 |
| | F | 100 | 1.01 | G | 150 | 0.946 | H | 200 | 0.861 | I | 20 | 0.984 | | | |
| Cyclohexane | A | 1.0 | 0.302 | B | 2.0 | 0.267 | C | 5.0 | 0.366 | D | 10 | 0.311 | E | 50 | 0.419 |
| | F | 100 | 0.412 | G | 150 | 0.404 | H | 200 | 0.413 | I | 20 | 0.389 | | | |
| Dibromochloromethane | A | 1.0 | 0.442 | B | 2.0 | 0.394 | C | 5.0 | 0.445 | D | 10 | 0.461 | E | 50 | 0.462 |
| | F | 100 | 0.473 | G | 150 | 0.437 | H | 200 | 0.412 | I | 20 | 0.476 | | | |
| Dibromofluoromethane | A | 50 | 0.255 | B | 50 | 0.258 | C | 50 | 0.256 | D | 50 | 0.256 | E | 50 | 0.258 |
| | F | 50 | 0.260 | G | 50 | 0.261 | H | 50 | 0.255 | I | 50 | 0.256 | | | |
| Dichlorodifluoromethane | A | 1.0 | 0.110 | B | 2.0 | 0.138 | C | 5.0 | 0.165 | D | 10 | 0.155 | E | 50 | 0.201 |
| | F | 100 | 0.180 | G | 150 | 0.172 | H | 200 | 0.171 | I | 20 | 0.181 | | | |
| Ethylbenzene | A | 1.0 | 2.47 | B | 2.0 | 2.16 | C | 5.0 | 2.70 | D | 10 | 2.58 | E | 50 | 2.63 |
| | F | 100 | 2.56 | G | 150 | 2.23 | H | 200 | 2.03 | I | 20 | 2.78 | | | |
| Isopropylbenzene | A | 1.0 | 2.13 | B | 2.0 | 1.81 | C | 5.0 | 2.30 | D | 10 | 2.11 | E | 50 | 2.35 |
| | F | 100 | 2.21 | G | 150 | 2.04 | H | 200 | 1.94 | I | 20 | 2.39 | | | |
| m,p-Xylenes | A | 2.0 | 1.84 | B | 4.0 | 1.65 | C | 10 | 1.94 | D | 20 | 1.91 | E | 100 | 1.86 |
| | F | 200 | 1.67 | G | 300 | 1.42 | H | 400 | 1.26 | I | 40 | 2.04 | | | |
| Methyl Acetate | A | 1.0 | 0.314 | B | 2.0 | 0.285 | C | 5.0 | 0.285 | D | 10 | 0.294 | E | 50 | 0.296 |
| | F | 100 | 0.291 | G | 150 | 0.285 | H | 200 | 0.270 | I | 20 | 0.287 | | | |
| Methyl tert-Butyl Ether | A | 1.0 | 0.310 | B | 2.0 | 0.317 | C | 5.0 | 0.363 | D | 10 | 0.361 | E | 50 | 0.381 |
| | F | 100 | 0.376 | G | 150 | 0.374 | H | 200 | 0.377 | I | 20 | 0.359 | | | |
| Methylene Chloride | A | 1.0 | 0.228 | B | 2.0 | 0.210 | C | 5.0 | 0.255 | D | 10 | 0.243 | E | 50 | 0.278 |
| | F | 100 | 0.266 | G | 150 | 0.259 | H | 200 | 0.256 | I | 20 | 0.264 | | | |
| o-Xylene | A | 1.0 | 1.82 | B | 2.0 | 1.66 | C | 5.0 | 2.00 | D | 10 | 1.97 | E | 50 | 1.96 |
| | F | 100 | 1.85 | G | 150 | 1.63 | H | 200 | 1.43 | I | 20 | 2.02 | | | |
| Styrene | A | 1.0 | 1.51 | B | 2.0 | 1.37 | C | 5.0 | 1.63 | D | 10 | 1.63 | E | 50 | 1.61 |
| | F | 100 | 1.58 | G | 150 | 1.37 | H | 200 | 1.28 | I | 20 | 1.68 | | | |
| Tetrachloroethene (PCE) | A | 1.0 | 0.392 | B | 2.0 | 0.356 | C | 5.0 | 0.466 | D | 10 | 0.436 | E | 50 | 0.492 |
| | F | 100 | 0.500 | G | 150 | 0.461 | H | 200 | 0.441 | I | 20 | 0.511 | | | |
| Toluene | A | 1.0 | 2.37 | B | 2.0 | 2.18 | C | 5.0 | 2.58 | D | 10 | 2.43 | E | 50 | 2.54 |
| | F | 100 | 2.47 | G | 150 | 2.16 | H | 200 | 1.99 | I | 20 | 2.73 | | | |
| Toluene-d8 | A | 50 | 2.41 | B | 50 | 2.43 | C | 50 | 2.45 | D | 50 | 2.48 | E | 50 | 2.35 |
| | F | 50 | 2.44 | G | 50 | 2.41 | H | 50 | 2.34 | I | 50 | 2.48 | | | |
| trans-1,2-Dichloroethene | A | 1.0 | 0.258 | B | 2.0 | 0.248 | C | 5.0 | 0.305 | D | 10 | 0.285 | E | 50 | 0.345 |
| | F | 100 | 0.338 | G | 150 | 0.333 | H | 200 | 0.326 | I | 20 | 0.324 | | | |
| trans-1,3-Dichloropropene | A | 1.0 | 0.620 | B | 2.0 | 0.584 | C | 5.0 | 0.677 | D | 10 | 0.694 | E | 50 | 0.674 |
| | F | 100 | 0.714 | G | 150 | 0.664 | H | 200 | 0.623 | I | 20 | 0.697 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene (TCE) | A | 1.0 | 0.181 | B | 2.0 | 0.172 | C | 5.0 | 0.213 | D | 10 | 0.204 | E | 50 | 0.233 |
| | F | 100 | 0.228 | G | 150 | 0.221 | H | 200 | 0.209 | I | 20 | 0.224 | | | |
| Trichlorofluoromethane | | | | B | 2.0 | 0.137 | C | 5.0 | 0.190 | D | 10 | 0.176 | E | 50 | 0.225 |
| | F | 100 | 0.216 | G | 150 | 0.209 | H | 200 | 0.206 | I | 20 | 0.205 | | | |
| Trichlorotrifluoroethane | A | 1.0 | 0.154 | B | 2.0 | 0.138 | C | 5.0 | 0.181 | D | 10 | 0.175 | E | 50 | 0.223 |
| | F | 100 | 0.197 | G | 150 | 0.186 | H | 200 | 0.187 | I | 20 | 0.202 | | | |
| Vinyl Chloride | A | 1.0 | 0.208 | B | 2.0 | 0.198 | C | 5.0 | 0.254 | D | 10 | 0.242 | E | 50 | 0.277 |
| | | | | | | | | | | I | 20 | 0.272 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| 1,1,1,2-Tetrachloroethane | MS | AverageRF | % RSD | 6.6 | | ≤ 15 | 0.489 | | 0.01 |
| 1,1,1-Trichloroethane (TCA) | MS | AverageRF | % RSD | 12.6 | | ≤ 15 | 0.221 | | 0.01 |
| † 1,1,2,2-Tetrachloroethane | MS | AverageRF | % RSD | 10.1 | | ≤ 15 | 0.728 | | 0.3 |
| 1,1,2-Trichloroethane | MS | AverageRF | % RSD | 4.6 | | ≤ 15 | 0.363 | | 0.01 |
| † 1,1-Dichloroethane | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 0.391 | | 0.1 |
| ‡ 1,1-Dichloroethene | MS | AverageRF | % RSD | 10.3 | | ≤ 15 | 0.230 | | 0.01 |
| 1,2,3-Trichlorobenzene | MS | AverageRF | % RSD | 3.7 | | ≤ 15 | 0.351 | | 0.01 |
| 1,2,4-Trichlorobenzene | MS | AverageRF | % RSD | 5.8 | | ≤ 15 | 0.532 | | 0.01 |
| 1,2-Dibromo-3-chloropropane (DBCP) | MS | AverageRF | % RSD | 8.3 | | ≤ 15 | 0.0760 | | 0.01 |
| 1,2-Dibromoethane (EDB) | MS | AverageRF | % RSD | 5.6 | | ≤ 15 | 0.403 | | 0.01 |
| 1,2-Dichlorobenzene | MS | AverageRF | % RSD | 5.5 | | ≤ 15 | 1.09 | | 0.01 |
| 1,2-Dichloroethane (EDC) | MS | AverageRF | % RSD | 6.6 | | ≤ 15 | 0.139 | | 0.01 |
| 1,2-Dichloroethane-d4 | SURR | AverageRF | % RSD | 1.8 | | ≤ 15 | 0.145 | | |
| ‡ 1,2-Dichloropropane | MS | AverageRF | % RSD | 6.4 | | ≤ 15 | 0.227 | | 0.01 |
| 1,3-Dichlorobenzene | MS | AverageRF | % RSD | 9.8 | | ≤ 15 | 1.20 | | 0.01 |
| 1,4-Dichlorobenzene | MS | AverageRF | % RSD | 7.2 | | ≤ 15 | 1.22 | | 0.01 |
| 2-Butanone (MEK) | MS | AverageRF | % RSD | 9.2 | | ≤ 15 | 0.0121 | | 0.01 |
| 2-Hexanone | MS | AverageRF | % RSD | 7.0 | | ≤ 15 | 0.271 | | 0.01 |
| 4-Bromofluorobenzene | SURR | AverageRF | % RSD | 8.7 | | ≤ 15 | 0.917 | | |
| 4-Methyl-2-pentanone (MIBK) | MS | AverageRF | % RSD | 6.0 | | ≤ 15 | 0.410 | | 0.01 |
| Acetone | MS | AverageRF | % RSD | 8.2 | | ≤ 15 | 0.0296 | | 0.01 |
| Benzene | MS | AverageRF | % RSD | 7.1 | | ≤ 15 | 0.899 | | 0.01 |
| Bromochloromethane | MS | AverageRF | % RSD | 10.2 | | ≤ 15 | 0.135 | | 0.01 |
| Bromodichloromethane | MS | AverageRF | % RSD | 7.5 | | ≤ 15 | 0.231 | | 0.01 |
| † Bromoform | MS | AverageRF | % RSD | 13.8 | | ≤ 15 | 0.218 | | 0.1 |
| Bromomethane | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.176 | | 0.01 |
| Carbon Disulfide | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.689 | | 0.01 |
| Carbon Tetrachloride | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.172 | | 0.01 |
| † Chlorobenzene | MS | AverageRF | % RSD | 7.7 | | ≤ 15 | 1.48 | | 0.3 |
| Chloroethane | MS | AverageRF | % RSD | 9.6 | | ≤ 15 | 0.161 | | 0.01 |
| ‡ Chloroform | MS | AverageRF | % RSD | 7.5 | | ≤ 15 | 0.345 | | 0.01 |
| † Chloromethane | MS | AverageRF | % RSD | 9.7 | | ≤ 15 | 0.323 | | 0.1 |
| cis-1,2-Dichloroethene | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 0.290 | | 0.01 |
| cis-1,3-Dichloropropene | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 0.935 | | 0.01 |
| Cyclohexane | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.365 | | 0.01 |
| Dibromochloromethane | MS | AverageRF | % RSD | 6.2 | | ≤ 15 | 0.445 | | 0.01 |
| Dibromofluoromethane | SURR | AverageRF | % RSD | 0.8 | | ≤ 15 | 0.257 | | |
| Dichlorodifluoromethane | MS | Linear | R2 | 0.998 | | ≥ 0.99 | 0.164 | | 0.01 |
| ‡ Ethylbenzene | MS | AverageRF | % RSD | 10.6 | | ≤ 15 | 2.46 | | 0.01 |
| Isopropylbenzene | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 2.14 | | 0.01 |
| m,p-Xylenes | MS | AverageRF | % RSD | 14.9 | | ≤ 15 | 1.73 | | 0.01 |
| Methyl Acetate | MS | AverageRF | % RSD | 4.1 | | ≤ 15 | 0.290 | | 0.01 |
| Methyl tert-Butyl Ether | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 0.358 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| Methylene Chloride | MS | AverageRF | % RSD | 8.3 | | ≤ 15 | 0.251 | | 0.01 |
| o-Xylene | MS | AverageRF | % RSD | 11.2 | | ≤ 15 | 1.81 | | 0.01 |
| Styrene | MS | AverageRF | % RSD | 9.4 | | ≤ 15 | 1.52 | | 0.01 |
| Tetrachloroethene (PCE) | MS | AverageRF | % RSD | 11.3 | | ≤ 15 | 0.451 | | 0.01 |
| ‡ Toluene | MS | AverageRF | % RSD | 9.9 | | ≤ 15 | 2.38 | | 0.01 |
| Toluene-d8 | SURR | AverageRF | % RSD | 2.1 | | ≤ 15 | 2.42 | | |
| trans-1,2-Dichloroethene | MS | AverageRF | % RSD | 11.5 | | ≤ 15 | 0.307 | | 0.01 |
| trans-1,3-Dichloropropene | MS | AverageRF | % RSD | 6.5 | | ≤ 15 | 0.661 | | 0.01 |
| Trichloroethene (TCE) | MS | AverageRF | % RSD | 10.0 | | ≤ 15 | 0.209 | | 0.01 |
| Trichlorofluoromethane | MS | AverageRF | % RSD | 14.3 | | ≤ 15 | 0.196 | | 0.01 |
| Trichlorotrifluoroethane | MS | AverageRF | % RSD | 13.8 | | ≤ 15 | 0.183 | | 0.01 |
| ‡ Vinyl Chloride | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.242 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012
**Date Analyzed:** 03/07/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2752
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120307\0307-16.D

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 21 | 0.489 | 0.523 | 7 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 21 | 0.221 | 0.234 | 6 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 22 | 0.728 | 0.785 | 8 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 21 | 0.363 | 0.386 | 6 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 21 | 0.391 | 0.419 | 7 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 23 | 0.230 | 0.261 | 13 | NA | ± 30 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 20 | 0.351 | 0.349 | 0 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 20 | 0.532 | 0.523 | -2 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 19 | 0.0760 | 0.0717 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 21 | 0.403 | 0.427 | 6 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 22 | 1.09 | 1.19 | 10 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 21 | 0.139 | 0.142 | 3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.227 | 0.240 | 6 | NA | ± 30 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 22 | 1.20 | 1.35 | 12 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 22 | 1.22 | 1.33 | 9 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 110 | 0.0121 | 0.0131 | 8 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.271 | 0.280 | 3 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 110 | 0.410 | 0.432 | 5 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.0296 | 0.0276 | -7 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 22 | 0.899 | 0.979 | 9 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 21 | 0.135 | 0.143 | 6 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.231 | 0.244 | 5 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 22 | 0.218 | 0.239 | 10 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 22 | 0.176 | 0.192 | 9 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.689 | 0.795 | 15 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 19 | 0.172 | 0.181 | NA | -3 | ± 30 % | Linear |
| Chlorobenzene | 20 | 22 | 1.48 | 1.62 | 10 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 22 | 0.161 | 0.175 | 9 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 21 | 0.345 | 0.364 | 6 | NA | ± 30 % | AverageRF |
| Chloromethane | 20 | 22 | 0.323 | 0.351 | 9 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.290 | 0.306 | 6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 21 | 0.935 | 0.996 | 6 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.365 | 0.398 | NA | 0 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 21 | 0.445 | 0.478 | 7 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 18 | 0.164 | 0.164 | NA | -11 | ± 30 % | Linear |
| Ethylbenzene | 20 | 23 | 2.46 | 2.81 | 14 | NA | ± 30 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 2.14 | 2.41 | 13 | NA | ± 30 % | AverageRF |
| m,p-Xylenes | 40 | 47 | 1.73 | 2.03 | 17 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 21 | 0.290 | 0.301 | 4 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.358 | 0.363 | 2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 22 | 0.251 | 0.271 | 8 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012
**Date Analyzed:** 03/07/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2752
**Units:** ug/L

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| o-Xylene | 20 | 23 | 1.81 | 2.07 | 14 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 22 | 1.52 | 1.70 | 12 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 23 | 0.451 | 0.515 | 14 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 23 | 2.38 | 2.71 | 14 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 21 | 0.307 | 0.328 | 7 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 21 | 0.661 | 0.696 | 5 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 22 | 0.209 | 0.229 | 10 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 21 | 0.196 | 0.206 | 5 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 22 | 0.183 | 0.199 | 9 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.242 | 0.264 | NA | -2 | ± 30 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 02/27/2012
**ICAL ID:** CAL2756
**Analysis Lot:** JWG1200306
**Units:** ug/L

**File ID:** J:\MS52\DATA\MS52-120322\0322-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 18 | 0.01 | 1.21 | 1.10 | -9 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 18 | 0.01 | 0.786 | 0.715 | -9 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 1.01 | 0.998 | -1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.675 | 0.656 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 19 | 0.1 | 0.745 | 0.708 | -5 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 17 | 0.01 | 0.629 | 0.526 | -16 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 1.69 | 1.63 | -4 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 19 | 0.01 | 1.92 | 1.86 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 18 | 0.01 | 0.232 | 0.213 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.878 | 0.824 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 18 | 0.01 | 2.42 | 2.22 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 18 | 0.01 | 0.536 | 0.491 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 50 | | 0.251 | 0.251 | 0 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 19 | 0.01 | 0.396 | 0.378 | -4 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 19 | 0.01 | 2.67 | 2.49 | -7 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 18 | 0.01 | 2.65 | 2.44 | -8 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.126 | 0.129 | 3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.01 | 0.514 | 0.521 | 1 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 47 | | 0.918 | 0.861 | -6 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 100 | 0.01 | 0.729 | 0.733 | 1 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 98 | 0.01 | 0.0878 | 0.0782 | NA | -2 | ± 30 % | Linear |
| Benzene | 20 | 19 | 0.01 | 1.74 | 1.63 | -6 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 20 | 0.01 | 0.265 | 0.260 | -2 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 18 | 0.01 | 0.592 | 0.536 | -9 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 18 | 0.1 | 0.693 | 0.631 | -9 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.01 | 0.267 | 0.247 | -7 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.01 | 1.03 | 1.20 | 16 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 17 | 0.01 | 0.667 | 0.591 | NA | -17 | ± 30 % | Linear |
| Chlorobenzene | 20 | 19 | 0.3 | 3.32 | 3.19 | -4 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 19 | 0.01 | 0.302 | 0.288 | -4 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 18 | 0.01 | 0.828 | 0.729 | -12 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 17 | 0.1 | 0.551 | 0.480 | -13 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 19 | 0.01 | 0.573 | 0.541 | -6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 19 | 0.01 | 1.71 | 1.63 | -5 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.684 | 0.674 | -2 | NA | ± 30 % | AverageRF |
| Dibromochloromethane | 20 | 18 | 0.01 | 1.09 | 0.995 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 50 | | 0.241 | 0.238 | -1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 18 | 0.01 | 0.554 | 0.489 | -12 | NA | ± 30 % | AverageRF |
| Ethylbenzene | 20 | 19 | 0.01 | 5.75 | 5.57 | -3 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 21 | 0.01 | 4.91 | 5.09 | 4 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 02/27/2012
**ICAL ID:** CAL2756
**Analysis Lot:** JWG1200306
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 39 | 0.01 | 4.53 | 4.39 | -3 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.510 | 0.509 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 1.08 | 1.05 | -2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 17 | 0.01 | 0.533 | 0.395 | NA | -17 | ± 30 % | Linear |
| o-Xylene | 20 | 19 | 0.01 | 4.72 | 4.49 | -5 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 3.52 | 3.47 | -1 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 20 | 0.01 | 1.13 | 1.12 | -1 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 19 | 0.01 | 5.02 | 4.81 | -4 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 51 | | 2.48 | 2.51 | 1 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 18 | 0.01 | 0.609 | 0.556 | -9 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 18 | 0.01 | 1.58 | 1.46 | -8 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 19 | 0.01 | 0.516 | 0.490 | -5 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 18 | 0.01 | 0.810 | 0.722 | -11 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 17 | 0.01 | 0.405 | 0.353 | -13 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.01 | 0.434 | 0.432 | -1 | NA | ± 20 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200322
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120330\0330-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 19 | 0.01 | 0.489 | 0.459 | -6 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.208 | -6 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.719 | -1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.354 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 20 | 0.1 | 0.391 | 0.398 | 2 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.01 | 0.230 | 0.256 | 11 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 18 | 0.01 | 0.351 | 0.323 | -8 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.468 | -12 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 15 | 0.01 | 0.0760 | 0.0577 | -24 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.403 | 0.373 | -7 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 20 | 0.01 | 1.09 | 1.08 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.01 | 0.139 | 0.136 | -2 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 49 | | 0.145 | 0.144 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.238 | 5 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 0.01 | 1.20 | 1.22 | 2 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 21 | 0.01 | 1.22 | 1.26 | 3 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.0121 | 0.0127 | 5 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 94 | 0.01 | 0.271 | 0.254 | -6 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 54 | | 0.917 | 0.993 | 8 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.384 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.01 | 0.0296 | 0.0274 | -7 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 21 | 0.01 | 0.899 | 0.927 | 3 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.132 | -3 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 20 | 0.01 | 0.231 | 0.228 | -2 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 18 | 0.1 | 0.218 | 0.201 | -8 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 18 | 0.01 | 0.176 | 0.162 | -8 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 0.01 | 0.689 | 0.769 | 12 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 17 | 0.01 | 0.172 | 0.159 | NA | -15 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.45 | -2 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 20 | 0.01 | 0.161 | 0.160 | 0 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.01 | 0.345 | 0.338 | -2 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.378 | 17 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.290 | 0.296 | 2 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.934 | 0 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.387 | NA | -2 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 19 | 0.01 | 0.445 | 0.411 | -8 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 49 | | 0.257 | 0.254 | -1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.194 | NA | 6 | ± 30 % | Linear |
| Ethylbenzene | 20 | 20 | 0.01 | 2.46 | 2.49 | 1 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 0.01 | 2.14 | 2.50 | 17 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200322
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.76 | 2 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.290 | 0.290 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.357 | 0 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 20 | 0.01 | 0.251 | 0.252 | 0 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 20 | 0.01 | 1.81 | 1.80 | -1 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.50 | -1 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.428 | -5 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.33 | -2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.32 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.299 | -2 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 19 | 0.01 | 0.661 | 0.637 | -4 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.207 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.191 | -2 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 20 | 0.01 | 0.183 | 0.183 | 0 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 21 | 0.01 | 0.242 | 0.278 | NA | 3 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200326
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120402\0402-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 19 | 0.01 | 0.489 | 0.460 | -6 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.212 | -4 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.729 | 0 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.352 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 20 | 0.1 | 0.391 | 0.399 | 2 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 23 | 0.01 | 0.230 | 0.263 | 14 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 0.351 | 0.329 | -6 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.470 | -12 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 16 | 0.01 | 0.0760 | 0.0614 | -19 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 18 | 0.01 | 0.403 | 0.371 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 19 | 0.01 | 1.09 | 1.02 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 19 | 0.01 | 0.139 | 0.132 | -5 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 47 | | 0.145 | 0.137 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.237 | 5 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 0.01 | 1.20 | 1.21 | 1 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 20 | 0.01 | 1.22 | 1.21 | -1 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 97 | 0.01 | 0.0121 | 0.0118 | -3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 92 | 0.01 | 0.271 | 0.249 | -8 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 53 | | 0.917 | 0.967 | 5 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.386 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 88 | 0.01 | 0.0296 | 0.0261 | -12 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 21 | 0.01 | 0.899 | 0.965 | 7 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.129 | -5 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 20 | 0.01 | 0.231 | 0.234 | 1 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.1 | 0.218 | 0.211 | -3 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.01 | 0.176 | 0.165 | -6 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.01 | 0.689 | 0.804 | 17 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 18 | 0.01 | 0.172 | 0.170 | NA | -9 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.46 | -1 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 20 | 0.01 | 0.161 | 0.163 | 1 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.01 | 0.345 | 0.336 | -2 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.375 | 16 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.01 | 0.290 | 0.305 | 5 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.946 | 1 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.392 | NA | -1 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 18 | 0.01 | 0.445 | 0.407 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 50 | | 0.257 | 0.259 | 1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.191 | NA | 5 | ± 30 % | Linear |
| Ethylbenzene | 20 | 19 | 0.01 | 2.46 | 2.36 | -4 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 0.01 | 2.14 | 2.43 | 13 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200326
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.76 | 2 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.290 | 0.283 | -2 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.360 | 1 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 21 | 0.01 | 0.251 | 0.261 | 4 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 21 | 0.01 | 1.81 | 1.87 | 3 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.52 | 0 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.429 | -5 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.42 | 2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.32 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.309 | 1 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.661 | 0.653 | -1 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.208 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.194 | -1 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 20 | 0.01 | 0.183 | 0.186 | 2 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.01 | 0.242 | 0.276 | NA | 2 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200334
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120403\0403-03.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 18 | 0.01 | 0.489 | 0.451 | -8 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.210 | -5 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.734 | 1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.354 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 21 | 0.1 | 0.391 | 0.401 | 3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.01 | 0.230 | 0.251 | 9 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 0.351 | 0.329 | -6 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.481 | -10 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 16 | 0.01 | 0.0760 | 0.0607 | -20 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.403 | 0.375 | -7 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 19 | 0.01 | 1.09 | 1.05 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.01 | 0.139 | 0.137 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 48 | | 0.145 | 0.140 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.233 | 3 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 21 | 0.01 | 1.20 | 1.23 | 3 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 20 | 0.01 | 1.22 | 1.20 | -2 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.0121 | 0.0124 | 2 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 93 | 0.01 | 0.271 | 0.252 | -7 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 51 | | 0.917 | 0.942 | 3 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.385 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 92 | 0.01 | 0.0296 | 0.0273 | -8 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 20 | 0.01 | 0.899 | 0.915 | 2 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.128 | -5 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.01 | 0.231 | 0.238 | 3 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.1 | 0.218 | 0.202 | -7 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 18 | 0.01 | 0.176 | 0.157 | -11 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 0.01 | 0.689 | 0.769 | 12 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 18 | 0.01 | 0.172 | 0.166 | NA | -11 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.45 | -2 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 21 | 0.01 | 0.161 | 0.165 | 3 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 19 | 0.01 | 0.345 | 0.329 | -5 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.369 | 14 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.290 | 0.289 | 0 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.922 | -1 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.392 | NA | -1 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 18 | 0.01 | 0.445 | 0.406 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 48 | | 0.257 | 0.248 | -4 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.189 | NA | 4 | ± 30 % | Linear |
| Ethylbenzene | 20 | 20 | 0.01 | 2.46 | 2.51 | 2 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 22 | 0.01 | 2.14 | 2.38 | 11 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200334
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.78 | 3 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 19 | 0.01 | 0.290 | 0.272 | -6 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.358 | 0 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 20 | 0.01 | 0.251 | 0.246 | -2 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 20 | 0.01 | 1.81 | 1.82 | 0 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.51 | 0 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.420 | -7 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.44 | 2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.31 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.304 | -1 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.661 | 0.651 | -2 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.206 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.191 | -2 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 21 | 0.01 | 0.183 | 0.192 | 5 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 21 | 0.01 | 0.242 | 0.280 | NA | 3 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Validation Package

## Sample Prep and Screen Data



p:\Stealth\Crystal.rpt\DividerF.rpt

# *Preparation Information*

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200305 | **Prep Method:** | EPA 5035 | **Prep Date:** | 03/22/12 09:17 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Client ID | Product | Matrix | Amt. Ext. | Final Vol. | Solids |
|---|---|---|---|---|---|---|
| J1201360-025 | CRHE-188849-IDW-0321201 | 8260B | SOIL | 5.9300g | 5mL | 84 |
| J1201360-026 | CRHE-188797-IDW-0321201 | 8260B | SOIL | 5.1200g | 5mL | 88 |
| J1201360-027 | CRHE-188842-IDW-0321201 | 8260B | SOIL | 5.9600g | 5mL | 83 |
| J1201360-028 | CRHE-188838-IDW-0321201 | 8260B | SOIL | 5.3500g | 5mL | 81 |
| JWG1200305-1 | Lab Control Sample | 8260B | SOIL | 5.00g | 5ml | 100 |
| JWG1200305-2 | Method Blank | 8260B | SOIL | 5.00g | 5ml | 100 |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201360-025 | 264703 | 42346 | 1uL | | | |
| J1201360-026 | 264704 | 42346 | 1uL | | | |
| J1201360-027 | 264705 | 42346 | 1uL | | | |
| J1201360-028 | 264706 | 42346 | 1uL | | | |
| JWG1200305-1 | 264707 | 42346 | 1uL | 42183/40123 | 20uL | |
| JWG1200305-2 | 264708 | 42346 | 1uL | | | |

**Comments:** _____

Started By: SAllen Assisted By: _____ Training Yes No

Completed By: SAllen Assisted By: _____ Yes No

Reviewed By: _____ Date: _____ Storage: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

# *Preparation Information*

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200321 | **Prep Method:** | EPA 5030B | **Prep Date:** | 03/30/12 10:42 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Client ID | Product | Matrix | Amt. Ext. | Final Vol. |
|---|---|---|---|---|---|
| J1201360-001 | CRHE-MW0032-045.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-002 | CRHE-MW0030-010.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-003 | CRHE-MW0023-065.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-004 | CRHE-MW0031-045.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-005 | CRHE-IW0020I-045.0-03192 | 8260B | WATER | 10ml | 10ml |
| J1201360-006 | CRHE-MW0039-030.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-007 | CRHE-MW0038-010.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-008 | EB01-03192012 | 8260B | WATER | 10ml | 10ml |
| J1201360-009 | CRHE-IW0015I-040.0-03192 | 8260B | WATER | 10ml | 10ml |
| J1201360-010 | CRHE-MW0034-038.5-0320: | 8260B | WATER | 10ml | 10ml |
| J1201360-011 | CRHE-IW0019I-040.0-03202 | 8260B | WATER | 10ml | 10ml |
| J1201360-012 | CRHE-MW0033-048.5-0320: | 8260B | WATER | 10ml | 10ml |
| J1201360-013 | CRHE-IW0021I-045.0-03202 | 8260B | WATER | 10ml | 10ml |
| J1201360-014 | CRHE-MW0035-045.0-0320: | 8260B | WATER | 10ml | 10ml |
| J1201360-015 | CRHE-MW0028-040.0-0320: | 8260B | WATER | 10ml | 10ml |
| J1201360-016 | CRHE-MW0037-030.0-0320: | 8260B | WATER | 10ml | 10ml |
| J1201360-017 | CRHE-IW0017I-030.0-03202 | 8260B | WATER | 10ml | 10ml |
| JWG1200321-1 | Lab Control Sample | 8260B | WATER | 10ml | 10ml |
| JWG1200321-2 | Method Blank | 8260B | WATER | 10ml | 10ml |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201360-001 | 264821 | 40951 | 1uL | | | |
| J1201360-002 | 264822 | 40951 | 1uL | | | |
| J1201360-003 | 264823 | 40951 | 1uL | | | |
| J1201360-004 | 264824 | 40951 | 1uL | | | |
| J1201360-005 | 264825 | 40951 | 1uL | | | |
| J1201360-006 | 264826 | 40951 | 1uL | | | |
| J1201360-007 | 264827 | 40951 | 1uL | | | |
| J1201360-008 | 264828 | 40951 | 1uL | | | |
| J1201360-009 | 264829 | 40951 | 1uL | | | |
| J1201360-010 | 264830 | 40951 | 1uL | | | |
| J1201360-011 | 264831 | 40951 | 1uL | | | |
| J1201360-012 | 264832 | 40951 | 1uL | | | |
| J1201360-013 | 264833 | 40951 | 1uL | | | |
| J1201360-014 | 264834 | 40951 | 1uL | | | |
| J1201360-015 | 264835 | 40951 | 1uL | | | |

**Comments:**

Started By: SAllen Assisted By: _____ Training: Yes No

Completed By: SAllen Assisted By: _____ Yes No

Reviewed By: _____ Date: _____ Storage: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined: Yes No

Received By: _____ Date: _____

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200321 | **Prep Method:** | EPA 5030B | **Prep Date:** | 03/30/12 10:42 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201360-016 | 264836 | 40951 | 1uL | | | |
| J1201360-017 | 264837 | 40951 | 1uL | | | |
| JWG1200321-1 | 264838 | 40951 | 1uL | 42546/40123 | 20uL | |
| JWG1200321-2 | 264839 | 40951 | 1uL | | | |

**Comments**

Started By: SAllen Assisted By: Training Yes No

Completed By: SAllen Assisted By: Yes No

Reviewed By: Date: Storage:

Chain of Custody

Relinquished By: Date:

Received By: Date: Extracts Examined Yes No

# *Preparation Information*

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200325 | **Prep Method:** | EPA 5030B | **Prep Date:** | 04/02/12 08:51 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Client ID | Product | Matrix | Amt. Ext. | Final Vol. |
|---|---|---|---|---|---|
| J1201360-001 | CRHE-MW0032-045.0-0319 | 8260B | WATER | 10ml | 10ml |
| J1201360-004 | CRHE-MW0031-045.0-0319 | 8260B | WATER | 10ml | 10ml |
| J1201360-005 | CRHE-IW0020I-045.0-03192 | 8260B | WATER | 10ml | 10ml |
| J1201360-006 | CRHE-MW0039-030.0-0319 | 8260B | WATER | 10ml | 10ml |
| J1201360-010 | CRHE-MW0034-038.5-0320 | 8260B | WATER | 10ml | 10ml |
| J1201360-011 | CRHE-IW0019I-040.0-03202 | 8260B | WATER | 10ml | 10ml |
| J1201360-014 | CRHE-MW0035-045.0-0320 | 8260B | WATER | 10ml | 10ml |
| J1201360-015 | CRHE-MW0028-040.0-0320 | 8260B | WATER | 10ml | 10ml |
| J1201360-017 | CRHE-IW0017I-030.0-03202 | 8260B | WATER | 10ml | 10ml |
| J1201360-018 | CRHE-IW0014I-040.0-03212 | 8260B | WATER | 10ml | 10ml |
| J1201360-019 | CRHE-MW0029-045.0-0321 | 8260B | WATER | 10ml | 10ml |
| J1201360-020 | CRHE-MW0026-035.0-0321 | 8260B | WATER | 10ml | 10ml |
| J1201360-021 | CRHE-MW0022-065.0-0321 | 8260B | WATER | 10ml | 10ml |
| J1201360-022 | CRHE-MW0027-045.0-0321 | 8260B | WATER | 10ml | 10ml |
| J1201360-023 | CRHE-MW0024-010.0-0321 | 8260B | WATER | 10ml | 10ml |
| J1201360-029 | Trip Blank | 8260B | WATER | 10ml | 10ml |
| JWG1200325-1 | Lab Control Sample | 8260B | WATER | 10ml | 10ml |
| JWG1200325-2 | Method Blank | 8260B | WATER | 10ml | 10ml |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201360-001 | 264845 | 40951 | 1uL | | | |
| J1201360-004 | 264846 | 40951 | 1uL | | | |
| J1201360-005 | 264847 | 40951 | 1uL | | | |
| J1201360-006 | 264848 | 40951 | 1uL | | | |
| J1201360-010 | 264849 | 40951 | 1uL | | | |
| J1201360-011 | 264850 | 40951 | 1uL | | | |
| J1201360-014 | 264851 | 40951 | 1uL | | | |
| J1201360-015 | 264852 | 40951 | 1uL | | | |
| J1201360-017 | 264853 | 40951 | 1uL | | | |
| J1201360-018 | 264854 | 40951 | 1uL | | | |
| J1201360-019 | 264855 | 40951 | 1uL | | | |
| J1201360-020 | 264856 | 40951 | 1uL | | | |
| J1201360-021 | 264857 | 40951 | 1uL | | | |
| J1201360-022 | 264858 | 40951 | 1uL | | | |
| J1201360-023 | 264843 | 40951 | 1uL | | | |
| J1201360-029 | 264844 | 40951 | 1uL | | | |

**Comments:**

Started By: SAllen  Assisted By: _____  Training: Yes / No

Completed By: SAllen  Assisted By: _____  Yes / No

Reviewed By: _____  Date: _____  Storage: _____

Chain of Custody

Relinquished By: _____  Date: _____  Extracts Examined: Yes / No

Received By: _____  Date: _____

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200325 | **Prep Method:** | EPA 5030B | **Prep Date:** | 04/02/12 08:51 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| JWG1200325-1 | 264859 | 40951 | 1uL | 42546/42796 | 20uL | |
| JWG1200325-2 | 264860 | 40951 | 1uL | | | |

**Comments:**

Started By: SAllen Assisted By: Training Yes No

Completed By: SAllen Assisted By: Yes No

Reviewed By: Date: Storage:

Chain of Custody

Relinquished By: Date: Extracts Examined

Received By: Date: Yes No

# *Preparation Information*

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200333 | **Prep Method:** | EPA 5030B | **Prep Date:** | 04/03/12 10:53 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Client ID | Product | Matrix | Amt. Ext. | Final Vol. |
|---|---|---|---|---|---|
| J1201360-018 | CRHE-IW0014I-040.0-03212 | 8260B | WATER | 10ml | 10ml |
| J1201360-019 | CRHE-MW0029-045.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-020 | CRHE-MW0026-035.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-021 | CRHE-MW0022-065.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-022 | CRHE-MW0027-045.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-024 | CRHE-MW0025-030.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-024 | CRHE-MW0025-030.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-030 | CHRE-MW0036-010.0-0320[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201388-017 | GAIN-FW-22B-02-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-018 | GAIN-FW-22B-01-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-019 | GAIN-FB-03-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-020 | GAIN-EB-03-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-021 | GAIN-Trip Blank-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-023 | GAIN-FW-29B-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-024 | GAIN-FW-99-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-025 | GAIN-FW-29C-032112 | 8260B | WATER | 10ml | 10ml |
| JWG1200333-1 | Matrix Spike | 8260B | WATER | 10ml | 10ml |
| JWG1200333-2 | Duplicate Matrix Spike | 8260B | WATER | 10ml | 10ml |
| JWG1200333-3 | Lab Control Sample | 8260B | WATER | 10ml | 10ml |
| JWG1200333-4 | Method Blank | 8260B | WATER | 10ml | 10ml |

| Lab Code | Parent Lab Code | Comments |
|---|---|---|
| JWG1200333-1 | J1201388-023 | |
| JWG1200333-2 | J1201388-023 | |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201360-018 | 264883 | 40951 | 1uL | | | |
| J1201360-019 | 264884 | 40951 | 1uL | | | |
| J1201360-020 | 264885 | 40951 | 1uL | | | |
| J1201360-021 | 264886 | 40951 | 1uL | | | |
| J1201360-022 | 264887 | 40951 | 1uL | | | |
| J1201360-024 | 264881 | 40951 | 1uL | | | |
| J1201360-024 | 264888 | 40951 | 1uL | | | |
| J1201360-030 | 264882 | 40951 | 1uL | | | |
| J1201388-017 | 264889 | 40951 | 1uL | | | |
| J1201388-018 | 264890 | 40951 | 1uL | | | |

**Comments:**

Started By: SAllen Assisted By: _____ Training: Yes No

Completed By: SAllen Assisted By: _____ Yes No

Reviewed By: _____ Date: _____ Storage: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined: Yes No

Received By: _____ Date: _____

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200333 | **Prep Method:** | EPA 5030B | **Prep Date:** | 04/03/12 10:53 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201388-019 | 264891 | 40951 | 1uL | | | |
| J1201388-020 | 264892 | 40951 | 1uL | | | |
| J1201388-021 | 264893 | 40951 | 1uL | | | |
| J1201388-023 | 264894 | 40951 | 1uL | | | |
| J1201388-024 | 264895 | 40951 | 1uL | | | |
| J1201388-025 | 264896 | 40951 | 1uL | | | |
| JWG1200333-1 | 264897 | 40951 | 1uL | 42873/42796 | 20uL | |
| JWG1200333-2 | 264898 | 40951 | 1uL | 42873/42796 | 20uL | |
| JWG1200333-3 | 264899 | 40951 | 1uL | 42873/42796 | 20uL | |
| JWG1200333-4 | 264900 | 40951 | 1uL | | | |

**Comments:**

Started By: SAllen Assisted By: Training Yes No

Completed By: SAllen Assisted By: Yes No

Reviewed By: Date: Storage:

Chain of Custody

Relinquished By: Date: Extracts Examined

Received By: Date: Yes No

April 05, 2012 Service Request No: J1201360

Ms. Jill Johnson
Geosyntec Consultants
9515 Holsberry Road
Suite A
Pensacola, FL 32534

**Laboratory Results for: KSC CRHE/FR1681**

Dear Ms. Johnson:

Enclosed are the results of the sample(s) submitted to our laboratory on March 22, 2012. For your reference, these analyses have been assigned our service request number **J1201360**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. If required, the laboratory can provide uncertainty measurements for each method employed in sample analysis; this uncertainty measurement would be generated using method validation studies and the laboratory's quality control data.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at CMyers@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc. dba ALS Environmental**

Craig Myers
Project Manager



*CAS Jacksonville is NELAC-accredited by the State of Florida, #E82502. Other state accreditations include: Georgia, #958; Kentucky, #63; Louisiana, #02086; North Carolina, #527; South Carolina, #96021001; Texas, #T104704197-09-TX; Maine, #2011006; DoD #66206.*

Columbia Analytical Services℠
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PHONE 904-739-2277 FAX 904-739-2011
Columbia Analytical Services, Inc.
Part of the ALS Group A Campbell Brothers Limited Company
www.caslab.com ▪ www.alsglobal.com

# TABLE OF CONTENTS

**CAS Lab Reference No.: J1201360**
**Non CLP Tier III (w/o Raw Data)**


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**This report contains a total of 283 pages**

COLUMBIA ANALYTICAL SERVICES, INC.

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request No.:** | J1201360 |
| **Project:** | KSC CRHE | **Date Received:** | 3/22/12 |
| **Sample Matrix:** | Water/Soil | | |

## CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III data deliverables including validation summary forms. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

### Sample Receipt

Twenty-nine water samples and one trip blank were received for analysis at Columbia Analytical Services on 3/22/12. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at $\leq$6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

### Volatile Organic Analyses:

Method 8260B: The upper control criterion was exceeded for the following analyte in Laboratory Control Samples (LCS) JWG1200321-1 and JWG1200333-3: Isopropylbenzene. The analyte in question was not detected in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

### General Chemistry Analyses:

No significant data anomalies were noted with this analysis.

Approved by_____ Date 4/5/12

**Client:** Geosyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360

## SAMPLE CROSS-REFERENCE

| SAMPLE # | CLIENT SAMPLE ID | DATE | TIME |
|---|---|---|---|
| J1201360-001 | CRHE-MW0032-045.0-03192012 | 3/19/12 | 11:00 |
| J1201360-002 | CRHE-MW0030-010.0-03192012 | 3/19/12 | 12:05 |
| J1201360-003 | CRHE-MW0023-065.0-03192012 | 3/19/12 | 14:40 |
| J1201360-004 | CRHE-MW0031-045.0-03192012 | 3/19/12 | 15:25 |
| J1201360-005 | CRHE-IW0020I-045.0-03192012 | 3/19/12 | 16:40 |
| J1201360-006 | CRHE-MW0039-030.0-03192012 | 3/19/12 | 17:39 |
| J1201360-007 | CRHE-MW0038-010.0-03192012 | 3/19/12 | 18:10 |
| J1201360-008 | EB01-03192012 | 3/19/12 | 15:30 |
| J1201360-009 | CRHE-IW0015I-040.0-03192012 | 3/19/12 | 18:10 |
| J1201360-010 | CRHE-MW0034-038.5-03202012 | 3/20/12 | 09:37 |
| J1201360-011 | CRHE-IW0019I-040.0-03202012 | 3/20/12 | 09:40 |
| J1201360-012 | CRHE-MW0033-048.5-03202012 | 3/20/12 | 10:17 |
| J1201360-013 | CRHE-IW0021I-045.0-03202012 | 3/20/12 | 11:23 |
| J1201360-014 | CRHE-MW0035-045.0-03202012 | 3/20/12 | 14:11 |
| J1201360-015 | CRHE-MW0028-040.0-03202012 | 3/20/12 | 14:20 |
| J1201360-016 | CRHE-MW0037-030.0-03202012 | 3/20/12 | 14:41 |
| J1201360-017 | CRHE-IW0017I-030.0-03202012 | 3/20/12 | 15:10 |
| J1201360-018 | CRHE-IW0014I-040.0-03212012 | 3/21/12 | 09:05 |
| J1201360-019 | CRHE-MW0029-045.0-03212012 | 3/21/12 | 11:00 |
| J1201360-020 | CRHE-MW0026-035.0-03212012 | 3/21/12 | 12:00 |
| J1201360-021 | CRHE-MW0022-065.0-03212012 | 3/21/12 | 15:05 |
| J1201360-022 | CRHE-MW0027-045.0-03212012 | 3/21/12 | 15:45 |
| J1201360-023 | CRHE-MW0024-010.0-03212012 | 3/21/12 | 17:50 |
| J1201360-024 | CRHE-MW0025-030.0-03212012 | 3/21/12 | 18:30 |
| J1201360-025 | CRHE-188849-IDW-03212012 | 3/21/12 | 16:15 |
| J1201360-026 | CRHE-188797-IDW-03212012 | 3/21/12 | 16:40 |
| J1201360-027 | CRHE-188842-IDW-03212012 | 3/21/12 | 16:45 |
| J1201360-028 | CRHE-188838-IDW-03212012 | 3/21/12 | 17:00 |
| J1201360-029 | Trip Blank | 3/19/12 | 00:00 |
| J1201360-030 | CHRE-MW0036-010.0-03202012 | 3/20/12 | 15:21 |

# Florida DEP Data Qualifiers

B Results based upon colony counts outside the acceptable range.

D Measurement was made in the field.

H Value based on field kit determination; results may not be accurate.

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
2. No known quality control criteria exists for the component.
3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).

K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).

L Off scale high. The analyte is above the upper limit of the linear calibration range.

M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.

N Presumptive evidence of the analyte. Confirmation was not performed.

Q Sample held beyond the accepted holding time.

T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.

U Indicates that the compound was analyzed for but not detected.

V Indicates that the analyte was detected in both the sample and the associated method blank.

Y The laboratory analysis was from an improperly preserved sample.

Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.

## Acronyms

| | |
|---|---|
| ASTM | American Society for Testing and Materials |
| A2LA | American Association for Laboratory Accreditation |
| CARB | California Air Resources Board |
| CAS Number | Chemical Abstract Service registry Number |
| CFC | Chlorofluorocarbon |
| CFU | Colony-Forming Unit |
| DEC | Department of Environmental Conservation |
| DEQ | Department of Environmental Quality |
| DHS | Department of Health Services |
| DOE | Department of Ecology |
| DOH | Department of Health |
| EPA | U. S. Environmental Protection Agency |
| ELAP | Environmental Laboratory Accreditation Program |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| LUFT | Leaking Underground Fuel Tank |
| M | Modified |
| MCL | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL | Method Detection Limit |
| MPN | Most Probable Number |
| MRL | Method Reporting Limit |
| NA | Not Applicable |
| NC | Not Calculated |
| NCASI | National Council of the Paper Industry for Air and Stream Improvement |
| ND | Not Detected |
| NIOSH | National Institute for Occupational Safety and Health |
| PQL | Practical Quantitation Limit |
| RCRA | Resource Conservation and Recovery Act |
| SIM | Selected Ion Monitoring |
| TPH | Total Petroleum Hydrocarbons |
| tr | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL. |

Columbia Analytical Services

# Chain of Custody Documentation

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Columbia Analytical Services

www.caslab.com

# CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR # J1201360

CAS Contact

9143 Philips Highway, Suite 200, Jacksonville, FL 32256 / Phone (904) 739-2277 / 800-695-7222 x06 / FAX (904) 739-2011



| Project Name | Project Number |
|---|---|
| KSC-CRHE | FR1681/17*4 |
| Report To: Jill Johnson | Report CC |
| jjohnson@geosyntec.com | |
| Company/Address | |
| 316 S. Baylen Street, Suite 201 | |
| Pensacola, FL 32502 | |
| Phone # | FAX # |
| 850-477-6542 | N/A |
| Sampler's Signature | Sampler's Printed Name |
| | Lauren Petty |

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

Preservative Key: 0. None; 1. HCL; 2. HNO3; 3. H2SO4; 4. NaOH; 5. Zn. Acetate; 6. MeOH; 7. NaHSO4; 8. Other

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | Matrix | NUMBER OF CONTAINERS | Preservative | 8260B (Full List VOC) | REMARKS |
|---|---|---|---|---|---|---|---|---|
| CRHE-MW0022-065.0-03212012 | | 3/21/2012 | 1505 | W | 3 | | X | |
| CRHE-MW0023-065.0-03192012 | | 3/19/2012 | 1440 | W | 3 | | X | |
| CRHE-MW0024-010.0-03212012 | | 3/21/2012 | 1750 | W | 3 | | X | |
| CRHE-MW0025-030.0-03212012 | | 3/21/2012 | 1830 | W | 3 | | X | |
| CRHE-MW0026-035.0-03212012 | | 3/21/2012 | 1200 | W | 3 | | X | |
| CRHE-MW0027-045.0-03212012 | | 3/21/2012 | 1545 | W | 3 | | X | |
| CRHE-MW0028-040.0-03202012 | | 3/20/2012 | 1420 | W | 3 | | X | |
| CRHE-MW0029-045.0-03212012 | | 3/21/2012 | 1100 | W | 3 | | X | |
| CRHE-MW0030-010.0-03192012 | | 3/19/2012 | 1205 | W | 3 | | X | |
| CRHE-MW0031-045.0-03192012 | | 3/19/2012 | 1525 | W | 3 | | X | |

**Special Instructions/Comments:**

W = Water

NASA RIS KEDD → Data Deliverable

3.0°C F71

TURNAROUND REQUIREMENTS

RUSH (SURCHARGES APPLY)

1 STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

I. Results Only

II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

III. Results + QC and Calibration Summaries

IV. Data Validation Report with Raw Data

Edata ___ Yes ___ No

INVOICE INFORMATION

P O #

Bill to: Geosyntec

316 S. Baylen Street Ste. 201

Pensacola, FL 32502

| Relinquished By | Received By | Relinquished By | Received By | Relinquished By | Received By |
|---|---|---|---|---|---|
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name: Geosyntec | Printed Name | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm: Lauren Petty | Firm: CAS/ALS | Firm | Firm | Firm | Firm |
| Date/Time: 03/22/12/0530 | Date/Time: 3.22.12 0730 | Date/Time | Date/Time | Date/Time | Date/Time |

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SR # J1201360

CAS Contact

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| Project Name | Project Number |
|---|---|
| KSC-CRHE | FR1681/17*4 |
| Report To Jill Johnson | Report CC |
| jjohnson@geosyntec.com | |
| Company/Address | |
| 316 S. Baylen Street, Suite 201 | |
| Pensacola, FL 32502 | |
| Phone # | FAX # |
| 850-477-6542 | N/A |
| Sampler's Signature | Sampler's Printed Name |
| | Lauren Petty |

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

Preservative Key: 0. None; 1. HCL; 2. HNO3; 3. H2SO4; 4. NaOH; 5. Zn Acetate; 6. MeOH; 7. NaHSO4; 8. Other

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | Matrix | NUMBER OF CONTAINERS | Preservative | 8260B (Full List VOC | REMARKS |
|---|---|---|---|---|---|---|---|---|
| CRHE-MW0032-045.0-03192012 | | 3/19/2012 | 1100 | W | | | X | |
| CRHE-MW0033-048 5-03202012 | | 3/20/2012 | 1017 | W | | | X | |
| CRHE-MW0034-038 5-03202012 | | 3/20/2012 | 0937 | W | | | X | |
| CRHE-MW0035-045 0-03202012 | | 3/20/2012 | 1411 | W | | | X | |
| CRHE-MW0036-010 0-03202012 | | 3/20/2012 | 1521 | W | | | X | |
| CRHE-MW0037-030.0-03202012 | | 3/20/2012 | 1441 | W | | | X | |
| CRHE-MW0038-010 0-03192012 | | 3/19/2012 | 1810 | W | | | X | |
| CRHE-MW0039-030 0-03192012 | | 3/19/2012 | 1739 | W | | | X | |
| CRHE-MW0014I-040 0-03212012 | | 3/21/2012 | 0905 | W | | | X | |
| CRHE-IW0015I-040 0-03192012 | | 3/19/2012 | 1810 | W | | | X | |

Special Instructions/Comments:

W = Water

Data Deliverable → NASA RIS KEDD

3.0 c T71

TURNAROUND REQUIREMENTS

[ ] RUSH (SURCHARGES APPLY)

[x] STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

[ ] I. Results Only

[ ] II. Results + QC Summaries

[ ] III. Results + QC and Calibration Summaries

[ ] IV. Data Validation Report with Raw Data

Edata ____ Yes ____ No

INVOICE INFORMATION

P.O. #

Bill to Geosyntec

316 S. Baylen Street Ste. 201

Pensacola, FL 32502

| Relinquished By | Received By | Relinquished By | Received By | Relinquished By | Received By |
|---|---|---|---|---|---|
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name: Lauren Petty | Printed Name: Bauer | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm: Geosyntec | Firm: CAS (ALS) | Firm | Firm | Firm | Firm |
| Date/Time: 3/22/12 1253 | Date/Time: 3.22.12 0930 | Date/Time | Date/Time | Date/Time | Date/Time |

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# CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR # J1201360

CAS Contact

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| | |
|---|---|
| Project Name: KSC-CRHE | Project Number: FR1681/17*4 |
| Report To: Jill Johnson<br>jjohnson@geosyntec.com | Report CC: |
| Company/Address: 316 S. Baylen Street, Suite 201<br>Pensacola, FL 32502 | |
| Phone #: 850-477-6542 | FAX #: N/A |
| Sampler's Signature: | Sampler's Printed Name: Lauren Petty |

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | Matrix | NUMBER OF CONTAINERS | 8260B (Full List VOC | 8260B (Full List VOC | 8260B (Full List VOC | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| Preservative | | | | | | 1 | 0 | 6 | |
| CRHE-IW0017I-030 0-03202012 | | 3/20/2012 | 1510 | W | 3 | X | | | |
| CRHE-IW0019I-040 0-03202012 | | 3/20/2012 | 0940 | W | 3 | X | | | |
| CRHE-IW0020I-045 0-03192012 | | 3/19/2012 | 1640 | W | 3 | X | | | |
| CRHE-IW0021I-045 0-03202012 | | 3/20/2012 | 1123 | W | 3 | X | | | |
| EB01-03192012 | | 3/19/2012 | 1530 | W | 3 | X | | | |
| CRHE-188849-IDW-03212012 | | 3/21/2012 | 1615 | S | 4 | | 3 | 1 | |
| CRHE-188797-IDW-03212012 | | 3/21/2012 | 1640 | S | 4 | | 3 | 1 | |
| CRHE-188842-IDW-03212012 | | 3/21/2012 | 1645 | S | 4 | | 3 | 1 | |
| CRHE-188838-IDW-03212012 | | 3/21/2012 | 1700 | S | 4 | | 3 | 1 | |
| Trip Blank | | Lab Provided | | | 2 | X | | | |

Preservative Key: 0 None; 1 HCL; 2 HNO3; 3 H2SO4; 4 NaOH; 5 Zn Acetate; 6 MeOH; 7 NaHSO4; 8. Other

Special Instructions/Comments:

W = Water
S = Soil

NASA RISKDD → Data Deliverable
3.0°C TM

TURNAROUND REQUIREMENTS

RUSH (SURCHARGES APPLY)

STANDARD

PROJECT REQUIRED TAT (DATE)

REQUESTED REPORT DATE

REPORT REQUIREMENTS

I. Results Only

II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

III. Results + QC and Calibration Summaries

IV. Data Validation Report with Raw Data

Edata ___ Yes ___ No

INVOICE INFORMATION

P.O. #

Bill to: Geosyntec
316 S. Baylen Street Ste. 201
Pensacola, FL 32502

| Relinquished By | Received By | Relinquished By | Received By | Relinquished By | Received By |
|---|---|---|---|---|---|
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name: Lauren Petty | Printed Name | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm: Geosyntec | Firm: CAS LAS | Firm | Firm | Firm | Firm |
| Date/Time: 3/22/12/0530 | Date/Time: 3.22.12 0730 | Date/Time | Date/Time | Date/Time | Date/Time |

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PAGE 1 OF 3

SR # J1201360
CAS Contact

| | |
|---|---|
| Project Name: KSC-CRHE | Project Number: FR1681 |
| Project Manager: Bill Johnson | Email Address: bjohnson@grosyntec.com |
| Company/Address: 316 S. Baylen Street, Suite 201, Pensacola, FL 32502 | |
| Phone #: 850-477-6547 | FAX#: 850-477-6707 |
| Sampler's Signature: [signature] | Sampler's Printed Name: Lauren Petty |

ANALYSIS REQUESTED (Include Method Number and [redacted])

PRESERVATIVE: HCl

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | 6200 (VOH) |
|---|---|---|---|---|---|---|
| CRHE-MW0032-03192012 | | 3/19/12 | 1100 | W | 3 | ✓ |
| CRHE-MW0030-03192012 | | 3/19/12 | 1205 | | | |
| CRHE-MW0023-03192012 | | | 1440 | | | |
| CRHE-MW0031-03192012 | | | 1525 | | | |
| CRHE-MW0020I-03192012 | | | 1640 | | | |
| CRHE-MW0039-03192012 | | | 1739 | | | |
| CRHE-MW0036-03192012 | | | 1810 | | | |
| EB01-03192012 | | | 1530 | | | ✓ |
| CRHE-MW0015I-03192012 | | 3/19/12 | 1910 | | | |
| CRHE-MW0034-03202012 | | 3/20/12 | 0937 | | | |

1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

SPECIAL INSTRUCTIONS/COMMENTS

W= Water

Will email Report Requirements 3/22.

See QAPP ☐ 3.0°C T71

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE: _____
REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
___ V. Speicalized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
PO#
BILL TO: Grosyntec
316 S Baylen St, Ste 201
Pensacola, FL 32502

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| Signature | Signature [signature] | Signature | Signature | Signature | Signature |
| Printed Name | Printed Name C Bauer | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm | Firm CAS/ALS | Firm | Firm | Firm | Firm |
| Date/Time | Date/Time 3.22.12 0730 | Date/Time | Date/Time | Date/Time | Date/Time |

Distribution: White - Return to Originator; Yellow - Retained by Client

JSCOC-3/11

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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PAGE 2 OF 3

SR # 31201360

CAS Contact

| | |
|---|---|
| Project Name: KSC - CRHE | Project Number: FR1681 |
| Project Manager: Jill Johnson | Email Address: JJohnson@geosyntec.com |
| Company/Address: 316 S. Baylen Street, Ste 201, Pensacola, FL 32502 | |
| Phone #: 850-477-6547 | FAX#: 850-477-6707 |
| Sampler's Signature: | Sampler's Printed Name: Lauren Petty |

ANALYSIS REQUESTED (Include Method Number a [redacted]

PRESERVATIVE: 1

NUMBER OF CONTAINERS

8260 (VOA)

0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | 8260 (VOA) | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|
| CRHE-IW0019I-03202012 | | 3/20/12 | 0940 | W | 3 | X | |
| CRHE-MW0033-03202012 | | " | 1017 | " | " | " | |
| CRHE-~~MW~~IW0021I-03202012 | | | 1123 | | | | |
| CRHE-MW0035-03202012 | | | 1411 | | | | |
| CRHE-MW0028-03202012 | | | 1420 | | | | |
| CRHE-MW0037-03202012 | | | 1441 | | | | |
| CRHE-IW0017I-03202012 | | | 1570 | | | | |
| CRHE-IW0014I-03202012 | | 3/21/12 | 0905 | | | | |
| CRHE-MW0029-03202012 | | | 1100 | | | | |
| CRHE-MW0026-03212012 | | | 1200 | | | | |

SPECIAL INSTRUCTIONS/COMMENTS

WE Water

See QAPP ☐ 3.0 °C T71

TURNAROUND REQUIREMENTS

____ RUSH (SURCHARGES APPLY)

X STANDARD

REQUESTED FAX DATE: _____

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS

____ I. Results Only

____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

____ V. Speicalized Forms / Custom Report

Edata ____ Yes ____ No

INVOICE INFORMATION

PO#

BILL TO: SE pay

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| 2 | | | | | |
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name | Printed Name: Bauer | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm | Firm: CAS/ACS | Firm | Firm | Firm | Firm |
| Date/Time | Date/Time: 3.22.12 0730 | Date/Time | Date/Time | Date/Time | Date/Time |

Distribution: White - Return to Originator; Yellow - Retained by Client

JSCOC-3/11

Columbia Analytical Services

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

www.caslab.com

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 3 OF 3

SR # 5120360
CAS Contact

| | |
|---|---|
| Project Name: KSC - CRHE | Project Number: FR11681 |
| Project Manager: Jill Johnson | Email Address: JJohnson@geosyntec.com |
| Company/Address: 316 S. Baylen Street Ste. 201, Pensacola, FL 32502 | |
| Phone #: 805-477-6547 | FAX#: 850-477-6707 |
| Sampler's Signature | Sampler's Printed Name: Lauren Petty |

ANALYSIS REQUESTED (Include Method Number and [redacted]

PRESERVATIVE: 1 | 0 | 6

NUMBER OF CONTAINERS

8260 (VOA)
8260 (VOA)
8260 (VOA)

1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

| CLIENT SAMPLE ID | LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| CRHE-MW0022-032120 12 | | 3/21/12 | 1505 | W | 3 | X | | | |
| CRHE-MW0027-032120 12 | | | 1545 | | | | | | |
| CRHE-MW0024-032120 12 | | | 1750 | | | | | | |
| CRHE-MW0025-032120 12 | | | ~~1825~~ 1830 | | | | | | |
| ~~CRHE-IDW-188849 MP~~ | | | | ~~SP~~ | | | | | |
| CRHE-188849-IDW-032120 12 | | | 1615 | S | 4 | | 3 | 1 | |
| CRHE-188797-IDW-032120 12 | | | 1640 | | | | 3 | 1 | |
| CRHE-188842-IDW-032120 12 | | | 1645 | | | | 3 | 1 | |
| CRHE-188838-IDW-032120 12 | | | 1700 | | | | 3 | 1 | |
| TRIP Blank | | LAB Provided | | W | 2 | 2 | | | |

SPECIAL INSTRUCTIONS/COMMENTS

CRHE-MW0036-032020 12 3/20/12 1521 W 3

W = Water

S = Soil

* Added per client SL 3/23/12

3.0°C T71

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE:
REQUESTED REPORT DATE:

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO: See pg 1

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| 1 3 | | | | | |
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name | Printed Name | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm | Firm CAS/ALS | Firm | Firm | Firm | Firm |
| Date/Time | Date/Time 3.22.12 0930 | Date/Time | Date/Time | Date/Time | Date/Time |

Distribution: White - Return to Originator; Yellow - Retained by Client

JSCOC-3/11

Columbia Analytical Services™

## Cooler Receipt Form

Client: Geosyntec Service Request #: J1201360

Project: KSC - CRHE

Cooler received on 3.22.12 (Lab 3.23.12) and opened on 3.22.12 by GB

COURIER: CAS UPS FEDEX (Client) Other _____ Airbill # _____

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | Were custody seals on outside of cooler? | (Yes) | No | | | | | |
| | If yes, how many and where? | #: 1 (on lid) | other | | | | | |
| 2 | Were seals intact and signature and date correct? | (Yes) | No | N/A | | | | |
| 3 | Were custody papers properly filled out? | (Yes) | No | N/A | | | | |
| 4 | Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C) | 3.0 | | | | | | |
| 5 | Thermometer ID | IR1 | | | | | | |
| 6 | Temperature Blank Present? | (Yes) | No | | | | | |
| 7 | Were Ice or Ice Packs present | (Ice) | Ice Packs | No | | | | |
| 8 | Did all bottles arrive in good condition (unbroken, etc....)? | (Yes) | No | N/A | | | | |
| 9 | Type of packing material present | Netting | (Vial Holder) | (Bubble Wrap) | | | | |
| | | Paper | Styrofoam | Other | N/A | | | |
| 10 | Were all bottle labels complete (sample ID, preservation, etc....)? | (Yes) | No | N/A | | | | |
| 11 | Did all bottle labels and tags agree with custody papers? | Yes | (No) | N/A | | | | |
| 12 | Were the correct bottles used for the tests indicated? | (Yes) | No | N/A | | | | |
| 13 | Were all of the preserved bottles received with the appropriate preservative? HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2 Preservative additions noted below | Yes | No | (N/A) | | | | |
| 14 | Were all samples received within analysis holding times? | (Yes) | No | N/A | | | | |
| 15 | Were all VOA vials free of air bubbles? If present, note below | (Yes) | No | N/A | | | | |
| 16 | Where did the bottles originate? | (CAS) | Client | | | | | |

| Sample ID | Reagent | Lot # | ml added | Initials Date/Time |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | (1) | |

Additional comments and/or explanation of all discrepancies noted above: 1 of 3 volatile vial label has the ID as MW0031-03192012 for MW0032-03192012. (2) Sample date & time matches Sample time on labels is 1832 for MW0038-03192012. (3) Sample ID on labels is

Client approval to run samples if discrepancies noted: Date:

Columbia Analytical Services

Jacksonville Laboratory
Condition Upon Receipt - Sample pH

SR # : J 1201360

Date: 3.22.12 Initials: GB

Note that pH is check and meets the required pH criterion listed in the column heading unless otherwise noted on the cooler receipt form.

| Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 40mL | 40mL | 40mL | 125mL | 125mL | 125mL | 125mL | 250mL | 250mL | 250mL | 250mL | 250mL | 250mL | 250mL | 500mL | 500mL | 500mL | 500mL | 500mL | 1L | 1L | 1L | 1L | 1L | 2oz | 4oz | 8oz | 16oz | 100ml | Ziplock | Misc. | |
| Container | G | G | G | P | P | P | P | P | P | P | P | P | G | G | P | P | P | P | G | P | P | G | G | G | G | G | G | G | P | P | Misc. | |
| Preserve | N/A | HCl | Na2 S2O3 | N/A | HCl | H2SO4 | HNO3 | N/A | H2SO4 | HNO3 | ZnAc2/ NaOH | NaOH | N/A | HNO3 | N/A | HCl | H2SO4 | HNO3 | N/A | N/A | HNO3 | N/A | HCl | H2SO4 | N/A | N/A | N/A | N/A | Na2 S2O3 | N/A | N/A | |
| Req. pH | N/A | <2 | N/A | N/A | <2 | <2 | <2 | N/A | <2 | <2 | >9 | >12 | N/A | <2 | N/A | <2 | <2 | <2 | N/A | N/A | <2 | N/A | <2 | <2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Sample # | - | - | | - | - | - | - | - | - | - | | - | | - | - | - | - | - | - | - | - | - | - | - | | | | - | - | | - | |
| -1 | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -1 |
| -2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -2 |
| -3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -3 |
| -4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -4 |
| -5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -5 |
| -6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -6 |
| -7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -7 |
| -8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -8 |
| -9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -9 |
| -10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -10 |
| -11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -11 |
| -12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -12 |
| -13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -13 |
| -14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -14 |
| -15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -15 |
| -16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -16 |
| -17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -17 |
| -18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -18 |
| -19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -19 |
| -20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -20 |
| -21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -21 |
| -22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -22 |
| -23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -23 |
| -24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -24 |
| -25 | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | -25 |
| -26 | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | -26 |
| -27 | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | -27 |
| -28 | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | -28 |
| -29 | | 4 | Trip Blank | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -29 |
| -30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -30 |
| -31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -31 |
| -32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -32 |
| -33 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -33 |
| -34 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -34 |
| -35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -35 |
| -36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -36 |
| -37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -37 |
| -38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -38 |
| -39 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -39 |
| -40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -40 |

NOTE: VOA pH checks are performed by the analytical area, not sample control

Columbia Analytical Services™

# Summary Package

9143 Philips Highway, Suite 200
Jacksonville, Florida 32256
Phone: (904) 739-2277 Fax (904) 739-2011
www.caslab.com

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Summary Package

## Sample and QC Results



n:\Stealth\Crystal rpt\DividerA.rpt

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360

## Cover Page - Organic Analysis Data Package
## Volatile Organic Compounds by GC/MS

| Sample Name | Lab Code | Date Collected | Date Received |
|---|---|---|---|
| CRHE-MW0032-045.0-03192012 | J1201360-001 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | 03/19/2012 | 03/22/2012 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | 03/19/2012 | 03/22/2012 |
| EB01-03192012 | J1201360-008 | 03/19/2012 | 03/22/2012 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | 03/19/2012 | 03/22/2012 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | 03/20/2012 | 03/22/2012 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | 03/20/2012 | 03/22/2012 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | 03/20/2012 | 03/22/2012 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | 03/20/2012 | 03/22/2012 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | 03/20/2012 | 03/22/2012 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | 03/20/2012 | 03/22/2012 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | 03/20/2012 | 03/22/2012 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | 03/20/2012 | 03/22/2012 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | 03/21/2012 | 03/22/2012 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | 03/21/2012 | 03/22/2012 |
| CRHE-188849-IDW-03212012 | J1201360-025 | 03/21/2012 | 03/22/2012 |
| CRHE-188797-IDW-03212012 | J1201360-026 | 03/21/2012 | 03/22/2012 |
| CRHE-188842-IDW-03212012 | J1201360-027 | 03/21/2012 | 03/22/2012 |
| CRHE-188838-IDW-03212012 | J1201360-028 | 03/21/2012 | 03/22/2012 |
| Trip Blank | J1201360-029 | 03/19/2012 | 03/22/2012 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | 03/20/2012 | 03/22/2012 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: James Nicholson

Date: 4/4/12 Title: Organics Manager

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0032-045.0-03192012
**Lab Code:** J1201360-001

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.54** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | **0.57** | I | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.62** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **6.6** | | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **13** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | **0.31** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0032-045.0-03192012
**Lab Code:** J1201360-001

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.30** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.71** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **8.2** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **83** | | 20 | 4.4 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0030-010.0-03192012
**Lab Code:** J1201360-002

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | **5.9** | I | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0030-010.0-03192012
**Lab Code:** J1201360-002

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 101 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0023-065.0-03192012
**Lab Code:** J1201360-003

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **0.70** | I | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.46** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0023-065.0-03192012
**Lab Code:** J1201360-003

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.21** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0031-045.0-03192012
**Lab Code:** J1201360-004

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **59** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0031-045.0-03192012
**Lab Code:** J1201360-004

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **6.0** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | **1.5** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **200** | | 10 | 2.2 | 10 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0020I-045.0-03192012
**Lab Code:** J1201360-005

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.25** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.49** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **33** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **0.92** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **79** | | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0020I-045.0-03192012
**Lab Code:** J1201360-005

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.27** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **130** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0039-030.0-03192012
**Lab Code:** J1201360-006

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.49** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **0.96** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0039-030.0-03192012
**Lab Code:** J1201360-006

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.50** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.43** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **92** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 113 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 97 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0038-010.0-03192012
**Lab Code:** J1201360-007

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0038-010.0-03192012
**Lab Code:** J1201360-007

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** EB01-03192012
**Lab Code:** J1201360-008

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** EB01-03192012
**Lab Code:** J1201360-008

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 101 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0015I-040.0-03192012
**Lab Code:** J1201360-009

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **2.0** | | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.21** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **76** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0015I-040.0-03192012
**Lab Code:** J1201360-009

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | 27 | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0034-038.5-03202012
**Lab Code:** J1201360-010

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.36** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **3.4** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **12** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **1.2** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **140** | | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0034-038.5-03202012
**Lab Code:** J1201360-010

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **150** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 101 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0019I-040.0-03202012
**Lab Code:** J1201360-011

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | **4.1** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.48** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **1.3** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **1000** | | 20 | 7.2 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **1.3** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0019I-040.0-03202012
**Lab Code:** J1201360-011

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.25** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **18** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **530** | | 20 | 4.4 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 102 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0033-048.5-03202012
**Lab Code:** J1201360-012

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.92** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | **9.9** | I | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.42** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **99** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **3.0** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0033-048.5-03202012
**Lab Code:** J1201360-012

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **1.4** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | **0.52** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **33** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 96 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 103 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

Analytical Results

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0021I-045.0-03202012
**Lab Code:** J1201360-013

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.98** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0021I-045.0-03202012
**Lab Code:** J1201360-013

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0035-045.0-03202012
**Lab Code:** J1201360-014

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.26** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.55** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0035-045.0-03202012
**Lab Code:** J1201360-014

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.23** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.44** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **130** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0028-040.0-03202012
**Lab Code:** J1201360-015

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.59** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.31** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **4.2** | | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **3.5** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0028-040.0-03202012
**Lab Code:** J1201360-015

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.55** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **4.1** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **180** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 95 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 110 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0037-030.0-03202012
**Lab Code:** J1201360-016

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.25** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **1.2** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.44** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **8.0** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0037-030.0-03202012
**Lab Code:** J1201360-016

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.20** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **19** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0017I-030.0-03202012
**Lab Code:** J1201360-017

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.32** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.52** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0017I-030.0-03202012
**Lab Code:** J1201360-017

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.27** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **90** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0014I-040.0-03212012
**Lab Code:** J1201360-018

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | **4.0** | I | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0014I-040.0-03212012
**Lab Code:** J1201360-018

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | **3.6** | | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0029-045.0-03212012
**Lab Code:** J1201360-019

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **1.4** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | **1.4** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **420** | | 10 | 3.6 | 10 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0029-045.0-03212012
**Lab Code:** J1201360-019

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **13** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **140** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **100** | | 10 | 2.2 | 10 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 112 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0026-035.0-03212012
**Lab Code:** J1201360-020

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | **3.5** | | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **9.1** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | **6.4** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | **0.41** | I | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **3600** | | 100 | 36 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0026-035.0-03212012
**Lab Code:** J1201360-020

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | **0.22** | I | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | **0.36** | I | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **34** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **1000** | | 100 | 16 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **2000** | | 100 | 22 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 95 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0022-065.0-03212012
**Lab Code:** J1201360-021

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | **0.51** | I | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | **1.5** | | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0022-065.0-03212012
**Lab Code:** J1201360-021

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | **0.22** | I | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0027-045.0-03212012
**Lab Code:** J1201360-022

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | **0.96** | I | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **2.7** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **790** | | 100 | 36 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0027-045.0-03212012
**Lab Code:** J1201360-022

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | **0.22** | I | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **14** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **1.3** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **1700** | | 100 | 22 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0024-010.0-03212012
**Lab Code:** J1201360-023

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **11** | | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0024-010.0-03212012
**Lab Code:** J1201360-023

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **0.74** | I | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **13** | | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0025-030.0-03212012
**Lab Code:** J1201360-024

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | **2.2** | | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | **15** | | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | **9700** | | 200 | 72 | 200 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0025-030.0-03212012
**Lab Code:** J1201360-024

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | **0.41** | I | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | **75** | | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | **0.60** | I | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | **7600** | | 200 | 44 | 200 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 92 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** Trip Blank
**Lab Code:** J1201360-029

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** Trip Blank
**Lab Code:** J1201360-029

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CHRE-MW0036-010.0-03202012
**Lab Code:** J1201360-030

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CHRE-MW0036-010.0-03202012
**Lab Code:** J1201360-030

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

Analytical Results

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 95 | 88-115 | 03/30/12 | Acceptable |

Comments:

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200333-4

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200333-4

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 103 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188849-IDW-03212012
**Lab Code:** J1201360-025

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.1 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.1 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.1 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 11 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 11 | 0.40 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 26 | 0.91 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 11 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 11 | 0.59 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 130 | 3.6 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.1 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 11 | 0.42 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.1 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.1 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 11 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 110 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188849-IDW-03212012
**Lab Code:** J1201360-025

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 11 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.1 | 0.064 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 51 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.1 | 0.074 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.1 | 0.51 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.1 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 21 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 21 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.1 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 99 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 101 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188797-IDW-03212012
**Lab Code:** J1201360-026

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.6 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.6 | 0.33 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.6 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 12 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 12 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 12 | 0.44 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.6 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.6 | 0.067 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.6 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 28 | 1.0 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 12 | 0.62 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 12 | 0.65 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 140 | 3.9 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.6 | 0.077 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 12 | 0.46 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.6 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.6 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.6 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 12 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 120 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188797-IDW-03212012
**Lab Code:** J1201360-026

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.6 | 0.067 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 12 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 12 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.6 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | **2.0** | I | 56 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.6 | 0.082 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.6 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.6 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.6 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 23 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 23 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.6 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 92 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 102 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 105 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188842-IDW-03212012
**Lab Code:** J1201360-027

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.1 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.1 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.1 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 11 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 11 | 0.40 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 26 | 0.91 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 11 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 11 | 0.59 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | 22 | I | 130 | 3.6 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.1 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 11 | 0.42 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.1 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.1 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 11 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 110 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188842-IDW-03212012
**Lab Code:** J1201360-027

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 11 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.1 | 0.064 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 51 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.1 | 0.074 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.1 | 0.51 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.1 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 21 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 21 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.1 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 90 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 103 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 91 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 105 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188838-IDW-03212012
**Lab Code:** J1201360-028

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.8 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.8 | 0.34 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.8 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 12 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 12 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 12 | 0.45 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.8 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.8 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.8 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 29 | 1.1 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 12 | 0.64 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 12 | 0.67 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | **17** | I | 150 | 4.1 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.8 | 0.080 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | **2.1** | I | 12 | 0.48 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.8 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.8 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.8 | 0.32 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 12 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 120 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188838-IDW-03212012
**Lab Code:** J1201360-028

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.8 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 12 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 12 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.8 | 0.073 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 58 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.8 | 0.085 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.8 | 0.58 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.8 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.8 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 24 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 24 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.8 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 116 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 99 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 108 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200305-2

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.0 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.0 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.0 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 10 | 0.39 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 25 | 0.90 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 10 | 0.55 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 10 | 0.58 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 130 | 3.5 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.0 | 0.069 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 10 | 0.41 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.0 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.0 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 10 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 100 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200305-2

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 10 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.0 | 0.063 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 50 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.0 | 0.073 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.0 | 0.50 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.0 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 20 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.0 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 95 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 102 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360

## Surrogate Recovery Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 | Sur2 | Sur3 | Sur4 |
|---|---|---|---|---|---|
| CRHE-MW0032-045.0-03192012 | J1201360-001 | 97 | 109 | 99 | 98 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | 98 | 106 | 98 | 101 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | 100 | 107 | 99 | 96 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | 97 | 106 | 100 | 98 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | 96 | 107 | 100 | 99 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | 99 | 113 | 99 | 97 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | 100 | 109 | 100 | 100 |
| EB01-03192012 | J1201360-008 | 97 | 106 | 99 | 101 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | 101 | 107 | 99 | 100 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | 99 | 109 | 101 | 98 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | 98 | 105 | 97 | 102 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | 96 | 109 | 96 | 103 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | 99 | 109 | 99 | 99 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | 99 | 108 | 98 | 96 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | 95 | 110 | 98 | 98 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | 97 | 107 | 99 | 98 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | 97 | 108 | 99 | 100 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | 94 | 107 | 97 | 99 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | 98 | 112 | 99 | 100 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | 99 | 108 | 95 | 96 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | 99 | 107 | 99 | 98 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | 96 | 107 | 98 | 96 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | 98 | 107 | 99 | 98 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | 97 | 111 | 92 | 98 |
| Trip Blank | J1201360-029 | 94 | 111 | 97 | 96 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | 97 | 111 | 97 | 100 |
| Method Blank | JWG1200321-2 | 98 | 105 | 100 | 95 |
| Method Blank | JWG1200325-2 | 99 | 105 | 99 | 98 |
| Method Blank | JWG1200333-4 | 96 | 103 | 97 | 96 |
| Lab Control Sample | JWG1200321-1 | 99 | 107 | 99 | 100 |
| Lab Control Sample | JWG1200325-1 | 94 | 104 | 98 | 97 |
| Lab Control Sample | JWG1200333-3 | 95 | 109 | 97 | 96 |

**Surrogate Recovery Control Limits (%)**

| | | |
|---|---|---|
| Sur1 = | 1,2-Dichloroethane-d4 | 72-121 |
| Sur2 = | 4-Bromofluorobenzene | 86-113 |
| Sur3 = | Dibromofluoromethane | 86-112 |
| Sur4 = | Toluene-d8 | 88-115 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360

## Surrogate Recovery Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 | Sur2 | Sur3 | Sur4 |
|---|---|---|---|---|---|
| CRHE-188849-IDW-03212012 | J1201360-025 | 94 | 99 | 96 | 101 |
| CRHE-188797-IDW-03212012 | J1201360-026 | 92 | 102 | 96 | 105 |
| CRHE-188842-IDW-03212012 | J1201360-027 | 90 | 103 | 91 | 105 |
| CRHE-188838-IDW-03212012 | J1201360-028 | 94 | 116 | 99 | 108 |
| Method Blank | JWG1200305-2 | 94 | 95 | 96 | 102 |
| Lab Control Sample | JWG1200305-1 | 94 | 97 | 98 | 101 |

**Surrogate Recovery Control Limits (%)**

| | |
|---|---|
| Sur1 = 1,2-Dichloroethane-d4 | 80-120 |
| Sur2 = 4-Bromofluorobenzene | 64-135 |
| Sur3 = Dibromofluoromethane | 74-125 |
| Sur4 = Toluene-d8 | 46-156 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 09:45

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS52\DATA\MS52-120322\0322-02.D
**Instrument ID:** MS52
**Analysis Method:** 8260B

**Lab Code:** JWG1200306-2
**Analysis Lot:** JWG1200306

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 53,457 | 11.60 | 47,863 | 9.16 | 122,997 | 6.17 |
| | **Upper Limit ==>** | 106,914 | 12.10 | 95,726 | 9.66 | 245,994 | 6.67 |
| | **Lower Limit ==>** | 26,729 | 11.10 | 23,932 | 8.66 | 61,499 | 5.67 |
| | **ICAL Result ==>** | 48,766 | 11.60 | 43,592 | 9.16 | 110,750 | 6.17 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200305-1 | 52,658 | 11.60 | 48,614 | 9.16 | 125,564 | 6.17 |
| Method Blank | JWG1200305-2 | 50,853 | 11.59 | 47,975 | 9.16 | 125,218 | 6.17 |
| CRHE-188849-IDW-03212012 | J1201360-025 | 45,168 | 11.60 | 46,360 | 9.16 | 121,432 | 6.17 |
| CRHE-188797-IDW-03212012 | J1201360-026 | 40,555 | 11.60 | 43,358 | 9.16 | 116,772 | 6.17 |
| CRHE-188842-IDW-03212012 | J1201360-027 | 40,415 | 11.60 | 42,767 | 9.17 | 117,887 | 6.17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | 35,955 | 11.60 | 42,626 | 9.16 | 118,248 | 6.18 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 11:12

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120330\0330-02.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200322-2
**Analysis Lot:** JWG1200322

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 328,039 | 11.12 | 413,475 | 8.80 | 1,184,883 | 5.51 |
| | **Upper Limit ==>** | 656,078 | 11.62 | 826,950 | 9.30 | 2,369,766 | 6.01 |
| | **Lower Limit ==>** | 164,020 | 10.62 | 206,738 | 8.30 | 592,442 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200321-1 | 318,654 | 11.12 | 397,222 | 8.80 | 1,171,291 | 5.51 |
| Method Blank | JWG1200321-2 | 337,907 | 11.13 | 403,441 | 8.80 | 1,145,808 | 5.51 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | 315,754 | 11.13 | 399,126 | 8.80 | 1,148,047 | 5.51 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | 323,166 | 11.13 | 392,864 | 8.80 | 1,177,874 | 5.51 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | 322,551 | 11.13 | 384,128 | 8.80 | 1,104,427 | 5.52 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | 331,420 | 11.13 | 396,550 | 8.80 | 1,156,645 | 5.51 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | 322,585 | 11.13 | 393,897 | 8.80 | 1,164,407 | 5.51 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | 319,516 | 11.13 | 401,946 | 8.80 | 1,172,242 | 5.51 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | 327,430 | 11.13 | 405,589 | 8.80 | 1,173,486 | 5.51 |
| EB01-03192012 | J1201360-008 | 330,521 | 11.13 | 389,632 | 8.80 | 1,146,764 | 5.51 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | 332,367 | 11.13 | 389,217 | 8.80 | 1,147,109 | 5.52 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | 321,006 | 11.13 | 397,996 | 8.80 | 1,125,602 | 5.52 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | 316,893 | 11.13 | 382,659 | 8.80 | 1,133,176 | 5.51 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | 324,878 | 11.13 | 388,136 | 8.80 | 1,169,094 | 5.52 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | 320,327 | 11.13 | 393,071 | 8.80 | 1,149,686 | 5.51 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | 330,706 | 11.12 | 409,470 | 8.80 | 1,174,443 | 5.52 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | 319,532 | 11.13 | 409,711 | 8.80 | 1,202,891 | 5.51 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | 322,399 | 11.13 | 400,508 | 8.80 | 1,144,939 | 5.51 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | 326,036 | 11.12 | 400,878 | 8.80 | 1,158,793 | 5.51 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 09:21

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120402\0402-02.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200326-2
**Analysis Lot:** JWG1200326

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 338,282 | 11.13 | 419,066 | 8.80 | 1,182,437 | 5.51 |
| | **Upper Limit ==>** | 676,564 | 11.63 | 838,132 | 9.30 | 2,364,874 | 6.01 |
| | **Lower Limit ==>** | 169,141 | 10.63 | 209,533 | 8.30 | 591,219 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200325-1 | 322,206 | 11.13 | 386,918 | 8.80 | 1,106,267 | 5.51 |
| Method Blank | JWG1200325-2 | 322,051 | 11.13 | 383,241 | 8.80 | 1,093,788 | 5.51 |
| Trip Blank | J1201360-029 | 314,454 | 11.13 | 402,969 | 8.80 | 1,172,678 | 5.51 |
| CRHE-MW0032-045.0-03192012D | J1201360-001 | 317,812 | 11.13 | 379,377 | 8.80 | 1,119,988 | 5.51 |
| CRHE-MW0031-045.0-03192012D | J1201360-004 | 322,770 | 11.13 | 395,883 | 8.80 | 1,159,224 | 5.51 |
| CRHE-IW0020I-045.0-03192012D | J1201360-005 | 319,432 | 11.13 | 390,271 | 8.80 | 1,120,582 | 5.51 |
| CRHE-MW0039-030.0-03192012D | J1201360-006 | 325,142 | 11.13 | 389,370 | 8.80 | 1,108,624 | 5.51 |
| CRHE-MW0034-038.5-03202012D | J1201360-010 | 327,008 | 11.13 | 395,803 | 8.80 | 1,096,028 | 5.51 |
| CRHE-IW0019I-040.0-03202012D | J1201360-011 | 319,532 | 11.13 | 392,191 | 8.80 | 1,116,694 | 5.51 |
| CRHE-MW0035-045.0-03202012D | J1201360-014 | 317,749 | 11.13 | 383,466 | 8.80 | 1,119,903 | 5.52 |
| CRHE-MW0028-040.0-03202012D | J1201360-015 | 320,292 | 11.13 | 385,204 | 8.80 | 1,151,728 | 5.51 |
| CRHE-IW0017I-030.0-03202012D | J1201360-017 | 313,536 | 11.13 | 395,840 | 8.80 | 1,123,689 | 5.51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | 316,218 | 11.13 | 402,165 | 8.80 | 1,116,092 | 5.52 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | 332,100 | 11.13 | 405,929 | 8.80 | 1,179,725 | 5.52 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | 326,026 | 11.13 | 414,330 | 8.80 | 1,170,714 | 5.52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | 314,676 | 11.13 | 399,293 | 8.80 | 1,157,084 | 5.52 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | 324,993 | 11.13 | 393,830 | 8.80 | 1,133,953 | 5.52 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | 318,409 | 11.13 | 384,678 | 8.80 | 1,105,383 | 5.52 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 11:53

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120403\0403-03.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200334-2
**Analysis Lot:** JWG1200334

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 317,277 | 11.13 | 383,361 | 8.80 | 1,079,939 | 5.51 |
| | **Upper Limit ==>** | 634,554 | 11.63 | 766,722 | 9.30 | 2,159,878 | 6.01 |
| | **Lower Limit ==>** | 158,639 | 10.63 | 191,681 | 8.30 | 539,970 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200333-3 | 309,433 | 11.13 | 402,331 | 8.80 | 1,130,474 | 5.51 |
| Method Blank | JWG1200333-4 | 316,138 | 11.13 | 389,420 | 8.80 | 1,095,457 | 5.51 |
| CRHE-IW0014I-040.0-03212012RI | J1201360-018 | 316,659 | 11.13 | 370,802 | 8.80 | 1,091,211 | 5.51 |
| CRHE-MW0022-065.0-03212012R | J1201360-021 | 315,576 | 11.13 | 390,002 | 8.80 | 1,108,138 | 5.51 |
| CRHE-MW0029-045.0-03212012D | J1201360-019 | 301,400 | 11.13 | 375,955 | 8.80 | 1,085,571 | 5.51 |
| CRHE-MW0026-035.0-03212012D | J1201360-020 | 304,045 | 11.12 | 375,196 | 8.80 | 1,067,834 | 5.51 |
| CRHE-MW0027-045.0-03212012D | J1201360-022 | 304,830 | 11.12 | 381,443 | 8.80 | 1,056,074 | 5.51 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | 307,096 | 11.13 | 380,864 | 8.80 | 1,120,196 | 5.51 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | 305,472 | 11.13 | 384,814 | 8.80 | 1,106,582 | 5.51 |
| CRHE-MW0025-030.0-03212012D | J1201360-024 | 313,276 | 11.13 | 402,002 | 8.80 | 1,159,827 | 5.52 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200321

| Analyte Name | Lab Control Sample JWG1200321-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.8 | 20.0 | 99 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 19.6 | 20.0 | 98 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 20.3 | 20.0 | 102 | 66-135 |
| 1,1,2-Trichloroethane | 19.6 | 20.0 | 98 | 75-122 |
| 1,1-Dichloroethane | 20.5 | 20.0 | 103 | 79-117 |
| 1,1-Dichloroethene | 23.0 | 20.0 | 115 | 72-128 |
| 1,2,3-Trichlorobenzene | 20.7 | 20.0 | 104 | 62-136 |
| 1,2,4-Trichlorobenzene | 19.2 | 20.0 | 96 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.5 | 20.0 | 82 | 60-122 |
| 1,2-Dibromoethane (EDB) | 18.7 | 20.0 | 93 | 76-118 |
| 1,2-Dichlorobenzene | 20.5 | 20.0 | 103 | 81-115 |
| 1,2-Dichloroethane (EDC) | 19.9 | 20.0 | 100 | 70-117 |
| 1,2-Dichloropropane | 21.6 | 20.0 | 108 | 79-117 |
| 1,3-Dichlorobenzene | 21.5 | 20.0 | 107 | 82-116 |
| 1,4-Dichlorobenzene | 20.9 | 20.0 | 105 | 82-115 |
| 2-Butanone (MEK) | 102 | 100 | 102 | 62-138 |
| 2-Hexanone | 93.2 | 100 | 93 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 96.1 | 100 | 96 | 77-120 |
| Acetone | 88.3 | 100 | 88 | 42-161 |
| Benzene | 21.4 | 20.0 | 107 | 80-117 |
| Bromochloromethane | 19.6 | 20.0 | 98 | 78-118 |
| Bromodichloromethane | 20.2 | 20.0 | 101 | 75-118 |
| Bromoform | 19.2 | 20.0 | 96 | 63-121 |
| Bromomethane | 19.1 | 20.0 | 95 | 31-153 |
| Carbon Disulfide | 119 | 100 | 119 | 72-128 |
| Carbon Tetrachloride | 18.3 | 20.0 | 91 | 67-124 |
| Chlorobenzene | 20.7 | 20.0 | 103 | 83-118 |
| Chloroethane | 21.5 | 20.0 | 107 | 68-132 |
| Chloroform | 19.6 | 20.0 | 98 | 77-116 |
| Chloromethane | 24.8 | 20.0 | 124 | 60-128 |
| cis-1,2-Dichloroethene | 21.5 | 20.0 | 108 | 78-117 |
| cis-1,3-Dichloropropene | 20.9 | 20.0 | 105 | 80-119 |
| Cyclohexane | 20.3 | 20.0 | 102 | 75-124 |
| Dibromochloromethane | 19.4 | 20.0 | 97 | 74-121 |
| Dichlorodifluoromethane | 22.1 | 20.0 | 111 | 49-132 |
| Ethylbenzene | 21.8 | 20.0 | 109 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200321

| | Lab Control Sample JWG1200321-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| Isopropylbenzene | 24.0 | 20.0 | 120 * | 78-119 |
| m,p-Xylenes | 44.3 | 40.0 | 111 | 79-122 |
| Methyl Acetate | 19.4 | 20.0 | 97 | 50-137 |
| Methyl tert-Butyl Ether | 20.0 | 20.0 | 100 | 73-118 |
| Methylene Chloride | 20.5 | 20.0 | 103 | 75-123 |
| o-Xylene | 21.3 | 20.0 | 106 | 80-119 |
| Styrene | 20.9 | 20.0 | 105 | 80-121 |
| Tetrachloroethene (PCE) | 20.2 | 20.0 | 101 | 75-126 |
| Toluene | 21.1 | 20.0 | 105 | 52-152 |
| trans-1,2-Dichloroethene | 20.9 | 20.0 | 104 | 75-121 |
| trans-1,3-Dichloropropene | 19.7 | 20.0 | 98 | 76-118 |
| Trichloroethene (TCE) | 20.6 | 20.0 | 103 | 78-122 |
| Trichlorofluoromethane | 20.3 | 20.0 | 101 | 58-134 |
| Trichlorotrifluoroethane | 21.4 | 20.0 | 107 | 77-128 |
| Vinyl Chloride | 21.4 | 20.0 | 107 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200325

| Analyte Name | Lab Control Sample JWG1200325-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.4 | 20.0 | 97 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 20.2 | 20.0 | 101 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 21.1 | 20.0 | 106 | 66-135 |
| 1,1,2-Trichloroethane | 19.6 | 20.0 | 98 | 75-122 |
| 1,1-Dichloroethane | 21.2 | 20.0 | 106 | 79-117 |
| 1,1-Dichloroethene | 23.6 | 20.0 | 118 | 72-128 |
| 1,2,3-Trichlorobenzene | 19.5 | 20.0 | 98 | 62-136 |
| 1,2,4-Trichlorobenzene | 18.7 | 20.0 | 93 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.7 | 20.0 | 83 | 60-122 |
| 1,2-Dibromoethane (EDB) | 19.1 | 20.0 | 96 | 76-118 |
| 1,2-Dichlorobenzene | 20.3 | 20.0 | 101 | 81-115 |
| 1,2-Dichloroethane (EDC) | 19.8 | 20.0 | 99 | 70-117 |
| 1,2-Dichloropropane | 21.5 | 20.0 | 108 | 79-117 |
| 1,3-Dichlorobenzene | 21.0 | 20.0 | 105 | 82-116 |
| 1,4-Dichlorobenzene | 21.0 | 20.0 | 105 | 82-115 |
| 2-Butanone (MEK) | 99.8 | 100 | 100 | 62-138 |
| 2-Hexanone | 94.3 | 100 | 94 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 95.0 | 100 | 95 | 77-120 |
| Acetone | 86.2 | 100 | 86 | 42-161 |
| Benzene | 21.4 | 20.0 | 107 | 80-117 |
| Bromochloromethane | 19.4 | 20.0 | 97 | 78-118 |
| Bromodichloromethane | 20.9 | 20.0 | 104 | 75-118 |
| Bromoform | 20.2 | 20.0 | 101 | 63-121 |
| Bromomethane | 19.4 | 20.0 | 97 | 31-153 |
| Carbon Disulfide | 121 | 100 | 121 | 72-128 |
| Carbon Tetrachloride | 19.3 | 20.0 | 96 | 67-124 |
| Chlorobenzene | 20.3 | 20.0 | 101 | 83-118 |
| Chloroethane | 22.3 | 20.0 | 112 | 68-132 |
| Chloroform | 20.5 | 20.0 | 102 | 77-116 |
| Chloromethane | 25.2 | 20.0 | 126 | 60-128 |
| cis-1,2-Dichloroethene | 21.7 | 20.0 | 108 | 78-117 |
| cis-1,3-Dichloropropene | 20.7 | 20.0 | 104 | 80-119 |
| Cyclohexane | 20.8 | 20.0 | 104 | 75-124 |
| Dibromochloromethane | 19.5 | 20.0 | 97 | 74-121 |
| Dichlorodifluoromethane | 22.3 | 20.0 | 111 | 49-132 |
| Ethylbenzene | 21.1 | 20.0 | 105 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200325

| Analyte Name | Lab Control Sample JWG1200325-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| Isopropylbenzene | 23.8 | 20.0 | 119 | 78-119 |
| m,p-Xylenes | 44.3 | 40.0 | 111 | 79-122 |
| Methyl Acetate | 18.4 | 20.0 | 92 | 50-137 |
| Methyl tert-Butyl Ether | 20.8 | 20.0 | 104 | 73-118 |
| Methylene Chloride | 21.2 | 20.0 | 106 | 75-123 |
| o-Xylene | 21.4 | 20.0 | 107 | 80-119 |
| Styrene | 21.2 | 20.0 | 106 | 80-121 |
| Tetrachloroethene (PCE) | 20.2 | 20.0 | 101 | 75-126 |
| Toluene | 21.1 | 20.0 | 105 | 52-152 |
| trans-1,2-Dichloroethene | 21.2 | 20.0 | 106 | 75-121 |
| trans-1,3-Dichloropropene | 19.9 | 20.0 | 100 | 76-118 |
| Trichloroethene (TCE) | 20.8 | 20.0 | 104 | 78-122 |
| Trichlorofluoromethane | 21.2 | 20.0 | 106 | 58-134 |
| Trichlorotrifluoroethane | 22.4 | 20.0 | 112 | 77-128 |
| Vinyl Chloride | 22.0 | 20.0 | 110 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200333

| Analyte Name | Lab Control Sample JWG1200333-3 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.9 | 20.0 | 95 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 19.5 | 20.0 | 97 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 19.6 | 20.0 | 98 | 66-135 |
| 1,1,2-Trichloroethane | 19.4 | 20.0 | 97 | 75-122 |
| 1,1-Dichloroethane | 20.4 | 20.0 | 102 | 79-117 |
| 1,1-Dichloroethene | 22.4 | 20.0 | 112 | 72-128 |
| 1,2,3-Trichlorobenzene | 19.2 | 20.0 | 96 | 62-136 |
| 1,2,4-Trichlorobenzene | 17.9 | 20.0 | 89 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.1 | 20.0 | 81 | 60-122 |
| 1,2-Dibromoethane (EDB) | 18.2 | 20.0 | 91 | 76-118 |
| 1,2-Dichlorobenzene | 19.6 | 20.0 | 98 | 81-115 |
| 1,2-Dichloroethane (EDC) | 20.0 | 20.0 | 100 | 70-117 |
| 1,2-Dichloropropane | 21.1 | 20.0 | 105 | 79-117 |
| 1,3-Dichlorobenzene | 20.9 | 20.0 | 105 | 82-116 |
| 1,4-Dichlorobenzene | 20.4 | 20.0 | 102 | 82-115 |
| 2-Butanone (MEK) | 98.5 | 100 | 99 | 62-138 |
| 2-Hexanone | 91.0 | 100 | 91 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 92.1 | 100 | 92 | 77-120 |
| Acetone | 90.0 | 100 | 90 | 42-161 |
| Benzene | 20.5 | 20.0 | 102 | 80-117 |
| Bromochloromethane | 18.7 | 20.0 | 94 | 78-118 |
| Bromodichloromethane | 20.6 | 20.0 | 103 | 75-118 |
| Bromoform | 18.3 | 20.0 | 92 | 63-121 |
| Bromomethane | 17.8 | 20.0 | 89 | 31-153 |
| Carbon Disulfide | 114 | 100 | 114 | 72-128 |
| Carbon Tetrachloride | 17.7 | 20.0 | 88 | 67-124 |
| Chlorobenzene | 19.7 | 20.0 | 98 | 83-118 |
| Chloroethane | 19.9 | 20.0 | 100 | 68-132 |
| Chloroform | 19.7 | 20.0 | 98 | 77-116 |
| Chloromethane | 21.6 | 20.0 | 108 | 60-128 |
| cis-1,2-Dichloroethene | 20.9 | 20.0 | 104 | 78-117 |
| cis-1,3-Dichloropropene | 19.6 | 20.0 | 98 | 80-119 |
| Cyclohexane | 19.8 | 20.0 | 99 | 75-124 |
| Dibromochloromethane | 18.4 | 20.0 | 92 | 74-121 |
| Dichlorodifluoromethane | 19.8 | 20.0 | 99 | 49-132 |
| Ethylbenzene | 20.8 | 20.0 | 104 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200333

| Analyte Name | Lab Control Sample JWG1200333-3 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| Isopropylbenzene | 24.1 | 20.0 | 120 * | 78-119 |
| m,p-Xylenes | 41.0 | 40.0 | 102 | 79-122 |
| Methyl Acetate | 19.1 | 20.0 | 95 | 50-137 |
| Methyl tert-Butyl Ether | 19.8 | 20.0 | 99 | 73-118 |
| Methylene Chloride | 20.0 | 20.0 | 100 | 75-123 |
| o-Xylene | 20.2 | 20.0 | 101 | 80-119 |
| Styrene | 19.9 | 20.0 | 99 | 80-121 |
| Tetrachloroethene (PCE) | 18.9 | 20.0 | 94 | 75-126 |
| Toluene | 20.0 | 20.0 | 100 | 52-152 |
| trans-1,2-Dichloroethene | 20.1 | 20.0 | 100 | 75-121 |
| trans-1,3-Dichloropropene | 19.3 | 20.0 | 96 | 76-118 |
| Trichloroethene (TCE) | 20.3 | 20.0 | 101 | 78-122 |
| Trichlorofluoromethane | 18.9 | 20.0 | 95 | 58-134 |
| Trichlorotrifluoroethane | 20.0 | 20.0 | 100 | 77-128 |
| Vinyl Chloride | 19.6 | 20.0 | 98 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry
**Level:** Low
**Extraction Lot:** JWG1200305

| | Lab Control Sample JWG1200305-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| 1,1,1,2-Tetrachloroethane | 18.1 | 20.0 | 90 | 71-124 |
| 1,1,1-Trichloroethane (TCA) | 17.4 | 20.0 | 87 | 72-131 |
| 1,1,2,2-Tetrachloroethane | 17.4 | 20.0 | 87 | 51-136 |
| 1,1,2-Trichloroethane | 18.4 | 20.0 | 92 | 74-113 |
| 1,1-Dichloroethane | 18.3 | 20.0 | 92 | 74-124 |
| 1,1-Dichloroethene | 16.0 | 20.0 | 80 | 67-128 |
| 1,2,3-Trichlorobenzene | 18.9 | 20.0 | 94 | 64-129 |
| 1,2,4-Trichlorobenzene | 18.7 | 20.0 | 93 | 61-135 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 17.4 | 20.0 | 87 | 54-129 |
| 1,2-Dibromoethane (EDB) | 18.2 | 20.0 | 91 | 74-114 |
| 1,2-Dichlorobenzene | 18.6 | 20.0 | 93 | 74-111 |
| 1,2-Dichloroethane (EDC) | 17.7 | 20.0 | 88 | 74-120 |
| 1,2-Dichloropropane | 18.3 | 20.0 | 91 | 77-119 |
| 1,3-Dichlorobenzene | 18.5 | 20.0 | 93 | 74-114 |
| 1,4-Dichlorobenzene | 18.7 | 20.0 | 93 | 72-112 |
| 2-Butanone (MEK) | 87.5 | 100 | 87 | 55-136 |
| 2-Hexanone | 88.0 | 100 | 88 | 60-127 |
| 4-Methyl-2-pentanone (MIBK) | 90.1 | 100 | 90 | 64-122 |
| Acetone | 83.4 | 100 | 83 | 30-164 |
| Benzene | 18.2 | 20.0 | 91 | 76-123 |
| Bromochloromethane | 19.0 | 20.0 | 95 | 75-124 |
| Bromodichloromethane | 17.1 | 20.0 | 85 | 74-124 |
| Bromoform | 16.8 | 20.0 | 84 | 58-126 |
| Bromomethane | 18.5 | 20.0 | 92 | 25-175 |
| Carbon Disulfide | 110 | 100 | 110 | 62-134 |
| Carbon Tetrachloride | 16.0 | 20.0 | 80 | 68-134 |
| Chlorobenzene | 19.0 | 20.0 | 95 | 74-116 |
| Chloroethane | 17.5 | 20.0 | 88 | 64-131 |
| Chloroform | 17.1 | 20.0 | 86 | 75-120 |
| Chloromethane | 16.6 | 20.0 | 83 | 59-138 |
| cis-1,2-Dichloroethene | 18.4 | 20.0 | 92 | 74-122 |
| cis-1,3-Dichloropropene | 18.5 | 20.0 | 93 | 75-115 |
| Cyclohexane | 19.3 | 20.0 | 96 | 70-127 |
| Dibromochloromethane | 16.7 | 20.0 | 83 | 67-123 |
| Dichlorodifluoromethane | 17.1 | 20.0 | 86 | 51-150 |
| Ethylbenzene | 18.9 | 20.0 | 95 | 71-122 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry
**Level:** Low
**Extraction Lot:** JWG1200305

| | Lab Control Sample JWG1200305-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| Isopropylbenzene | 20.9 | 20.0 | 105 | 67-124 |
| m,p-Xylenes | 38.0 | 40.0 | 95 | 71-122 |
| Methyl Acetate | 16.6 | 20.0 | 83 | 25-160 |
| Methyl tert-Butyl Ether | 18.1 | 20.0 | 90 | 72-121 |
| Methylene Chloride | 16.6 | 20.0 | 83 | 60-140 |
| o-Xylene | 18.3 | 20.0 | 92 | 71-120 |
| Styrene | 19.1 | 20.0 | 95 | 70-122 |
| Tetrachloroethene (PCE) | 18.9 | 20.0 | 95 | 69-124 |
| Toluene | 18.7 | 20.0 | 93 | 72-118 |
| trans-1,2-Dichloroethene | 17.6 | 20.0 | 88 | 71-127 |
| trans-1,3-Dichloropropene | 17.6 | 20.0 | 88 | 73-115 |
| Trichloroethene (TCE) | 18.4 | 20.0 | 92 | 70-129 |
| Trichlorofluoromethane | 17.4 | 20.0 | 87 | 67-129 |
| Trichlorotrifluoroethane | 17.7 | 20.0 | 89 | 66-131 |
| Vinyl Chloride | 18.9 | 20.0 | 95 | 62-137 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 13:10

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120330\0330-06.D

**Level:** Low
**Extraction Lot:** JWG1200321

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200321-1 | J:\MS53\DATA\MS53-120330\0330-03.D | 03/30/12 | 11:42 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/12 | 13:40 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/12 | 14:10 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/12 | 14:40 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/12 | 15:09 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/12 | 15:39 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/12 | 16:09 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/12 | 16:39 |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/12 | 17:09 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/12 | 17:39 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/12 | 18:09 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/12 | 18:39 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/12 | 19:09 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/12 | 19:39 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/12 | 20:09 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/12 | 20:39 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/12 | 21:08 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/12 | 21:38 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 11:20

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120402\0402-06.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200325

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200325-1 | J:\MS53\DATA\MS53-120402\0402-03.D | 04/02/12 | 09:51 |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/12 | 11:50 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/12 | 12:20 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/12 | 12:49 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/12 | 13:20 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/12 | 13:50 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/12 | 14:20 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/12 | 14:50 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/12 | 15:19 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/12 | 15:49 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/12 | 16:19 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/12 | 16:49 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/12 | 17:19 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/12 | 17:49 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/12 | 18:19 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/12 | 18:49 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/12 | 19:19 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 13:53

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200333-4

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120403\0403-07.D

**Level:** Low
**Extraction Lot:** JWG1200333

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200333-3 | J:\MS53\DATA\MS53-120403\0403-04.D | 04/03/12 | 12:25 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/12 | 14:23 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/12 | 14:52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/12 | 15:22 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/12 | 15:51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/12 | 16:21 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/12 | 16:50 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/12 | 17:20 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/12 | 18:18 |

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Extracted:** | 03/22/2012 |
| **Sample Matrix:** | Soil | **Date Analyzed:** | 03/22/2012 |
| | | **Time Analyzed:** | 11:28 |

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Instrument ID:** | MS52 |
| **Lab Code:** | JWG1200305-2 | **File ID:** | J:\MS52\DATA\MS52-120322\0322-05.D |
| **Extraction Method:** | EPA 5035 | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | JWG1200305 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200305-1 | J:\MS52\DATA\MS52-120322\0322-03.D | 03/22/12 | 10:14 |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/12 | 18:20 |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/12 | 18:48 |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/12 | 19:17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/12 | 19:45 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 11:42

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200321-1

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120330\0330-03.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200321

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200321-2 | J:\MS53\DATA\MS53-120330\0330-06.D | 03/30/12 | 13:10 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/12 | 13:40 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/12 | 14:10 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/12 | 14:40 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/12 | 15:09 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/12 | 15:39 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/12 | 16:09 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/12 | 16:39 |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/12 | 17:09 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/12 | 17:39 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/12 | 18:09 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/12 | 18:39 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/12 | 19:09 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/12 | 19:39 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/12 | 20:09 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/12 | 20:39 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/12 | 21:08 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/12 | 21:38 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 09:51

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200325-1

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120402\0402-03.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200325

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200325-2 | J:\MS53\DATA\MS53-120402\0402-06.D | 04/02/12 | 11:20 |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/12 | 11:50 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/12 | 12:20 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/12 | 12:49 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/12 | 13:20 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/12 | 13:50 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/12 | 14:20 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/12 | 14:50 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/12 | 15:19 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/12 | 15:49 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/12 | 16:19 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/12 | 16:49 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/12 | 17:19 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/12 | 17:49 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/12 | 18:19 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/12 | 18:49 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/12 | 19:19 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 12:25

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200333-3

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120403\0403-04.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200333

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200333-4 | J:\MS53\DATA\MS53-120403\0403-07.D | 04/03/12 | 13:53 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/12 | 14:23 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/12 | 14:52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/12 | 15:22 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/12 | 15:51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/12 | 16:21 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/12 | 16:50 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/12 | 17:20 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/12 | 18:18 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 10:14

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200305-1

**Instrument ID:** MS52
**File ID:** J:\MS52\DATA\MS52-120322\0322-03.D

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200305

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200305-2 | J:\MS52\DATA\MS52-120322\0322-05.D | 03/22/12 | 11:28 |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/12 | 18:20 |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/12 | 18:48 |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/12 | 19:17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/12 | 19:45 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 09:17

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS52\DATA\MS52-120322\0322-01.D
**Instrument ID:** MS52
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200306

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 15.1 | 3056 | PASS |
| 75 | 95 | 30 | 60 | 44.7 | 9053 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 20275 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 1378 | PASS |
| 173 | 174 | 0 | 2 | 0.4 | 78 | PASS |
| 174 | 95 | 50 | 120 | 93.5 | 18957 | PASS |
| 175 | 174 | 5 | 9 | 7.2 | 1370 | PASS |
| 176 | 174 | 95 | 101 | 98.9 | 18742 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 1226 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200306-2 | J:\MS52\DATA\MS52-120322\0322-02.D | 03/22/2012 | 09:45 | |
| Lab Control Sample | JWG1200305-1 | J:\MS52\DATA\MS52-120322\0322-03.D | 03/22/2012 | 10:14 | |
| Method Blank | JWG1200305-2 | J:\MS52\DATA\MS52-120322\0322-05.D | 03/22/2012 | 11:28 | |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/2012 | 18:20 | |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/2012 | 18:48 | |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/2012 | 19:17 | |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/2012 | 19:45 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 10:42

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120330\0330-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200322

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 15.2 | 25176 | PASS |
| 75 | 95 | 30 | 60 | 33.7 | 55912 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 166080 | PASS |
| 96 | 95 | 5 | 9 | 6.4 | 10595 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 90.7 | 150592 | PASS |
| 175 | 174 | 5 | 9 | 7.5 | 11247 | PASS |
| 176 | 174 | 95 | 101 | 95.4 | 143616 | PASS |
| 177 | 176 | 5 | 9 | 6.0 | 8649 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200322-2 | J:\MS53\DATA\MS53-120330\0330-02.D | 03/30/2012 | 11:12 | |
| Lab Control Sample | JWG1200321-1 | J:\MS53\DATA\MS53-120330\0330-03.D | 03/30/2012 | 11:42 | |
| Method Blank | JWG1200321-2 | J:\MS53\DATA\MS53-120330\0330-06.D | 03/30/2012 | 13:10 | |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/2012 | 13:40 | |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/2012 | 14:10 | |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/2012 | 14:40 | |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/2012 | 15:09 | |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/2012 | 15:39 | |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/2012 | 16:09 | |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/2012 | 16:39 | |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/2012 | 17:09 | |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/2012 | 17:39 | |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/2012 | 18:09 | |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/2012 | 18:39 | |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/2012 | 19:09 | |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/2012 | 19:39 | |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/2012 | 20:09 | |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/2012 | 20:39 | |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/2012 | 21:08 | |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/2012 | 21:38 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 08:51

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120402\0402-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200326

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.4 | 37064 | PASS |
| 75 | 95 | 30 | 60 | 35.7 | 80421 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 225429 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 14647 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 79.9 | 180139 | PASS |
| 175 | 174 | 5 | 9 | 7.7 | 13885 | PASS |
| 176 | 174 | 95 | 101 | 96.2 | 173248 | PASS |
| 177 | 176 | 5 | 9 | 6.3 | 10928 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200326-2 | J:\MS53\DATA\MS53-120402\0402-02.D | 04/02/2012 | 09:21 | |
| Lab Control Sample | JWG1200325-1 | J:\MS53\DATA\MS53-120402\0402-03.D | 04/02/2012 | 09:51 | |
| Method Blank | JWG1200325-2 | J:\MS53\DATA\MS53-120402\0402-06.D | 04/02/2012 | 11:20 | |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/2012 | 11:50 | |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/2012 | 12:20 | |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/2012 | 12:49 | |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/2012 | 13:20 | |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/2012 | 13:50 | |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/2012 | 14:20 | |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/2012 | 14:50 | |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/2012 | 15:19 | |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/2012 | 15:49 | |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/2012 | 16:19 | |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/2012 | 16:49 | |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/2012 | 17:19 | |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/2012 | 17:49 | |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/2012 | 18:19 | |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/2012 | 18:49 | |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/2012 | 19:19 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 10:53

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120403\0403-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200334

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.8 | 34616 | PASS |
| 75 | 95 | 30 | 60 | 36.5 | 75304 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 206165 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 13426 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 74.0 | 152600 | PASS |
| 175 | 174 | 5 | 9 | 8.1 | 12319 | PASS |
| 176 | 174 | 95 | 101 | 95.9 | 146363 | PASS |
| 177 | 176 | 5 | 9 | 6.7 | 9745 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200334-2 | J:\MS53\DATA\MS53-120403\0403-03.D | 04/03/2012 | 11:53 | |
| Lab Control Sample | JWG1200333-3 | J:\MS53\DATA\MS53-120403\0403-04.D | 04/03/2012 | 12:25 | |
| Method Blank | JWG1200333-4 | J:\MS53\DATA\MS53-120403\0403-07.D | 04/03/2012 | 13:53 | |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/2012 | 14:23 | |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/2012 | 14:52 | |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/2012 | 15:22 | |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/2012 | 15:51 | |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/2012 | 16:21 | |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/2012 | 16:50 | |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/2012 | 17:20 | |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/2012 | 18:18 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\MS52\DATA\MS52-120227\0227-04.D | F | J:\MS52\DATA\MS52-120227\0227-09.D |
| B | J:\MS52\DATA\MS52-120227\0227-05.D | G | J:\MS52\DATA\MS52-120227\0227-10.D |
| C | J:\MS52\DATA\MS52-120227\0227-06.D | H | J:\MS52\DATA\MS52-120227\0227-11.D |
| D | J:\MS52\DATA\MS52-120227\0227-07.D | I | J:\MS52\DATA\MS52-120227\0227-12.D |
| E | J:\MS52\DATA\MS52-120227\0227-08.D | | |

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | A | 1.0 | 1.06 | B | 2.0 | 1.07 | C | 5.0 | 1.09 | D | 10 | 1.16 | E | 20 | 1.24 |
| | F | 50 | 1.29 | G | 100 | 1.41 | H | 150 | 1.24 | I | 200 | 1.35 | | | |
| 1,1,1-Trichloroethane (TCA) | A | 1.0 | 0.672 | B | 2.0 | 0.693 | C | 5.0 | 0.706 | D | 10 | 0.709 | E | 20 | 0.843 |
| | F | 50 | 0.863 | G | 100 | 0.927 | H | 150 | 0.774 | I | 200 | 0.890 | | | |
| 1,1,2,2-Tetrachloroethane | A | 1.0 | 0.996 | B | 2.0 | 0.870 | C | 5.0 | 0.993 | D | 10 | 0.943 | E | 20 | 0.984 |
| | F | 50 | 1.03 | G | 100 | 1.16 | H | 150 | 1.08 | I | 200 | 1.03 | | | |
| 1,1,2-Trichloroethane | A | 1.0 | 0.650 | B | 2.0 | 0.651 | C | 5.0 | 0.608 | D | 10 | 0.664 | E | 20 | 0.665 |
| | F | 50 | 0.704 | G | 100 | 0.758 | H | 150 | 0.685 | I | 200 | 0.694 | | | |
| 1,1-Dichloroethane | A | 1.0 | 0.636 | B | 2.0 | 0.665 | C | 5.0 | 0.745 | D | 10 | 0.712 | E | 20 | 0.795 |
| | F | 50 | 0.787 | G | 100 | 0.830 | H | 150 | 0.727 | I | 200 | 0.812 | | | |
| 1,1-Dichloroethene | A | 1.0 | 0.518 | B | 2.0 | 0.546 | C | 5.0 | 0.598 | D | 10 | 0.564 | E | 20 | 0.676 |
| | F | 50 | 0.699 | G | 100 | 0.729 | H | 150 | 0.616 | I | 200 | 0.713 | | | |
| 1,2,3-Trichlorobenzene | | | | | | | C | 5.0 | 1.51 | D | 10 | 1.53 | E | 20 | 1.65 |
| | F | 50 | 1.68 | G | 100 | 1.88 | H | 150 | 1.79 | I | 200 | 1.79 | | | |
| 1,2,4-Trichlorobenzene | | | | | | | C | 5.0 | 1.78 | D | 10 | 1.65 | E | 20 | 1.85 |
| | F | 50 | 1.95 | G | 100 | 2.14 | H | 150 | 2.02 | I | 200 | 2.06 | | | |
| 1,2-Dibromo-3-chloropropane (DBCP | | | | | | | C | 5.0 | 0.201 | D | 10 | 0.207 | E | 20 | 0.215 |
| | F | 50 | 0.224 | G | 100 | 0.265 | H | 150 | 0.268 | I | 200 | 0.246 | | | |
| 1,2-Dibromoethane (EDB) | A | 1.0 | 0.828 | B | 2.0 | 0.746 | C | 5.0 | 0.831 | D | 10 | 0.838 | E | 20 | 0.879 |
| | F | 50 | 0.910 | G | 100 | 1.02 | H | 150 | 0.922 | I | 200 | 0.926 | | | |
| 1,2-Dichlorobenzene | A | 1.0 | 2.20 | B | 2.0 | 2.23 | C | 5.0 | 2.29 | D | 10 | 2.27 | E | 20 | 2.42 |
| | F | 50 | 2.48 | G | 100 | 2.75 | H | 150 | 2.54 | I | 200 | 2.57 | | | |
| 1,2-Dichloroethane (EDC) | A | 1.0 | 0.451 | B | 2.0 | 0.543 | C | 5.0 | 0.534 | D | 10 | 0.526 | E | 20 | 0.550 |
| | F | 50 | 0.559 | G | 100 | 0.594 | H | 150 | 0.529 | I | 200 | 0.541 | | | |
| 1,2-Dichloroethane-d4 | A | 50 | 0.259 | B | 50 | 0.263 | C | 50 | 0.260 | D | 50 | 0.257 | E | 50 | 0.250 |
| | F | 50 | 0.246 | G | 50 | 0.250 | H | 50 | 0.238 | I | 50 | 0.232 | | | |
| 1,2-Dichloropropane | A | 1.0 | 0.317 | B | 2.0 | 0.359 | C | 5.0 | 0.385 | D | 10 | 0.389 | E | 20 | 0.419 |
| | F | 50 | 0.414 | G | 100 | 0.449 | H | 150 | 0.398 | I | 200 | 0.432 | | | |
| 1,3-Dichlorobenzene | A | 1.0 | 2.49 | B | 2.0 | 2.45 | C | 5.0 | 2.50 | D | 10 | 2.50 | E | 20 | 2.68 |
| | F | 50 | 2.78 | G | 100 | 2.98 | H | 150 | 2.75 | I | 200 | 2.89 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | A | 1.0 | 2.55 | B | 2.0 | 2.49 | C | 5.0 | 2.54 | D | 10 | 2.51 | E | 20 | 2.68 |
| | F | 50 | 2.71 | G | 100 | 2.93 | H | 150 | 2.66 | I | 200 | 2.76 | | | |
| 2-Butanone (MEK) | A | 5.0 | 0.110 | B | 10 | 0.121 | C | 25 | 0.134 | D | 50 | 0.129 | E | 100 | 0.122 |
| | F | 250 | 0.126 | G | 500 | 0.137 | H | 750 | 0.133 | I | 1000 | 0.120 | | | |
| 2-Hexanone | A | 5.0 | 0.483 | B | 10 | 0.458 | C | 25 | 0.508 | D | 50 | 0.502 | E | 100 | 0.493 |
| | F | 250 | 0.519 | G | 500 | 0.587 | H | 750 | 0.567 | I | 1000 | 0.513 | | | |
| 4-Bromofluorobenzene | A | 50 | 0.871 | B | 50 | 0.864 | C | 50 | 0.864 | D | 50 | 0.885 | E | 50 | 0.872 |
| | F | 50 | 0.901 | G | 50 | 0.940 | H | 50 | 1.01 | I | 50 | 1.05 | | | |
| 4-Methyl-2-pentanone (MIBK) | A | 5.0 | 0.687 | B | 10 | 0.676 | C | 25 | 0.718 | D | 50 | 0.734 | E | 100 | 0.712 |
| | F | 250 | 0.727 | G | 500 | 0.822 | H | 750 | 0.779 | I | 1000 | 0.708 | | | |
| Acetone | A | 5.0 | 0.109 | B | 10 | 0.114 | C | 25 | 0.0910 | D | 50 | 0.0862 | E | 100 | 0.0760 |
| | F | 250 | 0.0764 | G | 500 | 0.0848 | H | 750 | 0.0801 | I | 1000 | 0.0729 | | | |
| Benzene | A | 1.0 | 1.64 | B | 2.0 | 1.61 | C | 5.0 | 1.72 | D | 10 | 1.63 | E | 20 | 1.81 |
| | F | 50 | 1.84 | G | 100 | 1.93 | H | 150 | 1.66 | I | 200 | 1.84 | | | |
| Bromochloromethane | A | 1.0 | 0.229 | B | 2.0 | 0.251 | C | 5.0 | 0.275 | D | 10 | 0.266 | E | 20 | 0.289 |
| | F | 50 | 0.281 | G | 100 | 0.280 | H | 150 | 0.254 | I | 200 | 0.262 | | | |
| Bromodichloromethane | A | 1.0 | 0.550 | B | 2.0 | 0.529 | C | 5.0 | 0.562 | D | 10 | 0.550 | E | 20 | 0.610 |
| | F | 50 | 0.623 | G | 100 | 0.668 | H | 150 | 0.599 | I | 200 | 0.632 | | | |
| Bromoform | A | 1.0 | 0.578 | B | 2.0 | 0.610 | C | 5.0 | 0.604 | D | 10 | 0.656 | E | 20 | 0.670 |
| | F | 50 | 0.738 | G | 100 | 0.832 | H | 150 | 0.780 | I | 200 | 0.769 | | | |
| Bromomethane | A | 1.0 | 0.210 | B | 2.0 | 0.245 | C | 5.0 | 0.239 | D | 10 | 0.240 | E | 20 | 0.289 |
| | F | 50 | 0.312 | G | 100 | 0.316 | H | 150 | 0.267 | I | 200 | 0.285 | | | |
| Carbon Disulfide | A | 5.0 | 0.950 | B | 10 | 0.925 | C | 25 | 0.995 | D | 50 | 0.961 | E | 100 | 1.11 |
| | F | 250 | 1.12 | G | 500 | 1.16 | H | 750 | 0.967 | I | 1000 | 1.12 | | | |
| Carbon Tetrachloride | A | 1.0 | 0.499 | B | 2.0 | 0.583 | C | 5.0 | 0.602 | D | 10 | 0.603 | E | 20 | 0.705 |
| | F | 50 | 0.755 | G | 100 | 0.804 | H | 150 | 0.676 | I | 200 | 0.775 | | | |
| Chlorobenzene | A | 1.0 | 2.91 | B | 2.0 | 3.04 | C | 5.0 | 3.14 | D | 10 | 3.18 | E | 20 | 3.41 |
| | F | 50 | 3.49 | G | 100 | 3.79 | H | 150 | 3.26 | I | 200 | 3.61 | | | |
| Chloroethane | A | 1.0 | 0.284 | B | 2.0 | 0.292 | C | 5.0 | 0.287 | D | 10 | 0.265 | E | 20 | 0.321 |
| | F | 50 | 0.322 | G | 100 | 0.335 | H | 150 | 0.285 | I | 200 | 0.325 | | | |
| Chloroform | A | 1.0 | 0.865 | B | 2.0 | 0.772 | C | 5.0 | 0.799 | D | 10 | 0.779 | E | 20 | 0.844 |
| | F | 50 | 0.850 | G | 100 | 0.904 | H | 150 | 0.787 | I | 200 | 0.854 | | | |
| Chloromethane | A | 1.0 | 0.480 | B | 2.0 | 0.498 | C | 5.0 | 0.522 | D | 10 | 0.490 | E | 20 | 0.602 |
| | F | 50 | 0.595 | G | 100 | 0.630 | H | 150 | 0.530 | I | 200 | 0.616 | | | |
| cis-1,2-Dichloroethene | A | 1.0 | 0.521 | B | 2.0 | 0.547 | C | 5.0 | 0.560 | D | 10 | 0.524 | E | 20 | 0.600 |
| | F | 50 | 0.608 | G | 100 | 0.638 | H | 150 | 0.550 | I | 200 | 0.612 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | A | 1.0 | 1.59 | B | 2.0 | 1.51 | C | 5.0 | 1.57 | D | 10 | 1.55 | E | 20 | 1.74 |
| | F | 50 | 1.82 | G | 100 | 1.96 | H | 150 | 1.77 | I | 200 | 1.89 | | | |
| Cyclohexane | A | 1.0 | 0.520 | B | 2.0 | 0.584 | C | 5.0 | 0.628 | D | 10 | 0.623 | E | 20 | 0.741 |
| | F | 50 | 0.762 | G | 100 | 0.817 | H | 150 | 0.690 | I | 200 | 0.796 | | | |
| Dibromochloromethane | A | 1.0 | 0.936 | B | 2.0 | 0.974 | C | 5.0 | 1.04 | D | 10 | 1.01 | E | 20 | 1.10 |
| | F | 50 | 1.15 | G | 100 | 1.28 | H | 150 | 1.15 | I | 200 | 1.20 | | | |
| Dibromofluoromethane | A | 50 | 0.243 | B | 50 | 0.248 | C | 50 | 0.245 | D | 50 | 0.244 | E | 50 | 0.243 |
| | F | 50 | 0.240 | G | 50 | 0.232 | H | 50 | 0.237 | I | 50 | 0.232 | | | |
| Dichlorodifluoromethane | A | 1.0 | 0.485 | B | 2.0 | 0.502 | C | 5.0 | 0.513 | D | 10 | 0.488 | E | 20 | 0.600 |
| | F | 50 | 0.618 | G | 100 | 0.650 | H | 150 | 0.531 | I | 200 | 0.602 | | | |
| Ethylbenzene | A | 1.0 | 4.98 | B | 2.0 | 4.98 | C | 5.0 | 5.31 | D | 10 | 5.29 | E | 20 | 6.02 |
| | F | 50 | 6.24 | G | 100 | 6.74 | H | 150 | 5.77 | I | 200 | 6.43 | | | |
| Isopropylbenzene | A | 1.0 | 3.99 | B | 2.0 | 4.07 | C | 5.0 | 4.52 | D | 10 | 4.56 | E | 20 | 5.01 |
| | F | 50 | 5.26 | G | 100 | 5.79 | H | 150 | 5.23 | I | 200 | 5.74 | | | |
| m,p-Xylenes | A | 2.0 | 3.98 | B | 4.0 | 3.87 | C | 10 | 4.20 | D | 20 | 4.25 | E | 40 | 4.83 |
| | F | 100 | 4.88 | G | 200 | 5.27 | H | 300 | 4.48 | I | 400 | 4.97 | | | |
| Methyl Acetate | A | 1.0 | 0.534 | B | 2.0 | 0.515 | C | 5.0 | 0.528 | D | 10 | 0.519 | E | 20 | 0.510 |
| | F | 50 | 0.481 | G | 100 | 0.537 | H | 150 | 0.506 | I | 200 | 0.458 | | | |
| Methyl tert-Butyl Ether | A | 1.0 | 1.04 | B | 2.0 | 1.05 | C | 5.0 | 1.05 | D | 10 | 1.01 | E | 20 | 1.05 |
| | F | 50 | 1.10 | G | 100 | 1.17 | H | 150 | 1.11 | I | 200 | 1.10 | | | |
| Methylene Chloride | A | 1.0 | 0.840 | B | 2.0 | 0.616 | C | 5.0 | 0.514 | D | 10 | 0.453 | E | 20 | 0.512 |
| | F | 50 | 0.493 | G | 100 | 0.481 | H | 150 | 0.436 | I | 200 | 0.449 | | | |
| o-Xylene | A | 1.0 | 4.45 | B | 2.0 | 4.11 | C | 5.0 | 4.44 | D | 10 | 4.38 | E | 20 | 4.91 |
| | F | 50 | 5.04 | G | 100 | 5.37 | H | 150 | 4.67 | I | 200 | 5.10 | | | |
| Styrene | A | 1.0 | 2.66 | B | 2.0 | 3.13 | C | 5.0 | 3.22 | D | 10 | 3.25 | E | 20 | 3.70 |
| | F | 50 | 3.83 | G | 100 | 4.21 | H | 150 | 3.67 | I | 200 | 3.99 | | | |
| Tetrachloroethene (PCE) | A | 1.0 | 0.932 | B | 2.0 | 0.963 | C | 5.0 | 1.08 | D | 10 | 1.05 | E | 20 | 1.21 |
| | F | 50 | 1.23 | G | 100 | 1.32 | H | 150 | 1.11 | I | 200 | 1.27 | | | |
| Toluene | A | 1.0 | 4.59 | B | 2.0 | 4.55 | C | 5.0 | 4.69 | D | 10 | 4.68 | E | 20 | 5.27 |
| | F | 50 | 5.33 | G | 100 | 5.73 | H | 150 | 4.91 | I | 200 | 5.46 | | | |
| Toluene-d8 | A | 50 | 2.51 | B | 50 | 2.46 | C | 50 | 2.44 | D | 50 | 2.46 | E | 50 | 2.50 |
| | F | 50 | 2.47 | G | 50 | 2.52 | H | 50 | 2.45 | I | 50 | 2.52 | | | |
| trans-1,2-Dichloroethene | A | 1.0 | 0.580 | B | 2.0 | 0.560 | C | 5.0 | 0.577 | D | 10 | 0.557 | E | 20 | 0.650 |
| | F | 50 | 0.639 | G | 100 | 0.679 | H | 150 | 0.577 | I | 200 | 0.661 | | | |
| trans-1,3-Dichloropropene | A | 1.0 | 1.40 | B | 2.0 | 1.47 | C | 5.0 | 1.44 | D | 10 | 1.45 | E | 20 | 1.54 |
| | F | 50 | 1.64 | G | 100 | 1.85 | H | 150 | 1.67 | I | 200 | 1.74 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene (TCE) | A | 1.0 | 0.417 | B | 2.0 | 0.448 | C | 5.0 | 0.503 | D | 10 | 0.491 | E | 20 | 0.550 |
| | F | 50 | 0.557 | G | 100 | 0.591 | H | 150 | 0.512 | I | 200 | 0.578 | | | |
| Trichlorofluoromethane | A | 1.0 | 0.748 | B | 2.0 | 0.708 | C | 5.0 | 0.742 | D | 10 | 0.720 | E | 20 | 0.879 |
| | F | 50 | 0.881 | G | 100 | 0.938 | H | 150 | 0.779 | I | 200 | 0.893 | | | |
| Trichlorotrifluoroethane | A | 1.0 | 0.330 | B | 2.0 | 0.332 | C | 5.0 | 0.376 | D | 10 | 0.372 | E | 20 | 0.452 |
| | F | 50 | 0.462 | G | 100 | 0.471 | H | 150 | 0.393 | I | 200 | 0.453 | | | |
| Vinyl Chloride | A | 1.0 | 0.369 | B | 2.0 | 0.439 | C | 5.0 | 0.448 | D | 10 | 0.423 | E | 20 | 0.496 |
| | F | 50 | 0.465 | G | 100 | 0.461 | H | 150 | 0.365 | I | 200 | 0.444 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| 1,1,1,2-Tetrachloroethane | MS | AverageRF | % RSD | 10.3 | | ≤ 15 | 1.21 | | 0.01 |
| 1,1,1-Trichloroethane (TCA) | MS | AverageRF | % RSD | 12.3 | | ≤ 15 | 0.786 | | 0.01 |
| † 1,1,2,2-Tetrachloroethane | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 1.01 | | 0.3 |
| 1,1,2-Trichloroethane | MS | AverageRF | % RSD | 6.2 | | ≤ 15 | 0.675 | | 0.01 |
| † 1,1-Dichloroethane | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 0.745 | | 0.1 |
| ‡ 1,1-Dichloroethene | MS | AverageRF | % RSD | 12.4 | | ≤ 15 | 0.629 | | 0.01 |
| 1,2,3-Trichlorobenzene | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 1.69 | | 0.01 |
| 1,2,4-Trichlorobenzene | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 1.92 | | 0.01 |
| 1,2-Dibromo-3-chloropropane (DBCP) | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.232 | | 0.01 |
| 1,2-Dibromoethane (EDB) | MS | AverageRF | % RSD | 8.9 | | ≤ 15 | 0.878 | | 0.01 |
| 1,2-Dichlorobenzene | MS | AverageRF | % RSD | 7.7 | | ≤ 15 | 2.42 | | 0.01 |
| 1,2-Dichloroethane (EDC) | MS | AverageRF | % RSD | 7.1 | | ≤ 15 | 0.536 | | 0.01 |
| 1,2-Dichloroethane-d4 | SURR | AverageRF | % RSD | 4.2 | | ≤ 15 | 0.251 | | |
| ‡ 1,2-Dichloropropane | MS | AverageRF | % RSD | 10.1 | | ≤ 15 | 0.396 | | 0.01 |
| 1,3-Dichlorobenzene | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 2.67 | | 0.01 |
| 1,4-Dichlorobenzene | MS | AverageRF | % RSD | 5.3 | | ≤ 15 | 2.65 | | 0.01 |
| 2-Butanone (MEK) | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 0.126 | | 0.01 |
| 2-Hexanone | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.514 | | 0.01 |
| 4-Bromofluorobenzene | SURR | AverageRF | % RSD | 7.6 | | ≤ 15 | 0.918 | | |
| 4-Methyl-2-pentanone (MIBK) | MS | AverageRF | % RSD | 6.3 | | ≤ 15 | 0.729 | | 0.01 |
| Acetone | MS | Linear | R2 | 0.994 | | ≥ 0.99 | 0.0878 | | 0.01 |
| Benzene | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 1.74 | | 0.01 |
| Bromochloromethane | MS | AverageRF | % RSD | 7.0 | | ≤ 15 | 0.265 | | 0.01 |
| Bromodichloromethane | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.592 | | 0.01 |
| † Bromoform | MS | AverageRF | % RSD | 12.9 | | ≤ 15 | 0.693 | | 0.1 |
| Bromomethane | MS | AverageRF | % RSD | 13.5 | | ≤ 15 | 0.267 | | 0.01 |
| Carbon Disulfide | MS | AverageRF | % RSD | 8.9 | | ≤ 15 | 1.03 | | 0.01 |
| Carbon Tetrachloride | MS | Linear | R2 | 0.993 | | ≥ 0.99 | 0.667 | | 0.01 |
| † Chlorobenzene | MS | AverageRF | % RSD | 8.6 | | ≤ 15 | 3.32 | | 0.3 |
| Chloroethane | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 0.302 | | 0.01 |
| ‡ Chloroform | MS | AverageRF | % RSD | 5.5 | | ≤ 15 | 0.828 | | 0.01 |
| † Chloromethane | MS | AverageRF | % RSD | 10.7 | | ≤ 15 | 0.551 | | 0.1 |
| cis-1,2-Dichloroethene | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 0.573 | | 0.01 |
| cis-1,3-Dichloropropene | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 1.71 | | 0.01 |
| Cyclohexane | MS | AverageRF | % RSD | 14.9 | | ≤ 15 | 0.684 | | 0.01 |
| Dibromochloromethane | MS | AverageRF | % RSD | 10.2 | | ≤ 15 | 1.09 | | 0.01 |
| Dibromofluoromethane | SURR | AverageRF | % RSD | 2.3 | | ≤ 15 | 0.241 | | |
| Dichlorodifluoromethane | MS | AverageRF | % RSD | 11.4 | | ≤ 15 | 0.554 | | 0.01 |
| ‡ Ethylbenzene | MS | AverageRF | % RSD | 11.2 | | ≤ 15 | 5.75 | | 0.01 |
| Isopropylbenzene | MS | AverageRF | % RSD | 13.5 | | ≤ 15 | 4.91 | | 0.01 |
| m,p-Xylenes | MS | AverageRF | % RSD | 10.7 | | ≤ 15 | 4.53 | | 0.01 |
| Methyl Acetate | MS | AverageRF | % RSD | 5.1 | | ≤ 15 | 0.510 | | 0.01 |
| Methyl tert-Butyl Ether | MS | AverageRF | % RSD | 4.6 | | ≤ 15 | 1.08 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation: Fit Type | Eval. | Eval. Result | Q | Control Criteria | RRF Evaluation: Average RRF | Q | Minimum RRF |
|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | MS | Linear | R2 | 0.998 | | ≥ 0.99 | 0.533 | | 0.01 |
| o-Xylene | MS | AverageRF | % RSD | 8.7 | | ≤ 15 | 4.72 | | 0.01 |
| Styrene | MS | AverageRF | % RSD | 13.9 | | ≤ 15 | 3.52 | | 0.01 |
| Tetrachloroethene (PCE) | MS | AverageRF | % RSD | 12.1 | | ≤ 15 | 1.13 | | 0.01 |
| ‡ Toluene | MS | AverageRF | % RSD | 8.6 | | ≤ 15 | 5.02 | | 0.01 |
| Toluene-d8 | SURR | AverageRF | % RSD | 1.2 | | ≤ 15 | 2.48 | | |
| trans-1,2-Dichloroethene | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.609 | | 0.01 |
| trans-1,3-Dichloropropene | MS | AverageRF | % RSD | 9.7 | | ≤ 15 | 1.58 | | 0.01 |
| Trichloroethene (TCE) | MS | AverageRF | % RSD | 11.4 | | ≤ 15 | 0.516 | | 0.01 |
| Trichlorofluoromethane | MS | AverageRF | % RSD | 10.8 | | ≤ 15 | 0.810 | | 0.01 |
| Trichlorotrifluoroethane | MS | AverageRF | % RSD | 13.9 | | ≤ 15 | 0.405 | | 0.01 |
| ‡ Vinyl Chloride | MS | AverageRF | % RSD | 10.0 | | ≤ 15 | 0.434 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012
**Date Analyzed:** 02/27/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2756
**Units:** ug/L

**File ID:** J:\MS52\DATA\MS52-120227\0227-16.D

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 21 | 1.21 | 1.25 | 3 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 21 | 0.786 | 0.827 | 5 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 1.01 | 1.01 | 0 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 21 | 0.675 | 0.713 | 6 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 22 | 0.745 | 0.819 | 10 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.629 | 0.681 | 8 | NA | ± 30 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 20 | 1.69 | 1.66 | -2 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 19 | 1.92 | 1.85 | -4 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 18 | 0.232 | 0.212 | -9 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 21 | 0.878 | 0.906 | 3 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 20 | 2.42 | 2.47 | 2 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.536 | 0.540 | 1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.396 | 0.425 | 7 | NA | ± 30 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 2.67 | 2.72 | 2 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 21 | 2.65 | 2.73 | 3 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 97 | 0.126 | 0.122 | -3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.514 | 0.515 | 0 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 100 | 0.729 | 0.730 | 0 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.0878 | 0.0775 | NA | -7 | ± 30 % | Linear |
| Benzene | 20 | 21 | 1.74 | 1.85 | 6 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 22 | 0.265 | 0.292 | 10 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.592 | 0.612 | 3 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.693 | 0.665 | -4 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.267 | 0.258 | -3 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 1.03 | 1.12 | 8 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 19 | 0.667 | 0.697 | NA | -3 | ± 30 % | Linear |
| Chlorobenzene | 20 | 21 | 3.32 | 3.51 | 6 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 21 | 0.302 | 0.321 | 7 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.828 | 0.846 | 2 | NA | ± 30 % | AverageRF |
| Chloromethane | 20 | 21 | 0.551 | 0.569 | 3 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.573 | 0.605 | 6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 21 | 1.71 | 1.79 | 5 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 22 | 0.684 | 0.743 | 9 | NA | ± 30 % | AverageRF |
| Dibromochloromethane | 20 | 20 | 1.09 | 1.10 | 1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.554 | 0.589 | 6 | NA | ± 30 % | AverageRF |
| Ethylbenzene | 20 | 21 | 5.75 | 6.10 | 6 | NA | ± 30 % | AverageRF |
| Isopropylbenzene | 20 | 21 | 4.91 | 5.23 | 7 | NA | ± 30 % | AverageRF |
| m,p-Xylenes | 40 | 43 | 4.53 | 4.90 | 8 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.510 | 0.512 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 1.08 | 1.10 | 2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 26 | 0.533 | 0.618 | NA | 29 | ± 30 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012
**Date Analyzed:** 02/27/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2756
**Units:** ug/L

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| o-Xylene | 20 | 21 | 4.72 | 4.99 | 6 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 22 | 3.52 | 3.83 | 9 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 21 | 1.13 | 1.21 | 7 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 21 | 5.02 | 5.34 | 6 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 21 | 0.609 | 0.653 | 7 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 1.58 | 1.57 | 0 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 22 | 0.516 | 0.579 | 12 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 21 | 0.810 | 0.857 | 6 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 21 | 0.405 | 0.435 | 7 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 23 | 0.434 | 0.493 | 13 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Level ID | File ID |
|---|---|
| A | J:\MS53\DATA\MS53-120307\0307-03.D |
| B | J:\MS53\DATA\MS53-120307\0307-04.D |
| C | J:\MS53\DATA\MS53-120307\0307-05.D |
| D | J:\MS53\DATA\MS53-120307\0307-06.D |
| E | J:\MS53\DATA\MS53-120307\0307-08.D |
| F | J:\MS53\DATA\MS53-120307\0307-09.D |
| G | J:\MS53\DATA\MS53-120307\0307-10.D |
| H | J:\MS53\DATA\MS53-120307\0307-11.D |
| I | J:\MS53\DATA\MS53-120307\0307-15.D |

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | A | 1.0 | 0.493 | B | 2.0 | 0.424 | C | 5.0 | 0.487 | D | 10 | 0.500 | E | 50 | 0.524 |
| | F | 100 | 0.512 | G | 150 | 0.473 | H | 200 | 0.463 | I | 20 | 0.523 | | | |
| 1,1,1-Trichloroethane (TCA) | A | 1.0 | 0.186 | B | 2.0 | 0.173 | C | 5.0 | 0.216 | D | 10 | 0.207 | E | 50 | 0.253 |
| | F | 100 | 0.246 | G | 150 | 0.241 | H | 200 | 0.241 | I | 20 | 0.227 | | | |
| 1,1,2,2-Tetrachloroethane | A | 1.0 | 0.721 | B | 2.0 | 0.736 | C | 5.0 | 0.779 | D | 10 | 0.812 | E | 50 | 0.777 |
| | F | 100 | 0.734 | G | 150 | 0.659 | H | 200 | 0.569 | I | 20 | 0.763 | | | |
| 1,1,2-Trichloroethane | A | 1.0 | 0.374 | B | 2.0 | 0.341 | C | 5.0 | 0.369 | D | 10 | 0.374 | E | 50 | 0.363 |
| | F | 100 | 0.380 | G | 150 | 0.348 | H | 200 | 0.339 | I | 20 | 0.381 | | | |
| 1,1-Dichloroethane | A | 1.0 | 0.341 | B | 2.0 | 0.323 | C | 5.0 | 0.390 | D | 10 | 0.382 | E | 50 | 0.427 |
| | F | 100 | 0.421 | G | 150 | 0.422 | H | 200 | 0.411 | I | 20 | 0.406 | | | |
| 1,1-Dichloroethene | A | 1.0 | 0.218 | B | 2.0 | 0.195 | C | 5.0 | 0.247 | D | 10 | 0.227 | E | 50 | 0.266 |
| | F | 100 | 0.240 | G | 150 | 0.219 | H | 200 | 0.206 | I | 20 | 0.257 | | | |
| 1,2,3-Trichlorobenzene | | | | | | | | | | D | 10 | 0.342 | E | 50 | 0.343 |
| | F | 100 | 0.373 | G | 150 | 0.354 | H | 200 | 0.354 | I | 20 | 0.337 | | | |
| 1,2,4-Trichlorobenzene | | | | | | | | | | D | 10 | 0.485 | E | 50 | 0.533 |
| | F | 100 | 0.564 | G | 150 | 0.552 | H | 200 | 0.552 | I | 20 | 0.505 | | | |
| 1,2-Dibromo-3-chloropropane (DBCP | | | | | | | C | 5.0 | 0.0716 | D | 10 | 0.0723 | E | 50 | 0.0750 |
| | F | 100 | 0.0823 | G | 150 | 0.0817 | H | 200 | 0.0823 | I | 20 | 0.0665 | | | |
| 1,2-Dibromoethane (EDB) | A | 1.0 | 0.375 | B | 2.0 | 0.367 | C | 5.0 | 0.413 | D | 10 | 0.423 | E | 50 | 0.415 |
| | F | 100 | 0.425 | G | 150 | 0.406 | H | 200 | 0.382 | I | 20 | 0.421 | | | |
| 1,2-Dichlorobenzene | A | 1.0 | 1.10 | B | 2.0 | 0.997 | C | 5.0 | 1.15 | D | 10 | 1.09 | E | 50 | 1.12 |
| | F | 100 | 1.12 | G | 150 | 1.03 | H | 200 | 1.01 | I | 20 | 1.16 | | | |
| 1,2-Dichloroethane (EDC) | A | 1.0 | 0.136 | B | 2.0 | 0.117 | C | 5.0 | 0.138 | D | 10 | 0.137 | E | 50 | 0.147 |
| | F | 100 | 0.145 | G | 150 | 0.145 | H | 200 | 0.143 | I | 20 | 0.141 | | | |
| 1,2-Dichloroethane-d4 | A | 50 | 0.147 | B | 50 | 0.149 | C | 50 | 0.145 | D | 50 | 0.148 | E | 50 | 0.146 |
| | F | 50 | 0.144 | G | 50 | 0.146 | H | 50 | 0.141 | I | 50 | 0.141 | | | |
| 1,2-Dichloropropane | A | 1.0 | 0.207 | B | 2.0 | 0.201 | C | 5.0 | 0.223 | D | 10 | 0.224 | E | 50 | 0.245 |
| | F | 100 | 0.240 | G | 150 | 0.233 | H | 200 | 0.230 | I | 20 | 0.234 | | | |
| 1,3-Dichlorobenzene | A | 1.0 | 1.27 | B | 2.0 | 1.14 | C | 5.0 | 1.33 | D | 10 | 1.26 | E | 50 | 1.26 |
| | F | 100 | 1.16 | G | 150 | 1.06 | H | 200 | 0.987 | I | 20 | 1.31 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | A | 1.0 | 1.21 | B | 2.0 | 1.11 | C | 5.0 | 1.28 | D | 10 | 1.25 | E | 50 | 1.31 |
| | F | 100 | 1.24 | G | 150 | 1.18 | H | 200 | 1.09 | I | 20 | 1.36 | | | |
| 2-Butanone (MEK) | A | 5.0 | 0.00960 | B | 10 | 0.0116 | C | 25 | 0.0117 | D | 50 | 0.0121 | E | 250 | 0.0134 |
| | F | 500 | 0.0126 | G | 750 | 0.0128 | H | 1000 | 0.0131 | I | 100 | 0.0122 | | | |
| 2-Hexanone | | | | B | 10 | 0.293 | C | 25 | 0.288 | D | 50 | 0.283 | E | 250 | 0.263 |
| | F | 500 | 0.273 | G | 750 | 0.250 | H | 1000 | 0.238 | I | 100 | 0.278 | | | |
| 4-Bromofluorobenzene | A | 50 | 1.02 | B | 50 | 0.970 | C | 50 | 0.993 | D | 50 | 0.952 | E | 50 | 0.907 |
| | F | 50 | 0.857 | G | 50 | 0.815 | H | 50 | 0.793 | I | 50 | 0.954 | | | |
| 4-Methyl-2-pentanone (MIBK) | A | 5.0 | 0.422 | B | 10 | 0.421 | C | 25 | 0.431 | D | 50 | 0.435 | E | 250 | 0.405 |
| | F | 500 | 0.401 | G | 750 | 0.380 | H | 1000 | 0.364 | I | 100 | 0.428 | | | |
| Acetone | A | 5.0 | 0.0341 | B | 10 | 0.0312 | C | 25 | 0.0313 | D | 50 | 0.0309 | E | 250 | 0.0284 |
| | F | 500 | 0.0286 | G | 750 | 0.0280 | H | 1000 | 0.0265 | I | 100 | 0.0274 | | | |
| Benzene | A | 1.0 | 0.820 | B | 2.0 | 0.794 | C | 5.0 | 0.904 | D | 10 | 0.885 | E | 50 | 0.990 |
| | F | 100 | 0.952 | G | 150 | 0.913 | H | 200 | 0.875 | I | 20 | 0.955 | | | |
| Bromochloromethane | A | 1.0 | 0.114 | B | 2.0 | 0.111 | C | 5.0 | 0.133 | D | 10 | 0.136 | E | 50 | 0.146 |
| | F | 100 | 0.145 | G | 150 | 0.148 | H | 200 | 0.145 | I | 20 | 0.142 | | | |
| Bromodichloromethane | A | 1.0 | 0.207 | B | 2.0 | 0.202 | C | 5.0 | 0.227 | D | 10 | 0.231 | E | 50 | 0.252 |
| | F | 100 | 0.246 | G | 150 | 0.244 | H | 200 | 0.233 | I | 20 | 0.241 | | | |
| Bromoform | A | 1.0 | 0.172 | B | 2.0 | 0.166 | C | 5.0 | 0.209 | D | 10 | 0.224 | E | 50 | 0.249 |
| | F | 100 | 0.246 | G | 150 | 0.236 | H | 200 | 0.224 | I | 20 | 0.232 | | | |
| Bromomethane | A | 1.0 | 0.172 | B | 2.0 | 0.160 | C | 5.0 | 0.182 | D | 10 | 0.184 | E | 50 | 0.217 |
| | F | 100 | 0.173 | G | 150 | 0.157 | H | 200 | 0.147 | I | 20 | 0.190 | | | |
| Carbon Disulfide | A | 5.0 | 0.669 | B | 10 | 0.622 | C | 25 | 0.755 | D | 50 | 0.708 | E | 250 | 0.796 |
| | F | 500 | 0.685 | G | 750 | 0.613 | H | 1000 | 0.560 | I | 100 | 0.787 | | | |
| Carbon Tetrachloride | A | 1.0 | 0.132 | B | 2.0 | 0.133 | C | 5.0 | 0.168 | D | 10 | 0.158 | E | 50 | 0.198 |
| | F | 100 | 0.195 | G | 150 | 0.190 | H | 200 | 0.193 | I | 20 | 0.178 | | | |
| Chlorobenzene | A | 1.0 | 1.44 | B | 2.0 | 1.39 | C | 5.0 | 1.57 | D | 10 | 1.54 | E | 50 | 1.56 |
| | F | 100 | 1.52 | G | 150 | 1.37 | H | 200 | 1.29 | I | 20 | 1.64 | | | |
| Chloroethane | A | 1.0 | 0.154 | B | 2.0 | 0.143 | C | 5.0 | 0.161 | D | 10 | 0.167 | E | 50 | 0.188 |
| | F | 100 | 0.162 | G | 150 | 0.150 | H | 200 | 0.143 | I | 20 | 0.178 | | | |
| Chloroform | A | 1.0 | 0.323 | B | 2.0 | 0.293 | C | 5.0 | 0.343 | D | 10 | 0.328 | E | 50 | 0.370 |
| | F | 100 | 0.368 | G | 150 | 0.370 | H | 200 | 0.357 | I | 20 | 0.350 | | | |
| Chloromethane | A | 1.0 | 0.306 | B | 2.0 | 0.286 | C | 5.0 | 0.324 | D | 10 | 0.314 | E | 50 | 0.389 |
| | F | 100 | 0.331 | G | 150 | 0.310 | H | 200 | 0.296 | I | 20 | 0.350 | | | |
| cis-1,2-Dichloroethene | A | 1.0 | 0.246 | B | 2.0 | 0.242 | C | 5.0 | 0.291 | D | 10 | 0.285 | E | 50 | 0.315 |
| | F | 100 | 0.310 | G | 150 | 0.308 | H | 200 | 0.301 | I | 20 | 0.307 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | A | 1.0 | 0.867 | B | 2.0 | 0.838 | C | 5.0 | 0.964 | D | 10 | 0.976 | E | 50 | 0.970 |
| | F | 100 | 1.01 | G | 150 | 0.946 | H | 200 | 0.861 | I | 20 | 0.984 | | | |
| Cyclohexane | A | 1.0 | 0.302 | B | 2.0 | 0.267 | C | 5.0 | 0.366 | D | 10 | 0.311 | E | 50 | 0.419 |
| | F | 100 | 0.412 | G | 150 | 0.404 | H | 200 | 0.413 | I | 20 | 0.389 | | | |
| Dibromochloromethane | A | 1.0 | 0.442 | B | 2.0 | 0.394 | C | 5.0 | 0.445 | D | 10 | 0.461 | E | 50 | 0.462 |
| | F | 100 | 0.473 | G | 150 | 0.437 | H | 200 | 0.412 | I | 20 | 0.476 | | | |
| Dibromofluoromethane | A | 50 | 0.255 | B | 50 | 0.258 | C | 50 | 0.256 | D | 50 | 0.256 | E | 50 | 0.258 |
| | F | 50 | 0.260 | G | 50 | 0.261 | H | 50 | 0.255 | I | 50 | 0.256 | | | |
| Dichlorodifluoromethane | A | 1.0 | 0.110 | B | 2.0 | 0.138 | C | 5.0 | 0.165 | D | 10 | 0.155 | E | 50 | 0.201 |
| | F | 100 | 0.180 | G | 150 | 0.172 | H | 200 | 0.171 | I | 20 | 0.181 | | | |
| Ethylbenzene | A | 1.0 | 2.47 | B | 2.0 | 2.16 | C | 5.0 | 2.70 | D | 10 | 2.58 | E | 50 | 2.63 |
| | F | 100 | 2.56 | G | 150 | 2.23 | H | 200 | 2.03 | I | 20 | 2.78 | | | |
| Isopropylbenzene | A | 1.0 | 2.13 | B | 2.0 | 1.81 | C | 5.0 | 2.30 | D | 10 | 2.11 | E | 50 | 2.35 |
| | F | 100 | 2.21 | G | 150 | 2.04 | H | 200 | 1.94 | I | 20 | 2.39 | | | |
| m,p-Xylenes | A | 2.0 | 1.84 | B | 4.0 | 1.65 | C | 10 | 1.94 | D | 20 | 1.91 | E | 100 | 1.86 |
| | F | 200 | 1.67 | G | 300 | 1.42 | H | 400 | 1.26 | I | 40 | 2.04 | | | |
| Methyl Acetate | A | 1.0 | 0.314 | B | 2.0 | 0.285 | C | 5.0 | 0.285 | D | 10 | 0.294 | E | 50 | 0.296 |
| | F | 100 | 0.291 | G | 150 | 0.285 | H | 200 | 0.270 | I | 20 | 0.287 | | | |
| Methyl tert-Butyl Ether | A | 1.0 | 0.310 | B | 2.0 | 0.317 | C | 5.0 | 0.363 | D | 10 | 0.361 | E | 50 | 0.381 |
| | F | 100 | 0.376 | G | 150 | 0.374 | H | 200 | 0.377 | I | 20 | 0.359 | | | |
| Methylene Chloride | A | 1.0 | 0.228 | B | 2.0 | 0.210 | C | 5.0 | 0.255 | D | 10 | 0.243 | E | 50 | 0.278 |
| | F | 100 | 0.266 | G | 150 | 0.259 | H | 200 | 0.256 | I | 20 | 0.264 | | | |
| o-Xylene | A | 1.0 | 1.82 | B | 2.0 | 1.66 | C | 5.0 | 2.00 | D | 10 | 1.97 | E | 50 | 1.96 |
| | F | 100 | 1.85 | G | 150 | 1.63 | H | 200 | 1.43 | I | 20 | 2.02 | | | |
| Styrene | A | 1.0 | 1.51 | B | 2.0 | 1.37 | C | 5.0 | 1.63 | D | 10 | 1.63 | E | 50 | 1.61 |
| | F | 100 | 1.58 | G | 150 | 1.37 | H | 200 | 1.28 | I | 20 | 1.68 | | | |
| Tetrachloroethene (PCE) | A | 1.0 | 0.392 | B | 2.0 | 0.356 | C | 5.0 | 0.466 | D | 10 | 0.436 | E | 50 | 0.492 |
| | F | 100 | 0.500 | G | 150 | 0.461 | H | 200 | 0.441 | I | 20 | 0.511 | | | |
| Toluene | A | 1.0 | 2.37 | B | 2.0 | 2.18 | C | 5.0 | 2.58 | D | 10 | 2.43 | E | 50 | 2.54 |
| | F | 100 | 2.47 | G | 150 | 2.16 | H | 200 | 1.99 | I | 20 | 2.73 | | | |
| Toluene-d8 | A | 50 | 2.41 | B | 50 | 2.43 | C | 50 | 2.45 | D | 50 | 2.48 | E | 50 | 2.35 |
| | F | 50 | 2.44 | G | 50 | 2.41 | H | 50 | 2.34 | I | 50 | 2.48 | | | |
| trans-1,2-Dichloroethene | A | 1.0 | 0.258 | B | 2.0 | 0.248 | C | 5.0 | 0.305 | D | 10 | 0.285 | E | 50 | 0.345 |
| | F | 100 | 0.338 | G | 150 | 0.333 | H | 200 | 0.326 | I | 20 | 0.324 | | | |
| trans-1,3-Dichloropropene | A | 1.0 | 0.620 | B | 2.0 | 0.584 | C | 5.0 | 0.677 | D | 10 | 0.694 | E | 50 | 0.674 |
| | F | 100 | 0.714 | G | 150 | 0.664 | H | 200 | 0.623 | I | 20 | 0.697 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene (TCE) | A | 1.0 | 0.181 | B | 2.0 | 0.172 | C | 5.0 | 0.213 | D | 10 | 0.204 | E | 50 | 0.233 |
| | F | 100 | 0.228 | G | 150 | 0.221 | H | 200 | 0.209 | I | 20 | 0.224 | | | |
| Trichlorofluoromethane | | | | B | 2.0 | 0.137 | C | 5.0 | 0.190 | D | 10 | 0.176 | E | 50 | 0.225 |
| | F | 100 | 0.216 | G | 150 | 0.209 | H | 200 | 0.206 | I | 20 | 0.205 | | | |
| Trichlorotrifluoroethane | A | 1.0 | 0.154 | B | 2.0 | 0.138 | C | 5.0 | 0.181 | D | 10 | 0.175 | E | 50 | 0.223 |
| | F | 100 | 0.197 | G | 150 | 0.186 | H | 200 | 0.187 | I | 20 | 0.202 | | | |
| Vinyl Chloride | A | 1.0 | 0.208 | B | 2.0 | 0.198 | C | 5.0 | 0.254 | D | 10 | 0.242 | E | 50 | 0.277 |
| | | | | | | | | | | I | 20 | 0.272 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| 1,1,1,2-Tetrachloroethane | MS | AverageRF | % RSD | 6.6 | | ≤ 15 | 0.489 | | 0.01 |
| 1,1,1-Trichloroethane (TCA) | MS | AverageRF | % RSD | 12.6 | | ≤ 15 | 0.221 | | 0.01 |
| † 1,1,2,2-Tetrachloroethane | MS | AverageRF | % RSD | 10.1 | | ≤ 15 | 0.728 | | 0.3 |
| 1,1,2-Trichloroethane | MS | AverageRF | % RSD | 4.6 | | ≤ 15 | 0.363 | | 0.01 |
| † 1,1-Dichloroethane | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 0.391 | | 0.1 |
| ‡ 1,1-Dichloroethene | MS | AverageRF | % RSD | 10.3 | | ≤ 15 | 0.230 | | 0.01 |
| 1,2,3-Trichlorobenzene | MS | AverageRF | % RSD | 3.7 | | ≤ 15 | 0.351 | | 0.01 |
| 1,2,4-Trichlorobenzene | MS | AverageRF | % RSD | 5.8 | | ≤ 15 | 0.532 | | 0.01 |
| 1,2-Dibromo-3-chloropropane (DBCP) | MS | AverageRF | % RSD | 8.3 | | ≤ 15 | 0.0760 | | 0.01 |
| 1,2-Dibromoethane (EDB) | MS | AverageRF | % RSD | 5.6 | | ≤ 15 | 0.403 | | 0.01 |
| 1,2-Dichlorobenzene | MS | AverageRF | % RSD | 5.5 | | ≤ 15 | 1.09 | | 0.01 |
| 1,2-Dichloroethane (EDC) | MS | AverageRF | % RSD | 6.6 | | ≤ 15 | 0.139 | | 0.01 |
| 1,2-Dichloroethane-d4 | SURR | AverageRF | % RSD | 1.8 | | ≤ 15 | 0.145 | | |
| ‡ 1,2-Dichloropropane | MS | AverageRF | % RSD | 6.4 | | ≤ 15 | 0.227 | | 0.01 |
| 1,3-Dichlorobenzene | MS | AverageRF | % RSD | 9.8 | | ≤ 15 | 1.20 | | 0.01 |
| 1,4-Dichlorobenzene | MS | AverageRF | % RSD | 7.2 | | ≤ 15 | 1.22 | | 0.01 |
| 2-Butanone (MEK) | MS | AverageRF | % RSD | 9.2 | | ≤ 15 | 0.0121 | | 0.01 |
| 2-Hexanone | MS | AverageRF | % RSD | 7.0 | | ≤ 15 | 0.271 | | 0.01 |
| 4-Bromofluorobenzene | SURR | AverageRF | % RSD | 8.7 | | ≤ 15 | 0.917 | | |
| 4-Methyl-2-pentanone (MIBK) | MS | AverageRF | % RSD | 6.0 | | ≤ 15 | 0.410 | | 0.01 |
| Acetone | MS | AverageRF | % RSD | 8.2 | | ≤ 15 | 0.0296 | | 0.01 |
| Benzene | MS | AverageRF | % RSD | 7.1 | | ≤ 15 | 0.899 | | 0.01 |
| Bromochloromethane | MS | AverageRF | % RSD | 10.2 | | ≤ 15 | 0.135 | | 0.01 |
| Bromodichloromethane | MS | AverageRF | % RSD | 7.5 | | ≤ 15 | 0.231 | | 0.01 |
| † Bromoform | MS | AverageRF | % RSD | 13.8 | | ≤ 15 | 0.218 | | 0.1 |
| Bromomethane | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.176 | | 0.01 |
| Carbon Disulfide | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.689 | | 0.01 |
| Carbon Tetrachloride | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.172 | | 0.01 |
| † Chlorobenzene | MS | AverageRF | % RSD | 7.7 | | ≤ 15 | 1.48 | | 0.3 |
| Chloroethane | MS | AverageRF | % RSD | 9.6 | | ≤ 15 | 0.161 | | 0.01 |
| ‡ Chloroform | MS | AverageRF | % RSD | 7.5 | | ≤ 15 | 0.345 | | 0.01 |
| † Chloromethane | MS | AverageRF | % RSD | 9.7 | | ≤ 15 | 0.323 | | 0.1 |
| cis-1,2-Dichloroethene | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 0.290 | | 0.01 |
| cis-1,3-Dichloropropene | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 0.935 | | 0.01 |
| Cyclohexane | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.365 | | 0.01 |
| Dibromochloromethane | MS | AverageRF | % RSD | 6.2 | | ≤ 15 | 0.445 | | 0.01 |
| Dibromofluoromethane | SURR | AverageRF | % RSD | 0.8 | | ≤ 15 | 0.257 | | |
| Dichlorodifluoromethane | MS | Linear | R2 | 0.998 | | ≥ 0.99 | 0.164 | | 0.01 |
| ‡ Ethylbenzene | MS | AverageRF | % RSD | 10.6 | | ≤ 15 | 2.46 | | 0.01 |
| Isopropylbenzene | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 2.14 | | 0.01 |
| m,p-Xylenes | MS | AverageRF | % RSD | 14.9 | | ≤ 15 | 1.73 | | 0.01 |
| Methyl Acetate | MS | AverageRF | % RSD | 4.1 | | ≤ 15 | 0.290 | | 0.01 |
| Methyl tert-Butyl Ether | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 0.358 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| Methylene Chloride | MS | AverageRF | % RSD | 8.3 | | ≤ 15 | 0.251 | | 0.01 |
| o-Xylene | MS | AverageRF | % RSD | 11.2 | | ≤ 15 | 1.81 | | 0.01 |
| Styrene | MS | AverageRF | % RSD | 9.4 | | ≤ 15 | 1.52 | | 0.01 |
| Tetrachloroethene (PCE) | MS | AverageRF | % RSD | 11.3 | | ≤ 15 | 0.451 | | 0.01 |
| ‡ Toluene | MS | AverageRF | % RSD | 9.9 | | ≤ 15 | 2.38 | | 0.01 |
| Toluene-d8 | SURR | AverageRF | % RSD | 2.1 | | ≤ 15 | 2.42 | | |
| trans-1,2-Dichloroethene | MS | AverageRF | % RSD | 11.5 | | ≤ 15 | 0.307 | | 0.01 |
| trans-1,3-Dichloropropene | MS | AverageRF | % RSD | 6.5 | | ≤ 15 | 0.661 | | 0.01 |
| Trichloroethene (TCE) | MS | AverageRF | % RSD | 10.0 | | ≤ 15 | 0.209 | | 0.01 |
| Trichlorofluoromethane | MS | AverageRF | % RSD | 14.3 | | ≤ 15 | 0.196 | | 0.01 |
| Trichlorotrifluoroethane | MS | AverageRF | % RSD | 13.8 | | ≤ 15 | 0.183 | | 0.01 |
| ‡ Vinyl Chloride | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.242 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012
**Date Analyzed:** 03/07/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2752
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120307\0307-16.D

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 21 | 0.489 | 0.523 | 7 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 21 | 0.221 | 0.234 | 6 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 22 | 0.728 | 0.785 | 8 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 21 | 0.363 | 0.386 | 6 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 21 | 0.391 | 0.419 | 7 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 23 | 0.230 | 0.261 | 13 | NA | ± 30 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 20 | 0.351 | 0.349 | 0 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 20 | 0.532 | 0.523 | -2 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 19 | 0.0760 | 0.0717 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 21 | 0.403 | 0.427 | 6 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 22 | 1.09 | 1.19 | 10 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 21 | 0.139 | 0.142 | 3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.227 | 0.240 | 6 | NA | ± 30 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 22 | 1.20 | 1.35 | 12 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 22 | 1.22 | 1.33 | 9 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 110 | 0.0121 | 0.0131 | 8 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.271 | 0.280 | 3 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 110 | 0.410 | 0.432 | 5 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.0296 | 0.0276 | -7 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 22 | 0.899 | 0.979 | 9 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 21 | 0.135 | 0.143 | 6 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.231 | 0.244 | 5 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 22 | 0.218 | 0.239 | 10 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 22 | 0.176 | 0.192 | 9 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.689 | 0.795 | 15 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 19 | 0.172 | 0.181 | NA | -3 | ± 30 % | Linear |
| Chlorobenzene | 20 | 22 | 1.48 | 1.62 | 10 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 22 | 0.161 | 0.175 | 9 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 21 | 0.345 | 0.364 | 6 | NA | ± 30 % | AverageRF |
| Chloromethane | 20 | 22 | 0.323 | 0.351 | 9 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.290 | 0.306 | 6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 21 | 0.935 | 0.996 | 6 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.365 | 0.398 | NA | 0 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 21 | 0.445 | 0.478 | 7 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 18 | 0.164 | 0.164 | NA | -11 | ± 30 % | Linear |
| Ethylbenzene | 20 | 23 | 2.46 | 2.81 | 14 | NA | ± 30 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 2.14 | 2.41 | 13 | NA | ± 30 % | AverageRF |
| m,p-Xylenes | 40 | 47 | 1.73 | 2.03 | 17 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 21 | 0.290 | 0.301 | 4 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.358 | 0.363 | 2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 22 | 0.251 | 0.271 | 8 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012
**Date Analyzed:** 03/07/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2752
**Units:** ug/L

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| o-Xylene | 20 | 23 | 1.81 | 2.07 | 14 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 22 | 1.52 | 1.70 | 12 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 23 | 0.451 | 0.515 | 14 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 23 | 2.38 | 2.71 | 14 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 21 | 0.307 | 0.328 | 7 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 21 | 0.661 | 0.696 | 5 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 22 | 0.209 | 0.229 | 10 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 21 | 0.196 | 0.206 | 5 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 22 | 0.183 | 0.199 | 9 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.242 | 0.264 | NA | -2 | ± 30 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 02/27/2012
**ICAL ID:** CAL2756
**Analysis Lot:** JWG1200306
**Units:** ug/L

**File ID:** J:\MS52\DATA\MS52-120322\0322-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 18 | 0.01 | 1.21 | 1.10 | -9 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 18 | 0.01 | 0.786 | 0.715 | -9 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 1.01 | 0.998 | -1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.675 | 0.656 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 19 | 0.1 | 0.745 | 0.708 | -5 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 17 | 0.01 | 0.629 | 0.526 | -16 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 1.69 | 1.63 | -4 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 19 | 0.01 | 1.92 | 1.86 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 18 | 0.01 | 0.232 | 0.213 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.878 | 0.824 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 18 | 0.01 | 2.42 | 2.22 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 18 | 0.01 | 0.536 | 0.491 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 50 | | 0.251 | 0.251 | 0 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 19 | 0.01 | 0.396 | 0.378 | -4 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 19 | 0.01 | 2.67 | 2.49 | -7 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 18 | 0.01 | 2.65 | 2.44 | -8 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.126 | 0.129 | 3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.01 | 0.514 | 0.521 | 1 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 47 | | 0.918 | 0.861 | -6 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 100 | 0.01 | 0.729 | 0.733 | 1 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 98 | 0.01 | 0.0878 | 0.0782 | NA | -2 | ± 30 % | Linear |
| Benzene | 20 | 19 | 0.01 | 1.74 | 1.63 | -6 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 20 | 0.01 | 0.265 | 0.260 | -2 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 18 | 0.01 | 0.592 | 0.536 | -9 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 18 | 0.1 | 0.693 | 0.631 | -9 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.01 | 0.267 | 0.247 | -7 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.01 | 1.03 | 1.20 | 16 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 17 | 0.01 | 0.667 | 0.591 | NA | -17 | ± 30 % | Linear |
| Chlorobenzene | 20 | 19 | 0.3 | 3.32 | 3.19 | -4 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 19 | 0.01 | 0.302 | 0.288 | -4 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 18 | 0.01 | 0.828 | 0.729 | -12 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 17 | 0.1 | 0.551 | 0.480 | -13 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 19 | 0.01 | 0.573 | 0.541 | -6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 19 | 0.01 | 1.71 | 1.63 | -5 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.684 | 0.674 | -2 | NA | ± 30 % | AverageRF |
| Dibromochloromethane | 20 | 18 | 0.01 | 1.09 | 0.995 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 50 | | 0.241 | 0.238 | -1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 18 | 0.01 | 0.554 | 0.489 | -12 | NA | ± 30 % | AverageRF |
| Ethylbenzene | 20 | 19 | 0.01 | 5.75 | 5.57 | -3 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 21 | 0.01 | 4.91 | 5.09 | 4 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 02/27/2012
**ICAL ID:** CAL2756
**Analysis Lot:** JWG1200306
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 39 | 0.01 | 4.53 | 4.39 | -3 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.510 | 0.509 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 1.08 | 1.05 | -2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 17 | 0.01 | 0.533 | 0.395 | NA | -17 | ± 30 % | Linear |
| o-Xylene | 20 | 19 | 0.01 | 4.72 | 4.49 | -5 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 3.52 | 3.47 | -1 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 20 | 0.01 | 1.13 | 1.12 | -1 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 19 | 0.01 | 5.02 | 4.81 | -4 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 51 | | 2.48 | 2.51 | 1 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 18 | 0.01 | 0.609 | 0.556 | -9 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 18 | 0.01 | 1.58 | 1.46 | -8 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 19 | 0.01 | 0.516 | 0.490 | -5 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 18 | 0.01 | 0.810 | 0.722 | -11 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 17 | 0.01 | 0.405 | 0.353 | -13 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.01 | 0.434 | 0.432 | -1 | NA | ± 20 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200322
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120330\0330-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 19 | 0.01 | 0.489 | 0.459 | -6 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.208 | -6 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.719 | -1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.354 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 20 | 0.1 | 0.391 | 0.398 | 2 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.01 | 0.230 | 0.256 | 11 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 18 | 0.01 | 0.351 | 0.323 | -8 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.468 | -12 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 15 | 0.01 | 0.0760 | 0.0577 | -24 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.403 | 0.373 | -7 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 20 | 0.01 | 1.09 | 1.08 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.01 | 0.139 | 0.136 | -2 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 49 | | 0.145 | 0.144 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.238 | 5 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 0.01 | 1.20 | 1.22 | 2 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 21 | 0.01 | 1.22 | 1.26 | 3 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.0121 | 0.0127 | 5 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 94 | 0.01 | 0.271 | 0.254 | -6 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 54 | | 0.917 | 0.993 | 8 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.384 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.01 | 0.0296 | 0.0274 | -7 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 21 | 0.01 | 0.899 | 0.927 | 3 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.132 | -3 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 20 | 0.01 | 0.231 | 0.228 | -2 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 18 | 0.1 | 0.218 | 0.201 | -8 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 18 | 0.01 | 0.176 | 0.162 | -8 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 0.01 | 0.689 | 0.769 | 12 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 17 | 0.01 | 0.172 | 0.159 | NA | -15 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.45 | -2 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 20 | 0.01 | 0.161 | 0.160 | 0 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.01 | 0.345 | 0.338 | -2 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.378 | 17 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.290 | 0.296 | 2 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.934 | 0 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.387 | NA | -2 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 19 | 0.01 | 0.445 | 0.411 | -8 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 49 | | 0.257 | 0.254 | -1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.194 | NA | 6 | ± 30 % | Linear |
| Ethylbenzene | 20 | 20 | 0.01 | 2.46 | 2.49 | 1 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 0.01 | 2.14 | 2.50 | 17 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200322
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.76 | 2 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.290 | 0.290 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.357 | 0 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 20 | 0.01 | 0.251 | 0.252 | 0 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 20 | 0.01 | 1.81 | 1.80 | -1 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.50 | -1 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.428 | -5 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.33 | -2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.32 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.299 | -2 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 19 | 0.01 | 0.661 | 0.637 | -4 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.207 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.191 | -2 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 20 | 0.01 | 0.183 | 0.183 | 0 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 21 | 0.01 | 0.242 | 0.278 | NA | 3 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200326
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120402\0402-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 19 | 0.01 | 0.489 | 0.460 | -6 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.212 | -4 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.729 | 0 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.352 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 20 | 0.1 | 0.391 | 0.399 | 2 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 23 | 0.01 | 0.230 | 0.263 | 14 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 0.351 | 0.329 | -6 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.470 | -12 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 16 | 0.01 | 0.0760 | 0.0614 | -19 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 18 | 0.01 | 0.403 | 0.371 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 19 | 0.01 | 1.09 | 1.02 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 19 | 0.01 | 0.139 | 0.132 | -5 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 47 | | 0.145 | 0.137 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.237 | 5 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 0.01 | 1.20 | 1.21 | 1 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 20 | 0.01 | 1.22 | 1.21 | -1 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 97 | 0.01 | 0.0121 | 0.0118 | -3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 92 | 0.01 | 0.271 | 0.249 | -8 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 53 | | 0.917 | 0.967 | 5 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.386 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 88 | 0.01 | 0.0296 | 0.0261 | -12 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 21 | 0.01 | 0.899 | 0.965 | 7 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.129 | -5 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 20 | 0.01 | 0.231 | 0.234 | 1 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.1 | 0.218 | 0.211 | -3 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.01 | 0.176 | 0.165 | -6 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.01 | 0.689 | 0.804 | 17 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 18 | 0.01 | 0.172 | 0.170 | NA | -9 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.46 | -1 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 20 | 0.01 | 0.161 | 0.163 | 1 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.01 | 0.345 | 0.336 | -2 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.375 | 16 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.01 | 0.290 | 0.305 | 5 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.946 | 1 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.392 | NA | -1 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 18 | 0.01 | 0.445 | 0.407 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 50 | | 0.257 | 0.259 | 1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.191 | NA | 5 | ± 30 % | Linear |
| Ethylbenzene | 20 | 19 | 0.01 | 2.46 | 2.36 | -4 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 0.01 | 2.14 | 2.43 | 13 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200326
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.76 | 2 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.290 | 0.283 | -2 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.360 | 1 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 21 | 0.01 | 0.251 | 0.261 | 4 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 21 | 0.01 | 1.81 | 1.87 | 3 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.52 | 0 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.429 | -5 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.42 | 2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.32 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.309 | 1 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.661 | 0.653 | -1 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.208 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.194 | -1 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 20 | 0.01 | 0.183 | 0.186 | 2 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.01 | 0.242 | 0.276 | NA | 2 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200334
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120403\0403-03.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 18 | 0.01 | 0.489 | 0.451 | -8 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.210 | -5 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.734 | 1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.354 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 21 | 0.1 | 0.391 | 0.401 | 3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.01 | 0.230 | 0.251 | 9 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 0.351 | 0.329 | -6 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.481 | -10 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 16 | 0.01 | 0.0760 | 0.0607 | -20 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.403 | 0.375 | -7 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 19 | 0.01 | 1.09 | 1.05 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.01 | 0.139 | 0.137 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 48 | | 0.145 | 0.140 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.233 | 3 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 21 | 0.01 | 1.20 | 1.23 | 3 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 20 | 0.01 | 1.22 | 1.20 | -2 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.0121 | 0.0124 | 2 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 93 | 0.01 | 0.271 | 0.252 | -7 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 51 | | 0.917 | 0.942 | 3 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.385 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 92 | 0.01 | 0.0296 | 0.0273 | -8 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 20 | 0.01 | 0.899 | 0.915 | 2 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.128 | -5 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.01 | 0.231 | 0.238 | 3 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.1 | 0.218 | 0.202 | -7 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 18 | 0.01 | 0.176 | 0.157 | -11 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 0.01 | 0.689 | 0.769 | 12 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 18 | 0.01 | 0.172 | 0.166 | NA | -11 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.45 | -2 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 21 | 0.01 | 0.161 | 0.165 | 3 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 19 | 0.01 | 0.345 | 0.329 | -5 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.369 | 14 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.290 | 0.289 | 0 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.922 | -1 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.392 | NA | -1 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 18 | 0.01 | 0.445 | 0.406 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 48 | | 0.257 | 0.248 | -4 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.189 | NA | 4 | ± 30 % | Linear |
| Ethylbenzene | 20 | 20 | 0.01 | 2.46 | 2.51 | 2 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 22 | 0.01 | 2.14 | 2.38 | 11 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200334
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.78 | 3 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 19 | 0.01 | 0.290 | 0.272 | -6 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.358 | 0 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 20 | 0.01 | 0.251 | 0.246 | -2 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 20 | 0.01 | 1.81 | 1.82 | 0 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.51 | 0 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.420 | -7 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.44 | 2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.31 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.304 | -1 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.661 | 0.651 | -2 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.206 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.191 | -2 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 21 | 0.01 | 0.183 | 0.192 | 5 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 21 | 0.01 | 0.242 | 0.280 | NA | 3 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360

## Analysis Run Log
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260B

**Analysis Lot:** JWG1200306
**Instrument ID:** MS52

| File ID | Sample Name | Lab Code | Date Analysis Started | Start Time | Q | Date Analysis Finished | Finish Time |
|---|---|---|---|---|---|---|---|
| \0322-01.D | GC/MS Tuning - Bromofluorobenzene | JWG1200306-1 | 3/22/2012 | 09:17 | | 3/22/2012 | 09:32 |
| \0322-02.D | Continuing Calibration Verification | JWG1200306-2 | 3/22/2012 | 09:45 | | 3/22/2012 | 10:00 |
| \0322-03.D | Lab Control Sample | JWG1200305-1 | 3/22/2012 | 10:14 | | 3/22/2012 | 10:29 |
| \0322-05.D | Method Blank | JWG1200305-2 | 3/22/2012 | 11:28 | | 3/22/2012 | 11:43 |
| \0322-19.D | CRHE-188849-IDW-03212012 | J1201360-025 | 3/22/2012 | 18:20 | | 3/22/2012 | 18:35 |
| \0322-20.D | CRHE-188797-IDW-03212012 | J1201360-026 | 3/22/2012 | 18:48 | | 3/22/2012 | 19:03 |
| \0322-21.D | CRHE-188842-IDW-03212012 | J1201360-027 | 3/22/2012 | 19:17 | | 3/22/2012 | 19:32 |
| \0322-22.D | CRHE-188838-IDW-03212012 | J1201360-028 | 3/22/2012 | 19:45 | | 3/22/2012 | 20:00 |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360

## Analysis Run Log
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260B

**Analysis Lot:** JWG1200322
**Instrument ID:** MS53

| File ID | Sample Name | Lab Code | Date Analysis Started | Start Time | Q | Date Analysis Finished | Finish Time |
|---|---|---|---|---|---|---|---|
| \0330-01.D | GC/MS Tuning - Bromofluorobenzene | JWG1200322-1 | 3/30/2012 | 10:42 | | 3/30/2012 | 10:57 |
| \0330-02.D | Continuing Calibration Verification | JWG1200322-2 | 3/30/2012 | 11:12 | | 3/30/2012 | 11:27 |
| \0330-03.D | Lab Control Sample | JWG1200321-1 | 3/30/2012 | 11:42 | | 3/30/2012 | 11:57 |
| \0330-06.D | Method Blank | JWG1200321-2 | 3/30/2012 | 13:10 | | 3/30/2012 | 13:25 |
| \0330-07.D | CRHE-MW0032-045.0-03192012 | J1201360-001 | 3/30/2012 | 13:40 | | 3/30/2012 | 13:55 |
| \0330-08.D | CRHE-MW0030-010.0-03192012 | J1201360-002 | 3/30/2012 | 14:10 | | 3/30/2012 | 14:25 |
| \0330-09.D | CRHE-MW0023-065.0-03192012 | J1201360-003 | 3/30/2012 | 14:40 | | 3/30/2012 | 14:55 |
| \0330-10.D | CRHE-MW0031-045.0-03192012 | J1201360-004 | 3/30/2012 | 15:09 | | 3/30/2012 | 15:24 |
| \0330-11.D | CRHE-IW0020I-045.0-03192012 | J1201360-005 | 3/30/2012 | 15:39 | | 3/30/2012 | 15:54 |
| \0330-12.D | CRHE-MW0039-030.0-03192012 | J1201360-006 | 3/30/2012 | 16:09 | | 3/30/2012 | 16:24 |
| \0330-13.D | CRHE-MW0038-010.0-03192012 | J1201360-007 | 3/30/2012 | 16:39 | | 3/30/2012 | 16:54 |
| \0330-14.D | EB01-03192012 | J1201360-008 | 3/30/2012 | 17:09 | | 3/30/2012 | 17:24 |
| \0330-15.D | CRHE-IW0015I-040.0-03192012 | J1201360-009 | 3/30/2012 | 17:39 | | 3/30/2012 | 17:54 |
| \0330-16.D | CRHE-MW0034-038.5-03202012 | J1201360-010 | 3/30/2012 | 18:09 | | 3/30/2012 | 18:24 |
| \0330-17.D | CRHE-IW0019I-040.0-03202012 | J1201360-011 | 3/30/2012 | 18:39 | | 3/30/2012 | 18:54 |
| \0330-18.D | CRHE-MW0033-048.5-03202012 | J1201360-012 | 3/30/2012 | 19:09 | | 3/30/2012 | 19:24 |
| \0330-19.D | CRHE-IW0021I-045.0-03202012 | J1201360-013 | 3/30/2012 | 19:39 | | 3/30/2012 | 19:54 |
| \0330-20.D | CRHE-MW0035-045.0-03202012 | J1201360-014 | 3/30/2012 | 20:09 | | 3/30/2012 | 20:24 |
| \0330-21.D | CRHE-MW0028-040.0-03202012 | J1201360-015 | 3/30/2012 | 20:39 | | 3/30/2012 | 20:54 |
| \0330-22.D | CRHE-MW0037-030.0-03202012 | J1201360-016 | 3/30/2012 | 21:08 | | 3/30/2012 | 21:23 |
| \0330-23.D | CRHE-IW0017I-030.0-03202012 | J1201360-017 | 3/30/2012 | 21:38 | | 3/30/2012 | 21:53 |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Service Request:** J1201360

## Analysis Run Log
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200326
**Instrument ID:** MS53

| File ID | Sample Name | Lab Code | Date Analysis Started | Start Time | Q | Date Analysis Finished | Finish Time |
|---|---|---|---|---|---|---|---|
| \0402-01.D | GC/MS Tuning - Bromofluorobenzene | JWG1200326-1 | 4/2/2012 | 08:51 | | 4/2/2012 | 09:06 |
| \0402-02.D | Continuing Calibration Verification | JWG1200326-2 | 4/2/2012 | 09:21 | | 4/2/2012 | 09:36 |
| \0402-03.D | Lab Control Sample | JWG1200325-1 | 4/2/2012 | 09:51 | | 4/2/2012 | 10:06 |
| \0402-06.D | Method Blank | JWG1200325-2 | 4/2/2012 | 11:20 | | 4/2/2012 | 11:35 |
| \0402-07.D | Trip Blank | J1201360-029 | 4/2/2012 | 11:50 | | 4/2/2012 | 12:05 |
| \0402-08.D | CRHE-MW0032-045.0-03192012 | J1201360-001 | 4/2/2012 | 12:20 | | 4/2/2012 | 12:35 |
| \0402-09.D | CRHE-MW0031-045.0-03192012 | J1201360-004 | 4/2/2012 | 12:49 | | 4/2/2012 | 13:04 |
| \0402-10.D | CRHE-IW0020I-045.0-03192012 | J1201360-005 | 4/2/2012 | 13:20 | | 4/2/2012 | 13:35 |
| \0402-11.D | CRHE-MW0039-030.0-03192012 | J1201360-006 | 4/2/2012 | 13:50 | | 4/2/2012 | 14:05 |
| \0402-12.D | CRHE-MW0034-038.5-03202012 | J1201360-010 | 4/2/2012 | 14:20 | | 4/2/2012 | 14:35 |
| \0402-13.D | CRHE-IW0019I-040.0-03202012 | J1201360-011 | 4/2/2012 | 14:50 | | 4/2/2012 | 15:05 |
| \0402-14.D | CRHE-MW0035-045.0-03202012 | J1201360-014 | 4/2/2012 | 15:19 | | 4/2/2012 | 15:34 |
| \0402-15.D | CRHE-MW0028-040.0-03202012 | J1201360-015 | 4/2/2012 | 15:49 | | 4/2/2012 | 16:04 |
| \0402-16.D | CRHE-IW0017I-030.0-03202012 | J1201360-017 | 4/2/2012 | 16:19 | | 4/2/2012 | 16:34 |
| \0402-17.D | CRHE-MW0027-045.0-03212012 | J1201360-022 | 4/2/2012 | 16:49 | | 4/2/2012 | 17:04 |
| \0402-18.D | CRHE-MW0022-065.0-03212012 | J1201360-021 | 4/2/2012 | 17:19 | | 4/2/2012 | 17:34 |
| \0402-19.D | CRHE-MW0026-035.0-03212012 | J1201360-020 | 4/2/2012 | 17:49 | | 4/2/2012 | 18:04 |
| \0402-20.D | CRHE-MW0029-045.0-03212012 | J1201360-019 | 4/2/2012 | 18:19 | | 4/2/2012 | 18:34 |
| \0402-21.D | CRHE-IW0014I-040.0-03212012 | J1201360-018 | 4/2/2012 | 18:49 | | 4/2/2012 | 19:04 |
| \0402-22.D | CRHE-MW0024-010.0-03212012 | J1201360-023 | 4/2/2012 | 19:19 | | 4/2/2012 | 19:34 |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360

## Analysis Run Log
## Volatile Organic Compounds by GC/MS

**Analysis Method:** 8260B

**Analysis Lot:** JWG1200334
**Instrument ID:** MS53

| File ID | Sample Name | Lab Code | Date Analysis Started | Start Time | Q | Date Analysis Finished | Finish Time |
|---|---|---|---|---|---|---|---|
| \0403-01.D | GC/MS Tuning - Bromofluorobenzene | JWG1200334-1 | 4/3/2012 | 10:53 | | 4/3/2012 | 11:08 |
| \0403-03.D | Continuing Calibration Verification | JWG1200334-2 | 4/3/2012 | 11:53 | | 4/3/2012 | 12:08 |
| \0403-04.D | Lab Control Sample | JWG1200333-3 | 4/3/2012 | 12:25 | | 4/3/2012 | 12:40 |
| \0403-07.D | Method Blank | JWG1200333-4 | 4/3/2012 | 13:53 | | 4/3/2012 | 14:08 |
| \0403-08.D | CRHE-IW0014I-040.0-03212012 | J1201360-018 | 4/3/2012 | 14:23 | | 4/3/2012 | 14:38 |
| \0403-09.D | CRHE-MW0022-065.0-03212012 | J1201360-021 | 4/3/2012 | 14:52 | | 4/3/2012 | 15:07 |
| \0403-10.D | CRHE-MW0029-045.0-03212012 | J1201360-019 | 4/3/2012 | 15:22 | | 4/3/2012 | 15:37 |
| \0403-11.D | CRHE-MW0026-035.0-03212012 | J1201360-020 | 4/3/2012 | 15:51 | | 4/3/2012 | 16:06 |
| \0403-12.D | CRHE-MW0027-045.0-03212012 | J1201360-022 | 4/3/2012 | 16:21 | | 4/3/2012 | 16:36 |
| \0403-13.D | CHRE-MW0036-010.0-03202012 | J1201360-030 | 4/3/2012 | 16:50 | | 4/3/2012 | 17:05 |
| \0403-14.D | CRHE-MW0025-030.0-03212012 | J1201360-024 | 4/3/2012 | 17:20 | | 4/3/2012 | 17:35 |
| \0403-16.D | CRHE-MW0025-030.0-03212012 | J1201360-024 | 4/3/2012 | 18:18 | | 4/3/2012 | 18:33 |
| \0403-17.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 18:48 | | 4/3/2012 | 19:03 |
| \0403-18.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 19:17 | | 4/3/2012 | 19:32 |
| \0403-19.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 19:46 | | 4/3/2012 | 20:01 |
| \0403-20.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 20:16 | | 4/3/2012 | 20:31 |
| \0403-21.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 20:46 | | 4/3/2012 | 21:01 |
| \0403-22.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 21:15 | | 4/3/2012 | 21:30 |
| \0403-23.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 21:45 | | 4/3/2012 | 22:00 |
| \0403-24.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 22:15 | | 4/3/2012 | 22:30 |
| \0403-26.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 23:14 | | 4/3/2012 | 23:29 |
| \0403-27.D | ZZZZZZ | ZZZZZZ | 4/3/2012 | 23:44 | | 4/3/2012 | 23:59 |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012

## Extraction Prep Log
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Extraction Lot:** JWG1200321
**Level:** Low

| Sample Name | Lab Code | Date Collected | Date Received | Sample Amount | Final Volume | % Solids | Note |
|---|---|---|---|---|---|---|---|
| CRHE-MW0032-045.0-03192( | J1201360-001 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0030-010.0-03192( | J1201360-002 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0023-065.0-03192( | J1201360-003 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0031-045.0-03192( | J1201360-004 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0020I-045.0-031920 | J1201360-005 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0039-030.0-03192( | J1201360-006 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0038-010.0-03192( | J1201360-007 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| EB01-03192012 | J1201360-008 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0015I-040.0-031920 | J1201360-009 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0034-038.5-03202( | J1201360-010 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0019I-040.0-032020 | J1201360-011 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0033-048.5-03202( | J1201360-012 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0021I-045.0-032020 | J1201360-013 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0035-045.0-03202( | J1201360-014 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0028-040.0-03202( | J1201360-015 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0037-030.0-03202( | J1201360-016 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0017I-030.0-032020 | J1201360-017 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| Method Blank | JWG1200321-2 | NA | NA | 10ml | 10ml | NA | |
| Lab Control Sample | JWG1200321-1 | NA | NA | 10ml | 10ml | NA | |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012

## Extraction Prep Log
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Extraction Lot:** JWG1200325
**Level:** Low

| Sample Name | Lab Code | Date Collected | Date Received | Sample Amount | Final Volume | % Solids | Note |
|---|---|---|---|---|---|---|---|
| CRHE-MW0032-045.0-03192( | J1201360-001 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0031-045.0-03192( | J1201360-004 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0020I-045.0-031920 | J1201360-005 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0039-030.0-03192( | J1201360-006 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0034-038.5-03202( | J1201360-010 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0019I-040.0-032020 | J1201360-011 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0035-045.0-03202( | J1201360-014 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0028-040.0-03202( | J1201360-015 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0017I-030.0-032020 | J1201360-017 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-IW0014I-040.0-032120 | J1201360-018 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0029-045.0-03212( | J1201360-019 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0026-035.0-03212( | J1201360-020 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0022-065.0-03212( | J1201360-021 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0027-045.0-03212( | J1201360-022 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0024-010.0-03212( | J1201360-023 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| Trip Blank | J1201360-029 | 03/19/12 | 03/22/12 | 10ml | 10ml | NA | |
| Method Blank | JWG1200325-2 | NA | NA | 10ml | 10ml | NA | |
| Lab Control Sample | JWG1200325-1 | NA | NA | 10ml | 10ml | NA | |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012

## Extraction Prep Log
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Extraction Lot:** JWG1200333
**Level:** Low

| Sample Name | Lab Code | Date Collected | Date Received | Sample Amount | Final Volume | % Solids | Note |
|---|---|---|---|---|---|---|---|
| CRHE-IW0014I-040.0-032120 | J1201360-018 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0029-045.0-03212C | J1201360-019 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0026-035.0-03212C | J1201360-020 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0022-065.0-03212C | J1201360-021 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0027-045.0-03212C | J1201360-022 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0025-030.0-03212C | J1201360-024 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CRHE-MW0025-030.0-03212C | J1201360-024 | 03/21/12 | 03/22/12 | 10ml | 10ml | NA | |
| CHRE-MW0036-010.0-03202C | J1201360-030 | 03/20/12 | 03/22/12 | 10ml | 10ml | NA | |
| Method Blank | JWG1200333-4 | NA | NA | 10ml | 10ml | NA | |
| Lab Control Sample | JWG1200333-3 | NA | NA | 10ml | 10ml | NA | |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012

## Extraction Prep Log
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Extraction Lot:** JWG1200305
**Level:** Low

| Sample Name | Lab Code | Date Collected | Date Received | Sample Amount | Final Volume | % Solids | Note |
|---|---|---|---|---|---|---|---|
| CRHE-188849-IDW-03212012 | J1201360-025 | 03/21/12 | 03/22/12 | 5.9300g | 5mL | 84 | |
| CRHE-188797-IDW-03212012 | J1201360-026 | 03/21/12 | 03/22/12 | 5.1200g | 5mL | 88 | |
| CRHE-188842-IDW-03212012 | J1201360-027 | 03/21/12 | 03/22/12 | 5.9600g | 5mL | 83 | |
| CRHE-188838-IDW-03212012 | J1201360-028 | 03/21/12 | 03/22/12 | 5.3500g | 5mL | 81 | |
| Method Blank | JWG1200305-2 | NA | NA | 5.00g | 5ml | 100 | |
| Lab Control Sample | JWG1200305-1 | NA | NA | 5.00g | 5ml | 100 | |

**Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis**

Columbia Analytical Services™

# Validation Package

9143 Philips Highway, Suite 200
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www.caslab.com

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Validation Package



p:\Stealth\Crystal.rpt\DividerB.rpt

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Validation Package

## QC Reports



p:\Stealth\Crystal.rpt\DividerC.rpt

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360

## Surrogate Recovery Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 | Sur2 | Sur3 | Sur4 |
|---|---|---|---|---|---|
| CRHE-MW0032-045.0-03192012 | J1201360-001 | 97 | 109 | 99 | 98 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | 98 | 106 | 98 | 101 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | 100 | 107 | 99 | 96 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | 97 | 106 | 100 | 98 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | 96 | 107 | 100 | 99 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | 99 | 113 | 99 | 97 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | 100 | 109 | 100 | 100 |
| EB01-03192012 | J1201360-008 | 97 | 106 | 99 | 101 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | 101 | 107 | 99 | 100 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | 99 | 109 | 101 | 98 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | 98 | 105 | 97 | 102 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | 96 | 109 | 96 | 103 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | 99 | 109 | 99 | 99 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | 99 | 108 | 98 | 96 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | 95 | 110 | 98 | 98 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | 97 | 107 | 99 | 98 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | 97 | 108 | 99 | 100 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | 94 | 107 | 97 | 99 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | 98 | 112 | 99 | 100 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | 99 | 108 | 95 | 96 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | 99 | 107 | 99 | 98 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | 96 | 107 | 98 | 96 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | 98 | 107 | 99 | 98 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | 97 | 111 | 92 | 98 |
| Trip Blank | J1201360-029 | 94 | 111 | 97 | 96 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | 97 | 111 | 97 | 100 |
| Method Blank | JWG1200321-2 | 98 | 105 | 100 | 95 |
| Method Blank | JWG1200325-2 | 99 | 105 | 99 | 98 |
| Method Blank | JWG1200333-4 | 96 | 103 | 97 | 96 |
| Lab Control Sample | JWG1200321-1 | 99 | 107 | 99 | 100 |
| Lab Control Sample | JWG1200325-1 | 94 | 104 | 98 | 97 |
| Lab Control Sample | JWG1200333-3 | 95 | 109 | 97 | 96 |

**Surrogate Recovery Control Limits (%)**

| | | |
|---|---|---|
| Sur1 = | 1,2-Dichloroethane-d4 | 72-121 |
| Sur2 = | 4-Bromofluorobenzene | 86-113 |
| Sur3 = | Dibromofluoromethane | 86-112 |
| Sur4 = | Toluene-d8 | 88-115 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360

## Surrogate Recovery Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 | Sur2 | Sur3 | Sur4 |
|---|---|---|---|---|---|
| CRHE-188849-IDW-03212012 | J1201360-025 | 94 | 99 | 96 | 101 |
| CRHE-188797-IDW-03212012 | J1201360-026 | 92 | 102 | 96 | 105 |
| CRHE-188842-IDW-03212012 | J1201360-027 | 90 | 103 | 91 | 105 |
| CRHE-188838-IDW-03212012 | J1201360-028 | 94 | 116 | 99 | 108 |
| Method Blank | JWG1200305-2 | 94 | 95 | 96 | 102 |
| Lab Control Sample | JWG1200305-1 | 94 | 97 | 98 | 101 |

**Surrogate Recovery Control Limits (%)**

| | |
|---|---|
| Sur1 = 1,2-Dichloroethane-d4 | 80-120 |
| Sur2 = 4-Bromofluorobenzene | 64-135 |
| Sur3 = Dibromofluoromethane | 74-125 |
| Sur4 = Toluene-d8 | 46-156 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 09:45

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS52\DATA\MS52-120322\0322-02.D
**Instrument ID:** MS52
**Analysis Method:** 8260B

**Lab Code:** JWG1200306-2
**Analysis Lot:** JWG1200306

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 53,457 | 11.60 | 47,863 | 9.16 | 122,997 | 6.17 |
| | **Upper Limit ==>** | 106,914 | 12.10 | 95,726 | 9.66 | 245,994 | 6.67 |
| | **Lower Limit ==>** | 26,729 | 11.10 | 23,932 | 8.66 | 61,499 | 5.67 |
| | **ICAL Result ==>** | 48,766 | 11.60 | 43,592 | 9.16 | 110,750 | 6.17 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200305-1 | 52,658 | 11.60 | 48,614 | 9.16 | 125,564 | 6.17 |
| Method Blank | JWG1200305-2 | 50,853 | 11.59 | 47,975 | 9.16 | 125,218 | 6.17 |
| CRHE-188849-IDW-03212012 | J1201360-025 | 45,168 | 11.60 | 46,360 | 9.16 | 121,432 | 6.17 |
| CRHE-188797-IDW-03212012 | J1201360-026 | 40,555 | 11.60 | 43,358 | 9.16 | 116,772 | 6.17 |
| CRHE-188842-IDW-03212012 | J1201360-027 | 40,415 | 11.60 | 42,767 | 9.17 | 117,887 | 6.17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | 35,955 | 11.60 | 42,626 | 9.16 | 118,248 | 6.18 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 11:12

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120330\0330-02.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200322-2
**Analysis Lot:** JWG1200322

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 328,039 | 11.12 | 413,475 | 8.80 | 1,184,883 | 5.51 |
| | **Upper Limit ==>** | 656,078 | 11.62 | 826,950 | 9.30 | 2,369,766 | 6.01 |
| | **Lower Limit ==>** | 164,020 | 10.62 | 206,738 | 8.30 | 592,442 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200321-1 | 318,654 | 11.12 | 397,222 | 8.80 | 1,171,291 | 5.51 |
| Method Blank | JWG1200321-2 | 337,907 | 11.13 | 403,441 | 8.80 | 1,145,808 | 5.51 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | 315,754 | 11.13 | 399,126 | 8.80 | 1,148,047 | 5.51 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | 323,166 | 11.13 | 392,864 | 8.80 | 1,177,874 | 5.51 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | 322,551 | 11.13 | 384,128 | 8.80 | 1,104,427 | 5.52 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | 331,420 | 11.13 | 396,550 | 8.80 | 1,156,645 | 5.51 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | 322,585 | 11.13 | 393,897 | 8.80 | 1,164,407 | 5.51 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | 319,516 | 11.13 | 401,946 | 8.80 | 1,172,242 | 5.51 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | 327,430 | 11.13 | 405,589 | 8.80 | 1,173,486 | 5.51 |
| EB01-03192012 | J1201360-008 | 330,521 | 11.13 | 389,632 | 8.80 | 1,146,764 | 5.51 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | 332,367 | 11.13 | 389,217 | 8.80 | 1,147,109 | 5.52 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | 321,006 | 11.13 | 397,996 | 8.80 | 1,125,602 | 5.52 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | 316,893 | 11.13 | 382,659 | 8.80 | 1,133,176 | 5.51 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | 324,878 | 11.13 | 388,136 | 8.80 | 1,169,094 | 5.52 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | 320,327 | 11.13 | 393,071 | 8.80 | 1,149,686 | 5.51 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | 330,706 | 11.12 | 409,470 | 8.80 | 1,174,443 | 5.52 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | 319,532 | 11.13 | 409,711 | 8.80 | 1,202,891 | 5.51 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | 322,399 | 11.13 | 400,508 | 8.80 | 1,144,939 | 5.51 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | 326,036 | 11.12 | 400,878 | 8.80 | 1,158,793 | 5.51 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 09:21

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120402\0402-02.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200326-2
**Analysis Lot:** JWG1200326

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 338,282 | 11.13 | 419,066 | 8.80 | 1,182,437 | 5.51 |
| | **Upper Limit ==>** | 676,564 | 11.63 | 838,132 | 9.30 | 2,364,874 | 6.01 |
| | **Lower Limit ==>** | 169,141 | 10.63 | 209,533 | 8.30 | 591,219 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200325-1 | 322,206 | 11.13 | 386,918 | 8.80 | 1,106,267 | 5.51 |
| Method Blank | JWG1200325-2 | 322,051 | 11.13 | 383,241 | 8.80 | 1,093,788 | 5.51 |
| Trip Blank | J1201360-029 | 314,454 | 11.13 | 402,969 | 8.80 | 1,172,678 | 5.51 |
| CRHE-MW0032-045.0-03192012D | J1201360-001 | 317,812 | 11.13 | 379,377 | 8.80 | 1,119,988 | 5.51 |
| CRHE-MW0031-045.0-03192012D | J1201360-004 | 322,770 | 11.13 | 395,883 | 8.80 | 1,159,224 | 5.51 |
| CRHE-IW0020I-045.0-03192012D | J1201360-005 | 319,432 | 11.13 | 390,271 | 8.80 | 1,120,582 | 5.51 |
| CRHE-MW0039-030.0-03192012D | J1201360-006 | 325,142 | 11.13 | 389,370 | 8.80 | 1,108,624 | 5.51 |
| CRHE-MW0034-038.5-03202012D | J1201360-010 | 327,008 | 11.13 | 395,803 | 8.80 | 1,096,028 | 5.51 |
| CRHE-IW0019I-040.0-03202012D | J1201360-011 | 319,532 | 11.13 | 392,191 | 8.80 | 1,116,694 | 5.51 |
| CRHE-MW0035-045.0-03202012D | J1201360-014 | 317,749 | 11.13 | 383,466 | 8.80 | 1,119,903 | 5.52 |
| CRHE-MW0028-040.0-03202012D | J1201360-015 | 320,292 | 11.13 | 385,204 | 8.80 | 1,151,728 | 5.51 |
| CRHE-IW0017I-030.0-03202012D | J1201360-017 | 313,536 | 11.13 | 395,840 | 8.80 | 1,123,689 | 5.51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | 316,218 | 11.13 | 402,165 | 8.80 | 1,116,092 | 5.52 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | 332,100 | 11.13 | 405,929 | 8.80 | 1,179,725 | 5.52 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | 326,026 | 11.13 | 414,330 | 8.80 | 1,170,714 | 5.52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | 314,676 | 11.13 | 399,293 | 8.80 | 1,157,084 | 5.52 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | 324,993 | 11.13 | 393,830 | 8.80 | 1,133,953 | 5.52 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | 318,409 | 11.13 | 384,678 | 8.80 | 1,105,383 | 5.52 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 11:53

## Internal Standard Area and RT Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120403\0403-03.D
**Instrument ID:** MS53
**Analysis Method:** 8260B

**Lab Code:** JWG1200334-2
**Analysis Lot:** JWG1200334

| | | 1,4-Dichlorobenzene-d4 | | Chlorobenzene-d5 | | Fluorobenzene | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| | **Results ==>** | 317,277 | 11.13 | 383,361 | 8.80 | 1,079,939 | 5.51 |
| | **Upper Limit ==>** | 634,554 | 11.63 | 766,722 | 9.30 | 2,159,878 | 6.01 |
| | **Lower Limit ==>** | 158,639 | 10.63 | 191,681 | 8.30 | 539,970 | 5.01 |
| | **ICAL Result ==>** | 361,728 | 11.12 | 426,985 | 8.79 | 1,305,616 | 5.51 |
| *Associated Analyses* | | | | | | | |
| Lab Control Sample | JWG1200333-3 | 309,433 | 11.13 | 402,331 | 8.80 | 1,130,474 | 5.51 |
| Method Blank | JWG1200333-4 | 316,138 | 11.13 | 389,420 | 8.80 | 1,095,457 | 5.51 |
| CRHE-IW0014I-040.0-03212012RI | J1201360-018 | 316,659 | 11.13 | 370,802 | 8.80 | 1,091,211 | 5.51 |
| CRHE-MW0022-065.0-03212012R | J1201360-021 | 315,576 | 11.13 | 390,002 | 8.80 | 1,108,138 | 5.51 |
| CRHE-MW0029-045.0-03212012D | J1201360-019 | 301,400 | 11.13 | 375,955 | 8.80 | 1,085,571 | 5.51 |
| CRHE-MW0026-035.0-03212012D | J1201360-020 | 304,045 | 11.12 | 375,196 | 8.80 | 1,067,834 | 5.51 |
| CRHE-MW0027-045.0-03212012D | J1201360-022 | 304,830 | 11.12 | 381,443 | 8.80 | 1,056,074 | 5.51 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | 307,096 | 11.13 | 380,864 | 8.80 | 1,120,196 | 5.51 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | 305,472 | 11.13 | 384,814 | 8.80 | 1,106,582 | 5.51 |
| CRHE-MW0025-030.0-03212012D | J1201360-024 | 313,276 | 11.13 | 402,002 | 8.80 | 1,159,827 | 5.52 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200321

| | Lab Control Sample JWG1200321-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| 1,1,1,2-Tetrachloroethane | 19.8 | 20.0 | 99 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 19.6 | 20.0 | 98 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 20.3 | 20.0 | 102 | 66-135 |
| 1,1,2-Trichloroethane | 19.6 | 20.0 | 98 | 75-122 |
| 1,1-Dichloroethane | 20.5 | 20.0 | 103 | 79-117 |
| 1,1-Dichloroethene | 23.0 | 20.0 | 115 | 72-128 |
| 1,2,3-Trichlorobenzene | 20.7 | 20.0 | 104 | 62-136 |
| 1,2,4-Trichlorobenzene | 19.2 | 20.0 | 96 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.5 | 20.0 | 82 | 60-122 |
| 1,2-Dibromoethane (EDB) | 18.7 | 20.0 | 93 | 76-118 |
| 1,2-Dichlorobenzene | 20.5 | 20.0 | 103 | 81-115 |
| 1,2-Dichloroethane (EDC) | 19.9 | 20.0 | 100 | 70-117 |
| 1,2-Dichloropropane | 21.6 | 20.0 | 108 | 79-117 |
| 1,3-Dichlorobenzene | 21.5 | 20.0 | 107 | 82-116 |
| 1,4-Dichlorobenzene | 20.9 | 20.0 | 105 | 82-115 |
| 2-Butanone (MEK) | 102 | 100 | 102 | 62-138 |
| 2-Hexanone | 93.2 | 100 | 93 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 96.1 | 100 | 96 | 77-120 |
| Acetone | 88.3 | 100 | 88 | 42-161 |
| Benzene | 21.4 | 20.0 | 107 | 80-117 |
| Bromochloromethane | 19.6 | 20.0 | 98 | 78-118 |
| Bromodichloromethane | 20.2 | 20.0 | 101 | 75-118 |
| Bromoform | 19.2 | 20.0 | 96 | 63-121 |
| Bromomethane | 19.1 | 20.0 | 95 | 31-153 |
| Carbon Disulfide | 119 | 100 | 119 | 72-128 |
| Carbon Tetrachloride | 18.3 | 20.0 | 91 | 67-124 |
| Chlorobenzene | 20.7 | 20.0 | 103 | 83-118 |
| Chloroethane | 21.5 | 20.0 | 107 | 68-132 |
| Chloroform | 19.6 | 20.0 | 98 | 77-116 |
| Chloromethane | 24.8 | 20.0 | 124 | 60-128 |
| cis-1,2-Dichloroethene | 21.5 | 20.0 | 108 | 78-117 |
| cis-1,3-Dichloropropene | 20.9 | 20.0 | 105 | 80-119 |
| Cyclohexane | 20.3 | 20.0 | 102 | 75-124 |
| Dibromochloromethane | 19.4 | 20.0 | 97 | 74-121 |
| Dichlorodifluoromethane | 22.1 | 20.0 | 111 | 49-132 |
| Ethylbenzene | 21.8 | 20.0 | 109 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200321

| Analyte Name | Lab Control Sample JWG1200321-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| Isopropylbenzene | 24.0 | 20.0 | 120 * | 78-119 |
| m,p-Xylenes | 44.3 | 40.0 | 111 | 79-122 |
| Methyl Acetate | 19.4 | 20.0 | 97 | 50-137 |
| Methyl tert-Butyl Ether | 20.0 | 20.0 | 100 | 73-118 |
| Methylene Chloride | 20.5 | 20.0 | 103 | 75-123 |
| o-Xylene | 21.3 | 20.0 | 106 | 80-119 |
| Styrene | 20.9 | 20.0 | 105 | 80-121 |
| Tetrachloroethene (PCE) | 20.2 | 20.0 | 101 | 75-126 |
| Toluene | 21.1 | 20.0 | 105 | 52-152 |
| trans-1,2-Dichloroethene | 20.9 | 20.0 | 104 | 75-121 |
| trans-1,3-Dichloropropene | 19.7 | 20.0 | 98 | 76-118 |
| Trichloroethene (TCE) | 20.6 | 20.0 | 103 | 78-122 |
| Trichlorofluoromethane | 20.3 | 20.0 | 101 | 58-134 |
| Trichlorotrifluoroethane | 21.4 | 20.0 | 107 | 77-128 |
| Vinyl Chloride | 21.4 | 20.0 | 107 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200325

| | Lab Control Sample JWG1200325-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| 1,1,1,2-Tetrachloroethane | 19.4 | 20.0 | 97 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 20.2 | 20.0 | 101 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 21.1 | 20.0 | 106 | 66-135 |
| 1,1,2-Trichloroethane | 19.6 | 20.0 | 98 | 75-122 |
| 1,1-Dichloroethane | 21.2 | 20.0 | 106 | 79-117 |
| 1,1-Dichloroethene | 23.6 | 20.0 | 118 | 72-128 |
| 1,2,3-Trichlorobenzene | 19.5 | 20.0 | 98 | 62-136 |
| 1,2,4-Trichlorobenzene | 18.7 | 20.0 | 93 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.7 | 20.0 | 83 | 60-122 |
| 1,2-Dibromoethane (EDB) | 19.1 | 20.0 | 96 | 76-118 |
| 1,2-Dichlorobenzene | 20.3 | 20.0 | 101 | 81-115 |
| 1,2-Dichloroethane (EDC) | 19.8 | 20.0 | 99 | 70-117 |
| 1,2-Dichloropropane | 21.5 | 20.0 | 108 | 79-117 |
| 1,3-Dichlorobenzene | 21.0 | 20.0 | 105 | 82-116 |
| 1,4-Dichlorobenzene | 21.0 | 20.0 | 105 | 82-115 |
| 2-Butanone (MEK) | 99.8 | 100 | 100 | 62-138 |
| 2-Hexanone | 94.3 | 100 | 94 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 95.0 | 100 | 95 | 77-120 |
| Acetone | 86.2 | 100 | 86 | 42-161 |
| Benzene | 21.4 | 20.0 | 107 | 80-117 |
| Bromochloromethane | 19.4 | 20.0 | 97 | 78-118 |
| Bromodichloromethane | 20.9 | 20.0 | 104 | 75-118 |
| Bromoform | 20.2 | 20.0 | 101 | 63-121 |
| Bromomethane | 19.4 | 20.0 | 97 | 31-153 |
| Carbon Disulfide | 121 | 100 | 121 | 72-128 |
| Carbon Tetrachloride | 19.3 | 20.0 | 96 | 67-124 |
| Chlorobenzene | 20.3 | 20.0 | 101 | 83-118 |
| Chloroethane | 22.3 | 20.0 | 112 | 68-132 |
| Chloroform | 20.5 | 20.0 | 102 | 77-116 |
| Chloromethane | 25.2 | 20.0 | 126 | 60-128 |
| cis-1,2-Dichloroethene | 21.7 | 20.0 | 108 | 78-117 |
| cis-1,3-Dichloropropene | 20.7 | 20.0 | 104 | 80-119 |
| Cyclohexane | 20.8 | 20.0 | 104 | 75-124 |
| Dibromochloromethane | 19.5 | 20.0 | 97 | 74-121 |
| Dichlorodifluoromethane | 22.3 | 20.0 | 111 | 49-132 |
| Ethylbenzene | 21.1 | 20.0 | 105 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200325

| Analyte Name | Lab Control Sample JWG1200325-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| Isopropylbenzene | 23.8 | 20.0 | 119 | 78-119 |
| m,p-Xylenes | 44.3 | 40.0 | 111 | 79-122 |
| Methyl Acetate | 18.4 | 20.0 | 92 | 50-137 |
| Methyl tert-Butyl Ether | 20.8 | 20.0 | 104 | 73-118 |
| Methylene Chloride | 21.2 | 20.0 | 106 | 75-123 |
| o-Xylene | 21.4 | 20.0 | 107 | 80-119 |
| Styrene | 21.2 | 20.0 | 106 | 80-121 |
| Tetrachloroethene (PCE) | 20.2 | 20.0 | 101 | 75-126 |
| Toluene | 21.1 | 20.0 | 105 | 52-152 |
| trans-1,2-Dichloroethene | 21.2 | 20.0 | 106 | 75-121 |
| trans-1,3-Dichloropropene | 19.9 | 20.0 | 100 | 76-118 |
| Trichloroethene (TCE) | 20.8 | 20.0 | 104 | 78-122 |
| Trichlorofluoromethane | 21.2 | 20.0 | 106 | 58-134 |
| Trichlorotrifluoroethane | 22.4 | 20.0 | 112 | 77-128 |
| Vinyl Chloride | 22.0 | 20.0 | 110 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200333

| Analyte Name | Lab Control Sample JWG1200333-3 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.9 | 20.0 | 95 | 77-118 |
| 1,1,1-Trichloroethane (TCA) | 19.5 | 20.0 | 97 | 70-122 |
| 1,1,2,2-Tetrachloroethane | 19.6 | 20.0 | 98 | 66-135 |
| 1,1,2-Trichloroethane | 19.4 | 20.0 | 97 | 75-122 |
| 1,1-Dichloroethane | 20.4 | 20.0 | 102 | 79-117 |
| 1,1-Dichloroethene | 22.4 | 20.0 | 112 | 72-128 |
| 1,2,3-Trichlorobenzene | 19.2 | 20.0 | 96 | 62-136 |
| 1,2,4-Trichlorobenzene | 17.9 | 20.0 | 89 | 66-127 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 16.1 | 20.0 | 81 | 60-122 |
| 1,2-Dibromoethane (EDB) | 18.2 | 20.0 | 91 | 76-118 |
| 1,2-Dichlorobenzene | 19.6 | 20.0 | 98 | 81-115 |
| 1,2-Dichloroethane (EDC) | 20.0 | 20.0 | 100 | 70-117 |
| 1,2-Dichloropropane | 21.1 | 20.0 | 105 | 79-117 |
| 1,3-Dichlorobenzene | 20.9 | 20.0 | 105 | 82-116 |
| 1,4-Dichlorobenzene | 20.4 | 20.0 | 102 | 82-115 |
| 2-Butanone (MEK) | 98.5 | 100 | 99 | 62-138 |
| 2-Hexanone | 91.0 | 100 | 91 | 74-127 |
| 4-Methyl-2-pentanone (MIBK) | 92.1 | 100 | 92 | 77-120 |
| Acetone | 90.0 | 100 | 90 | 42-161 |
| Benzene | 20.5 | 20.0 | 102 | 80-117 |
| Bromochloromethane | 18.7 | 20.0 | 94 | 78-118 |
| Bromodichloromethane | 20.6 | 20.0 | 103 | 75-118 |
| Bromoform | 18.3 | 20.0 | 92 | 63-121 |
| Bromomethane | 17.8 | 20.0 | 89 | 31-153 |
| Carbon Disulfide | 114 | 100 | 114 | 72-128 |
| Carbon Tetrachloride | 17.7 | 20.0 | 88 | 67-124 |
| Chlorobenzene | 19.7 | 20.0 | 98 | 83-118 |
| Chloroethane | 19.9 | 20.0 | 100 | 68-132 |
| Chloroform | 19.7 | 20.0 | 98 | 77-116 |
| Chloromethane | 21.6 | 20.0 | 108 | 60-128 |
| cis-1,2-Dichloroethene | 20.9 | 20.0 | 104 | 78-117 |
| cis-1,3-Dichloropropene | 19.6 | 20.0 | 98 | 80-119 |
| Cyclohexane | 19.8 | 20.0 | 99 | 75-124 |
| Dibromochloromethane | 18.4 | 20.0 | 92 | 74-121 |
| Dichlorodifluoromethane | 19.8 | 20.0 | 99 | 49-132 |
| Ethylbenzene | 20.8 | 20.0 | 104 | 82-119 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low
**Extraction Lot:** JWG1200333

| | Lab Control Sample JWG1200333-3 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| Isopropylbenzene | 24.1 | 20.0 | 120 * | 78-119 |
| m,p-Xylenes | 41.0 | 40.0 | 102 | 79-122 |
| Methyl Acetate | 19.1 | 20.0 | 95 | 50-137 |
| Methyl tert-Butyl Ether | 19.8 | 20.0 | 99 | 73-118 |
| Methylene Chloride | 20.0 | 20.0 | 100 | 75-123 |
| o-Xylene | 20.2 | 20.0 | 101 | 80-119 |
| Styrene | 19.9 | 20.0 | 99 | 80-121 |
| Tetrachloroethene (PCE) | 18.9 | 20.0 | 94 | 75-126 |
| Toluene | 20.0 | 20.0 | 100 | 52-152 |
| trans-1,2-Dichloroethene | 20.1 | 20.0 | 100 | 75-121 |
| trans-1,3-Dichloropropene | 19.3 | 20.0 | 96 | 76-118 |
| Trichloroethene (TCE) | 20.3 | 20.0 | 101 | 78-122 |
| Trichlorofluoromethane | 18.9 | 20.0 | 95 | 58-134 |
| Trichlorotrifluoroethane | 20.0 | 20.0 | 100 | 77-128 |
| Vinyl Chloride | 19.6 | 20.0 | 98 | 69-138 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry
**Level:** Low
**Extraction Lot:** JWG1200305

| | Lab Control Sample JWG1200305-1 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| 1,1,1,2-Tetrachloroethane | 18.1 | 20.0 | 90 | 71-124 |
| 1,1,1-Trichloroethane (TCA) | 17.4 | 20.0 | 87 | 72-131 |
| 1,1,2,2-Tetrachloroethane | 17.4 | 20.0 | 87 | 51-136 |
| 1,1,2-Trichloroethane | 18.4 | 20.0 | 92 | 74-113 |
| 1,1-Dichloroethane | 18.3 | 20.0 | 92 | 74-124 |
| 1,1-Dichloroethene | 16.0 | 20.0 | 80 | 67-128 |
| 1,2,3-Trichlorobenzene | 18.9 | 20.0 | 94 | 64-129 |
| 1,2,4-Trichlorobenzene | 18.7 | 20.0 | 93 | 61-135 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 17.4 | 20.0 | 87 | 54-129 |
| 1,2-Dibromoethane (EDB) | 18.2 | 20.0 | 91 | 74-114 |
| 1,2-Dichlorobenzene | 18.6 | 20.0 | 93 | 74-111 |
| 1,2-Dichloroethane (EDC) | 17.7 | 20.0 | 88 | 74-120 |
| 1,2-Dichloropropane | 18.3 | 20.0 | 91 | 77-119 |
| 1,3-Dichlorobenzene | 18.5 | 20.0 | 93 | 74-114 |
| 1,4-Dichlorobenzene | 18.7 | 20.0 | 93 | 72-112 |
| 2-Butanone (MEK) | 87.5 | 100 | 87 | 55-136 |
| 2-Hexanone | 88.0 | 100 | 88 | 60-127 |
| 4-Methyl-2-pentanone (MIBK) | 90.1 | 100 | 90 | 64-122 |
| Acetone | 83.4 | 100 | 83 | 30-164 |
| Benzene | 18.2 | 20.0 | 91 | 76-123 |
| Bromochloromethane | 19.0 | 20.0 | 95 | 75-124 |
| Bromodichloromethane | 17.1 | 20.0 | 85 | 74-124 |
| Bromoform | 16.8 | 20.0 | 84 | 58-126 |
| Bromomethane | 18.5 | 20.0 | 92 | 25-175 |
| Carbon Disulfide | 110 | 100 | 110 | 62-134 |
| Carbon Tetrachloride | 16.0 | 20.0 | 80 | 68-134 |
| Chlorobenzene | 19.0 | 20.0 | 95 | 74-116 |
| Chloroethane | 17.5 | 20.0 | 88 | 64-131 |
| Chloroform | 17.1 | 20.0 | 86 | 75-120 |
| Chloromethane | 16.6 | 20.0 | 83 | 59-138 |
| cis-1,2-Dichloroethene | 18.4 | 20.0 | 92 | 74-122 |
| cis-1,3-Dichloropropene | 18.5 | 20.0 | 93 | 75-115 |
| Cyclohexane | 19.3 | 20.0 | 96 | 70-127 |
| Dibromochloromethane | 16.7 | 20.0 | 83 | 67-123 |
| Dichlorodifluoromethane | 17.1 | 20.0 | 86 | 51-150 |
| Ethylbenzene | 18.9 | 20.0 | 95 | 71-122 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012

## Lab Control Spike Summary
## Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry
**Level:** Low
**Extraction Lot:** JWG1200305

| Analyte Name | Lab Control Sample JWG1200305-1 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| Isopropylbenzene | 20.9 | 20.0 | 105 | 67-124 |
| m,p-Xylenes | 38.0 | 40.0 | 95 | 71-122 |
| Methyl Acetate | 16.6 | 20.0 | 83 | 25-160 |
| Methyl tert-Butyl Ether | 18.1 | 20.0 | 90 | 72-121 |
| Methylene Chloride | 16.6 | 20.0 | 83 | 60-140 |
| o-Xylene | 18.3 | 20.0 | 92 | 71-120 |
| Styrene | 19.1 | 20.0 | 95 | 70-122 |
| Tetrachloroethene (PCE) | 18.9 | 20.0 | 95 | 69-124 |
| Toluene | 18.7 | 20.0 | 93 | 72-118 |
| trans-1,2-Dichloroethene | 17.6 | 20.0 | 88 | 71-127 |
| trans-1,3-Dichloropropene | 17.6 | 20.0 | 88 | 73-115 |
| Trichloroethene (TCE) | 18.4 | 20.0 | 92 | 70-129 |
| Trichlorofluoromethane | 17.4 | 20.0 | 87 | 67-129 |
| Trichlorotrifluoroethane | 17.7 | 20.0 | 89 | 66-131 |
| Vinyl Chloride | 18.9 | 20.0 | 95 | 62-137 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 03/30/2012
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 13:10

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120330\0330-06.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200321

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200321-1 | J:\MS53\DATA\MS53-120330\0330-03.D | 03/30/12 | 11:42 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/12 | 13:40 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/12 | 14:10 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/12 | 14:40 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/12 | 15:09 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/12 | 15:39 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/12 | 16:09 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/12 | 16:39 |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/12 | 17:09 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/12 | 17:39 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/12 | 18:09 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/12 | 18:39 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/12 | 19:09 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/12 | 19:39 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/12 | 20:09 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/12 | 20:39 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/12 | 21:08 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/12 | 21:38 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 11:20

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120402\0402-06.D

**Level:** Low
**Extraction Lot:** JWG1200325

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200325-1 | J:\MS53\DATA\MS53-120402\0402-03.D | 04/02/12 | 09:51 |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/12 | 11:50 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/12 | 12:20 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/12 | 12:49 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/12 | 13:20 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/12 | 13:50 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/12 | 14:20 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/12 | 14:50 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/12 | 15:19 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/12 | 15:49 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/12 | 16:19 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/12 | 16:49 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/12 | 17:19 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/12 | 17:49 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/12 | 18:19 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/12 | 18:49 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/12 | 19:19 |

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Extracted:** | 04/03/2012 |
| **Sample Matrix:** | Water | **Date Analyzed:** | 04/03/2012 |
| | | **Time Analyzed:** | 13:53 |

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Instrument ID:** | MS53 |
| **Lab Code:** | JWG1200333-4 | **File ID:** | J:\MS53\DATA\MS53-120403\0403-07.D |
| **Extraction Method:** | EPA 5030B | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | JWG1200333 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200333-3 | J:\MS53\DATA\MS53-120403\0403-04.D | 04/03/12 | 12:25 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/12 | 14:23 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/12 | 14:52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/12 | 15:22 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/12 | 15:51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/12 | 16:21 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/12 | 16:50 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/12 | 17:20 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/12 | 18:18 |

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Extracted:** | 03/22/2012 |
| **Sample Matrix:** | Soil | **Date Analyzed:** | 03/22/2012 |
| | | **Time Analyzed:** | 11:28 |

## Method Blank Summary
## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Instrument ID:** | MS52 |
| **Lab Code:** | JWG1200305-2 | **File ID:** | J:\MS52\DATA\MS52-120322\0322-05.D |
| **Extraction Method:** | EPA 5035 | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | JWG1200305 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | JWG1200305-1 | J:\MS52\DATA\MS52-120322\0322-03.D | 03/22/12 | 10:14 |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/12 | 18:20 |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/12 | 18:48 |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/12 | 19:17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/12 | 19:45 |

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Extracted:** | 03/30/2012 |
| **Sample Matrix:** | Water | **Date Analyzed:** | 03/30/2012 |
| | | **Time Analyzed:** | 11:42 |

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | Lab Control Sample | **Instrument ID:** | MS53 |
| **Lab Code:** | JWG1200321-1 | **File ID:** | J:\MS53\DATA\MS53-120330\0330-03.D |
| **Extraction Method:** | EPA 5030B | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | JWG1200321 |

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200321-2 | J:\MS53\DATA\MS53-120330\0330-06.D | 03/30/12 | 13:10 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/12 | 13:40 |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/12 | 14:10 |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/12 | 14:40 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/12 | 15:09 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/12 | 15:39 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/12 | 16:09 |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/12 | 16:39 |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/12 | 17:09 |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/12 | 17:39 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/12 | 18:09 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/12 | 18:39 |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/12 | 19:09 |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/12 | 19:39 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/12 | 20:09 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/12 | 20:39 |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/12 | 21:08 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/12 | 21:38 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/02/2012
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 09:51

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200325-1

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120402\0402-03.D

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200325

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200325-2 | J:\MS53\DATA\MS53-120402\0402-06.D | 04/02/12 | 11:20 |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/12 | 11:50 |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/12 | 12:20 |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/12 | 12:49 |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/12 | 13:20 |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/12 | 13:50 |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/12 | 14:20 |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/12 | 14:50 |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/12 | 15:19 |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/12 | 15:49 |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/12 | 16:19 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/12 | 16:49 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/12 | 17:19 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/12 | 17:49 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/12 | 18:19 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/12 | 18:49 |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/12 | 19:19 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Extracted:** 04/03/2012
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 12:25

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200333-3

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Instrument ID:** MS53
**File ID:** J:\MS53\DATA\MS53-120403\0403-04.D

**Level:** Low
**Extraction Lot:** JWG1200333

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200333-4 | J:\MS53\DATA\MS53-120403\0403-07.D | 04/03/12 | 13:53 |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/12 | 14:23 |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/12 | 14:52 |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/12 | 15:22 |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/12 | 15:51 |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/12 | 16:21 |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/12 | 16:50 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/12 | 17:20 |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/12 | 18:18 |

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Extracted:** 03/22/2012
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 10:14

## Lab Control Sample Summary
## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200305-1

**Instrument ID:** MS52
**File ID:** J:\MS52\DATA\MS52-120322\0322-03.D

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low
**Extraction Lot:** JWG1200305

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | JWG1200305-2 | J:\MS52\DATA\MS52-120322\0322-05.D | 03/22/12 | 11:28 |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/12 | 18:20 |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/12 | 18:48 |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/12 | 19:17 |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/12 | 19:45 |

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Validation Package

## Raw Data



p:\Stealth\Crystal.rpt\DividerD.rpt

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0032-045.0-03192012
**Lab Code:** J1201360-001

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.54** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | **0.57** | I | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.62** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **6.6** | | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **13** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | **0.31** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0032-045.0-03192012
**Lab Code:** J1201360-001

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.30** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.71** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **8.2** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **83** | | 20 | 4.4 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0030-010.0-03192012
**Lab Code:** J1201360-002

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | **5.9** | I | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0030-010.0-03192012
**Lab Code:** J1201360-002

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 101 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0023-065.0-03192012
**Lab Code:** J1201360-003

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **0.70** | I | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.46** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0023-065.0-03192012
**Lab Code:** J1201360-003

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.21** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0031-045.0-03192012
**Lab Code:** J1201360-004

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **59** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0031-045.0-03192012
**Lab Code:** J1201360-004

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **6.0** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | **1.5** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **200** | | 10 | 2.2 | 10 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0020I-045.0-03192012
**Lab Code:** J1201360-005

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.25** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.49** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **33** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **0.92** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **79** | | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0020I-045.0-03192012
**Lab Code:** J1201360-005

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.27** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **130** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0039-030.0-03192012
**Lab Code:** J1201360-006

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.49** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **0.96** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0039-030.0-03192012
**Lab Code:** J1201360-006

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.50** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.43** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **92** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 113 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 97 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0038-010.0-03192012
**Lab Code:** J1201360-007

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0038-010.0-03192012
**Lab Code:** J1201360-007

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** EB01-03192012
**Lab Code:** J1201360-008

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** EB01-03192012
**Lab Code:** J1201360-008

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 106 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 101 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0015I-040.0-03192012
**Lab Code:** J1201360-009

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **2.0** | | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.21** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **76** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0015I-040.0-03192012
**Lab Code:** J1201360-009

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **27** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0034-038.5-03202012
**Lab Code:** J1201360-010

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.36** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **3.4** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **12** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **1.2** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **140** | | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0034-038.5-03202012
**Lab Code:** J1201360-010

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **150** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 101 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0019I-040.0-03202012
**Lab Code:** J1201360-011

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | **4.1** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.48** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **1.3** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **1000** | | 20 | 7.2 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **1.3** | I | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0019I-040.0-03202012
**Lab Code:** J1201360-011

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.25** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **18** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **530** | | 20 | 4.4 | 20 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 102 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0033-048.5-03202012
**Lab Code:** J1201360-012

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.92** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | **9.9** | I | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.42** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **99** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **3.0** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0033-048.5-03202012
**Lab Code:** J1201360-012

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **1.4** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | **0.52** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **33** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 96 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 103 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0021I-045.0-03202012
**Lab Code:** J1201360-013

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.98** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0021I-045.0-03202012
**Lab Code:** J1201360-013

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0035-045.0-03202012
**Lab Code:** J1201360-014

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **0.26** | I | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.55** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0035-045.0-03202012
**Lab Code:** J1201360-014

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.23** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.44** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **130** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0028-040.0-03202012
**Lab Code:** J1201360-015

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.59** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **0.31** | I | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **4.2** | | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **3.5** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0028-040.0-03202012
**Lab Code:** J1201360-015

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **0.55** | I | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **4.1** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **180** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 95 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 110 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0037-030.0-03202012
**Lab Code:** J1201360-016

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.25** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **1.2** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.44** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **8.0** | I | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

| | | | |
|---|---|---|---|
| **Client:** | GeoSyntec Consultants | **Service Request:** | J1201360 |
| **Project:** | KSC CRHE/FR1681 | **Date Collected:** | 03/20/2012 |
| **Sample Matrix:** | Water | **Date Received:** | 03/22/2012 |

## Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | CRHE-MW0037-030.0-03202012 | **Units:** | ug/L |
| **Lab Code:** | J1201360-016 | **Basis:** | NA |
| **Extraction Method:** | EPA 5030B | **Level:** | Low |
| **Analysis Method:** | 8260B | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **0.20** | I | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **19** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0017I-030.0-03202012
**Lab Code:** J1201360-017

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **0.32** | I | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **0.52** | I | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0017I-030.0-03202012
**Lab Code:** J1201360-017

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **0.27** | I | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **90** | | 5.0 | 1.1 | 5 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0014I-040.0-03212012
**Lab Code:** J1201360-018

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | **4.0** | I | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-IW0014I-040.0-03212012
**Lab Code:** J1201360-018

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | **3.6** | | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 99 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0029-045.0-03212012
**Lab Code:** J1201360-019

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **1.4** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | **1.4** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **420** | | 10 | 3.6 | 10 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0029-045.0-03212012
**Lab Code:** J1201360-019

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **13** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **140** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **100** | | 10 | 2.2 | 10 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 112 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0026-035.0-03212012
**Lab Code:** J1201360-020

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | **3.5** | | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **9.1** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | **6.4** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | **0.41** | I | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **3600** | | 100 | 36 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0026-035.0-03212012
**Lab Code:** J1201360-020

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | **0.22** | I | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | **0.36** | I | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **34** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **1000** | | 100 | 16 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **2000** | | 100 | 22 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 108 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 95 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0022-065.0-03212012
**Lab Code:** J1201360-021

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | **0.51** | I | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | **1.5** | | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0022-065.0-03212012
**Lab Code:** J1201360-021

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | **0.22** | I | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0027-045.0-03212012
**Lab Code:** J1201360-022

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | **0.96** | I | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **2.7** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **790** | | 100 | 36 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0027-045.0-03212012
**Lab Code:** J1201360-022

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | **0.22** | I | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **14** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **1.3** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **1700** | | 100 | 22 | 100 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0024-010.0-03212012
**Lab Code:** J1201360-023

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | 11 | | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0024-010.0-03212012
**Lab Code:** J1201360-023

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **0.74** | I | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **13** | | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0025-030.0-03212012
**Lab Code:** J1201360-024

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | **2.2** | | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | **15** | | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | **9700** | | 200 | 72 | 200 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-MW0025-030.0-03212012
**Lab Code:** J1201360-024

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | **0.41** | I | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | **75** | | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | **0.60** | I | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | **7600** | | 200 | 44 | 200 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 92 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** Trip Blank
**Lab Code:** J1201360-029

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/19/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** Trip Blank
**Lab Code:** J1201360-029

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CHRE-MW0036-010.0-03202012
**Lab Code:** J1201360-030

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** 03/20/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CHRE-MW0036-010.0-03202012
**Lab Code:** J1201360-030

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 111 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200321-2

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 100 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 95 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200325-2

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 105 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 98 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200333-4

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | ND | U | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | ND | U | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | ND | U | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | ND | U | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | ND | U | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | ND | U | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | ND | U | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | ND | U | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | ND | U | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | ND | U | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | ND | U | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | ND | U | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | ND | U | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | ND | U | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | ND | U | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | ND | U | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | ND | U | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | ND | U | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200333-4

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | ND | UJ | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | J(3) |
| m,p-Xylenes | ND | U | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | ND | U | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | ND | U | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | ND | U | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | ND | U | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | ND | U | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | ND | U | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | ND | U | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | ND | U | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | ND | U | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | ND | U | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | ND | U | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | ND | U | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 103 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200321-1

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | **19.8** | | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,1-Trichloroethane (TCA) | **19.6** | | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2,2-Tetrachloroethane | **20.3** | | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1,2-Trichloroethane | **19.6** | | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethane | **20.5** | | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,1-Dichloroethene | **23.0** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,3-Trichlorobenzene | **20.7** | | 10 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2,4-Trichlorobenzene | **19.2** | | 10 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromo-3-chloropropane (DBCP | **16.5** | | 5.0 | 2.3 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dibromoethane (EDB) | **18.7** | | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichlorobenzene | **20.5** | | 1.0 | 0.50 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloroethane (EDC) | **19.9** | | 1.0 | 0.18 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,2-Dichloropropane | **21.6** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,3-Dichlorobenzene | **21.5** | | 1.0 | 0.13 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 1,4-Dichlorobenzene | **20.9** | | 1.0 | 0.10 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Butanone (MEK) | **102** | | 10 | 3.8 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 2-Hexanone | **93.2** | | 25 | 2.2 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| 4-Methyl-2-pentanone (MIBK) | **96.1** | | 25 | 0.65 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Acetone | **88.3** | | 50 | 5.6 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Benzene | **21.4** | | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromochloromethane | **19.6** | | 5.0 | 0.27 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromodichloromethane | **20.2** | | 1.0 | 0.17 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromoform | **19.2** | | 2.0 | 0.42 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Bromomethane | **19.1** | | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Disulfide | **119** | | 10 | 3.0 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Carbon Tetrachloride | **18.3** | | 1.0 | 0.34 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chlorobenzene | **20.7** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroethane | **21.5** | | 5.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloroform | **19.6** | | 1.0 | 0.35 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Chloromethane | **24.8** | | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,2-Dichloroethene | **21.5** | | 1.0 | 0.36 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| cis-1,3-Dichloropropene | **20.9** | | 1.0 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Cyclohexane | **20.3** | | 10 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dibromochloromethane | **19.4** | | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Dichlorodifluoromethane | **22.1** | | 20 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200321-1

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | **21.8** | | 1.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Isopropylbenzene | **24.0** | | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| m,p-Xylenes | **44.3** | | 2.0 | 0.41 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl Acetate | **19.4** | | 10 | 0.84 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methyl tert-Butyl Ether | **20.0** | | 2.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Methylene Chloride | **20.5** | | 5.0 | 0.21 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| o-Xylene | **21.3** | | 1.0 | 0.14 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Styrene | **20.9** | | 1.0 | 0.29 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Tetrachloroethene (PCE) | **20.2** | | 1.0 | 0.11 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Toluene | **21.1** | | 1.0 | 0.19 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,2-Dichloroethene | **20.9** | | 1.0 | 0.12 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| trans-1,3-Dichloropropene | **19.7** | | 1.0 | 0.23 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichloroethene (TCE) | **20.6** | | 1.0 | 0.16 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorofluoromethane | **20.3** | | 20 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Trichlorotrifluoroethane | **21.4** | | 20 | 0.20 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |
| Vinyl Chloride | **21.4** | | 1.0 | 0.22 | 1 | 03/30/12 | 03/30/12 | JWG1200321 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 72-121 | 03/30/12 | Acceptable |
| 4-Bromofluorobenzene | 107 | 86-113 | 03/30/12 | Acceptable |
| Dibromofluoromethane | 99 | 86-112 | 03/30/12 | Acceptable |
| Toluene-d8 | 100 | 88-115 | 03/30/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200325-1

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | **19.4** | | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,1-Trichloroethane (TCA) | **20.2** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2,2-Tetrachloroethane | **21.1** | | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1,2-Trichloroethane | **19.6** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethane | **21.2** | | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,1-Dichloroethene | **23.6** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,3-Trichlorobenzene | **19.5** | | 10 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2,4-Trichlorobenzene | **18.7** | | 10 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromo-3-chloropropane (DBCP | **16.7** | | 5.0 | 2.3 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dibromoethane (EDB) | **19.1** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichlorobenzene | **20.3** | | 1.0 | 0.50 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloroethane (EDC) | **19.8** | | 1.0 | 0.18 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,2-Dichloropropane | **21.5** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,3-Dichlorobenzene | **21.0** | | 1.0 | 0.13 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 1,4-Dichlorobenzene | **21.0** | | 1.0 | 0.10 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Butanone (MEK) | **99.8** | | 10 | 3.8 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 2-Hexanone | **94.3** | | 25 | 2.2 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| 4-Methyl-2-pentanone (MIBK) | **95.0** | | 25 | 0.65 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Acetone | **86.2** | | 50 | 5.6 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Benzene | **21.4** | | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromochloromethane | **19.4** | | 5.0 | 0.27 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromodichloromethane | **20.9** | | 1.0 | 0.17 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromoform | **20.2** | | 2.0 | 0.42 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Bromomethane | **19.4** | | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Disulfide | **121** | | 10 | 3.0 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Carbon Tetrachloride | **19.3** | | 1.0 | 0.34 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chlorobenzene | **20.3** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroethane | **22.3** | | 5.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloroform | **20.5** | | 1.0 | 0.35 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Chloromethane | **25.2** | | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,2-Dichloroethene | **21.7** | | 1.0 | 0.36 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| cis-1,3-Dichloropropene | **20.7** | | 1.0 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Cyclohexane | **20.8** | | 10 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dibromochloromethane | **19.5** | | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Dichlorodifluoromethane | **22.3** | | 20 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200325-1

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Units:** ug/L
**Basis:** NA

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | **21.1** | | 1.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Isopropylbenzene | **23.8** | | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| m,p-Xylenes | **44.3** | | 2.0 | 0.41 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl Acetate | **18.4** | | 10 | 0.84 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methyl tert-Butyl Ether | **20.8** | | 2.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Methylene Chloride | **21.2** | | 5.0 | 0.21 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| o-Xylene | **21.4** | | 1.0 | 0.14 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Styrene | **21.2** | | 1.0 | 0.29 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Tetrachloroethene (PCE) | **20.2** | | 1.0 | 0.11 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Toluene | **21.1** | | 1.0 | 0.19 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,2-Dichloroethene | **21.2** | | 1.0 | 0.12 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| trans-1,3-Dichloropropene | **19.9** | | 1.0 | 0.23 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichloroethene (TCE) | **20.8** | | 1.0 | 0.16 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorofluoromethane | **21.2** | | 20 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Trichlorotrifluoroethane | **22.4** | | 20 | 0.20 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |
| Vinyl Chloride | **22.0** | | 1.0 | 0.22 | 1 | 04/02/12 | 04/02/12 | JWG1200325 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 72-121 | 04/02/12 | Acceptable |
| 4-Bromofluorobenzene | 104 | 86-113 | 04/02/12 | Acceptable |
| Dibromofluoromethane | 98 | 86-112 | 04/02/12 | Acceptable |
| Toluene-d8 | 97 | 88-115 | 04/02/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200333-3

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | **18.9** | | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,1-Trichloroethane (TCA) | **19.5** | | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2,2-Tetrachloroethane | **19.6** | | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1,2-Trichloroethane | **19.4** | | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethane | **20.4** | | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,1-Dichloroethene | **22.4** | | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,3-Trichlorobenzene | **19.2** | | 10 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2,4-Trichlorobenzene | **17.9** | | 10 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromo-3-chloropropane (DBCP | **16.1** | | 5.0 | 2.3 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dibromoethane (EDB) | **18.2** | | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichlorobenzene | **19.6** | | 1.0 | 0.50 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloroethane (EDC) | **20.0** | | 1.0 | 0.18 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,2-Dichloropropane | **21.1** | | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,3-Dichlorobenzene | **20.9** | | 1.0 | 0.13 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 1,4-Dichlorobenzene | **20.4** | | 1.0 | 0.10 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Butanone (MEK) | **98.5** | | 10 | 3.8 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 2-Hexanone | **91.0** | | 25 | 2.2 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| 4-Methyl-2-pentanone (MIBK) | **92.1** | | 25 | 0.65 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Acetone | **90.0** | | 50 | 5.6 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Benzene | **20.5** | | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromochloromethane | **18.7** | | 5.0 | 0.27 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromodichloromethane | **20.6** | | 1.0 | 0.17 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromoform | **18.3** | | 2.0 | 0.42 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Bromomethane | **17.8** | | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Disulfide | **114** | | 10 | 3.0 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Carbon Tetrachloride | **17.7** | | 1.0 | 0.34 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chlorobenzene | **19.7** | | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroethane | **19.9** | | 5.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloroform | **19.7** | | 1.0 | 0.35 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Chloromethane | **21.6** | | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,2-Dichloroethene | **20.9** | | 1.0 | 0.36 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| cis-1,3-Dichloropropene | **19.6** | | 1.0 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Cyclohexane | **19.8** | | 10 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dibromochloromethane | **18.4** | | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Dichlorodifluoromethane | **19.8** | I | 20 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Water

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200333-3

**Units:** ug/L
**Basis:** NA

**Extraction Method:** EPA 5030B
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | **20.8** | | 1.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Isopropylbenzene | **24.1** | | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| m,p-Xylenes | **41.0** | | 2.0 | 0.41 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl Acetate | **19.1** | | 10 | 0.84 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methyl tert-Butyl Ether | **19.8** | | 2.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Methylene Chloride | **20.0** | | 5.0 | 0.21 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| o-Xylene | **20.2** | | 1.0 | 0.14 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Styrene | **19.9** | | 1.0 | 0.29 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Tetrachloroethene (PCE) | **18.9** | | 1.0 | 0.11 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Toluene | **20.0** | | 1.0 | 0.19 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,2-Dichloroethene | **20.1** | | 1.0 | 0.12 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| trans-1,3-Dichloropropene | **19.3** | | 1.0 | 0.23 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichloroethene (TCE) | **20.3** | | 1.0 | 0.16 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorofluoromethane | **18.9** | I | 20 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Trichlorotrifluoroethane | **20.0** | | 20 | 0.20 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |
| Vinyl Chloride | **19.6** | | 1.0 | 0.22 | 1 | 04/03/12 | 04/03/12 | JWG1200333 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 95 | 72-121 | 04/03/12 | Acceptable |
| 4-Bromofluorobenzene | 109 | 86-113 | 04/03/12 | Acceptable |
| Dibromofluoromethane | 97 | 86-112 | 04/03/12 | Acceptable |
| Toluene-d8 | 96 | 88-115 | 04/03/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188849-IDW-03212012
**Lab Code:** J1201360-025

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.1 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.1 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.1 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 11 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 11 | 0.40 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 26 | 0.91 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 11 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 11 | 0.59 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 130 | 3.6 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.1 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 11 | 0.42 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.1 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.1 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 11 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 110 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188849-IDW-03212012
**Lab Code:** J1201360-025

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 11 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.1 | 0.064 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 51 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.1 | 0.074 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.1 | 0.51 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.1 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 21 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 21 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.1 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 99 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 101 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188797-IDW-03212012
**Lab Code:** J1201360-026

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.6 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.6 | 0.33 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.6 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 12 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 12 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 12 | 0.44 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.6 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.6 | 0.067 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.6 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 28 | 1.0 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 12 | 0.62 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 12 | 0.65 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 140 | 3.9 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.6 | 0.077 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 12 | 0.46 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.6 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.6 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.6 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.6 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 12 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.6 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 120 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188797-IDW-03212012
**Lab Code:** J1201360-026

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.6 | 0.067 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.6 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 12 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 12 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.6 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | **2.0** | I | 56 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.6 | 0.082 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.6 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.6 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.6 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.6 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.6 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 23 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 23 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.6 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 92 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 102 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 105 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188842-IDW-03212012
**Lab Code:** J1201360-027

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.1 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.1 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.1 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 11 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 11 | 0.40 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.1 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 26 | 0.91 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 11 | 0.56 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 11 | 0.59 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | **22** | I | 130 | 3.6 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.1 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 11 | 0.42 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.1 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.1 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.1 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 11 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.1 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 110 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188842-IDW-03212012
**Lab Code:** J1201360-027

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.1 | 0.061 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.1 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 11 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 11 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.1 | 0.064 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 51 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.1 | 0.074 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.1 | 0.16 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.1 | 0.51 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.1 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.1 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.1 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 21 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 21 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.1 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 90 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 103 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 91 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 105 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188838-IDW-03212012
**Lab Code:** J1201360-028

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.8 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.8 | 0.34 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.8 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 12 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 12 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 12 | 0.45 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.8 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.8 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.8 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 29 | 1.1 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 12 | 0.64 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 12 | 0.67 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | **17** | I | 150 | 4.1 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.8 | 0.080 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | **2.1** | I | 12 | 0.48 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.8 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.8 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.8 | 0.32 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.8 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 12 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.8 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 120 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** 03/21/2012
**Date Received:** 03/22/2012

## Volatile Organic Compounds by GC/MS

**Sample Name:** CRHE-188838-IDW-03212012
**Lab Code:** J1201360-028

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.8 | 0.070 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.8 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 12 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 12 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.8 | 0.073 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 58 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.8 | 0.085 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.8 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.8 | 0.58 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.8 | 0.20 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.8 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.8 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 24 | 0.30 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 24 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.8 | 0.28 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 116 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 99 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 108 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200305-2

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | ND | U | 5.0 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | ND | U | 5.0 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | ND | U | 5.0 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | ND | U | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | ND | U | 10 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | ND | U | 10 | 0.39 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | ND | U | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | ND | U | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | ND | U | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | ND | U | 25 | 0.90 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | ND | U | 10 | 0.55 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | ND | U | 10 | 0.58 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | ND | U | 130 | 3.5 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | ND | U | 5.0 | 0.069 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | ND | U | 10 | 0.41 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | ND | U | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | ND | U | 5.0 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | ND | U | 5.0 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | ND | U | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | ND | U | 10 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | ND | U | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | ND | U | 100 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** JWG1200305-2

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | U | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | ND | U | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | ND | U | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | ND | U | 10 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | ND | U | 5.0 | 0.063 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | ND | U | 50 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | ND | U | 5.0 | 0.073 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | ND | U | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | ND | U | 5.0 | 0.50 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | ND | U | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | ND | U | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | ND | U | 5.0 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | ND | U | 20 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | ND | U | 20 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | ND | U | 5.0 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 95 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 96 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 102 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200305-1

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | **18.1** | | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,1-Trichloroethane (TCA) | **17.4** | | 5.0 | 0.21 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2,2-Tetrachloroethane | **17.4** | | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1,2-Trichloroethane | **18.4** | | 5.0 | 0.29 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethane | **18.3** | | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,1-Dichloroethene | **16.0** | | 5.0 | 0.12 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,3-Trichlorobenzene | **18.9** | | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2,4-Trichlorobenzene | **18.7** | | 10 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromo-3-chloropropane (DBCP | **17.4** | | 10 | 0.39 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dibromoethane (EDB) | **18.2** | | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichlorobenzene | **18.6** | | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloroethane (EDC) | **17.7** | | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,2-Dichloropropane | **18.3** | | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,3-Dichlorobenzene | **18.5** | | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 1,4-Dichlorobenzene | **18.7** | | 5.0 | 0.10 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Butanone (MEK) | **87.5** | | 25 | 0.90 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 2-Hexanone | **88.0** | | 10 | 0.55 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| 4-Methyl-2-pentanone (MIBK) | **90.1** | | 10 | 0.58 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Acetone | **83.4** | I | 130 | 3.5 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Benzene | **18.2** | | 5.0 | 0.069 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromochloromethane | **19.0** | | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromodichloromethane | **17.1** | | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromoform | **16.8** | | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Bromomethane | **18.5** | | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Disulfide | **110** | | 10 | 0.41 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Carbon Tetrachloride | **16.0** | | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chlorobenzene | **19.0** | | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroethane | **17.5** | | 5.0 | 0.23 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloroform | **17.1** | | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Chloromethane | **16.6** | | 5.0 | 0.27 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,2-Dichloroethene | **18.4** | | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| cis-1,3-Dichloropropene | **18.5** | | 5.0 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Cyclohexane | **19.3** | | 10 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dibromochloromethane | **16.7** | | 5.0 | 0.19 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Dichlorodifluoromethane | **17.1** | I | 100 | 0.22 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

**Comments:**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681
**Sample Matrix:** Soil

**Service Request:** J1201360
**Date Collected:** NA
**Date Received:** NA

## Volatile Organic Compounds by GC/MS

**Sample Name:** Lab Control Sample
**Lab Code:** JWG1200305-1

**Extraction Method:** EPA 5035
**Analysis Method:** 8260B

**Units:** ug/Kg
**Basis:** Dry

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | **18.9** | | 5.0 | 0.060 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Isopropylbenzene | **20.9** | | 5.0 | 0.14 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| m,p-Xylenes | **38.0** | | 10 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl Acetate | **16.6** | | 10 | 0.13 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methyl tert-Butyl Ether | **18.1** | | 5.0 | 0.063 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Methylene Chloride | **16.6** | I | 50 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| o-Xylene | **18.3** | | 5.0 | 0.073 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Styrene | **19.1** | | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Tetrachloroethene (PCE) | **18.9** | | 5.0 | 0.15 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Toluene | **18.7** | | 5.0 | 0.50 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,2-Dichloroethene | **17.6** | | 5.0 | 0.17 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| trans-1,3-Dichloropropene | **17.6** | | 5.0 | 0.11 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichloroethene (TCE) | **18.4** | | 5.0 | 0.18 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorofluoromethane | **17.4** | I | 20 | 0.26 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Trichlorotrifluoroethane | **17.7** | I | 20 | 0.25 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |
| Vinyl Chloride | **18.9** | | 5.0 | 0.24 | 1 | 03/22/12 | 03/22/12 | JWG1200305 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 94 | 80-120 | 03/22/12 | Acceptable |
| 4-Bromofluorobenzene | 97 | 64-135 | 03/22/12 | Acceptable |
| Dibromofluoromethane | 98 | 74-125 | 03/22/12 | Acceptable |
| Toluene-d8 | 101 | 46-156 | 03/22/12 | Acceptable |

**Comments:**

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Validation Package

### Standards Data



n:\Stealth\Crystal.rpt\DividerE.rpt

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012
**Time Analyzed:** 09:17

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS52\DATA\MS52-120322\0322-01.D
**Instrument ID:** MS52
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200306

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 15.1 | 3056 | PASS |
| 75 | 95 | 30 | 60 | 44.7 | 9053 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 20275 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 1378 | PASS |
| 173 | 174 | 0 | 2 | 0.4 | 78 | PASS |
| 174 | 95 | 50 | 120 | 93.5 | 18957 | PASS |
| 175 | 174 | 5 | 9 | 7.2 | 1370 | PASS |
| 176 | 174 | 95 | 101 | 98.9 | 18742 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 1226 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200306-2 | J:\MS52\DATA\MS52-120322\0322-02.D | 03/22/2012 | 09:45 | |
| Lab Control Sample | JWG1200305-1 | J:\MS52\DATA\MS52-120322\0322-03.D | 03/22/2012 | 10:14 | |
| Method Blank | JWG1200305-2 | J:\MS52\DATA\MS52-120322\0322-05.D | 03/22/2012 | 11:28 | |
| CRHE-188849-IDW-03212012 | J1201360-025 | J:\MS52\DATA\MS52-120322\0322-19.D | 03/22/2012 | 18:20 | |
| CRHE-188797-IDW-03212012 | J1201360-026 | J:\MS52\DATA\MS52-120322\0322-20.D | 03/22/2012 | 18:48 | |
| CRHE-188842-IDW-03212012 | J1201360-027 | J:\MS52\DATA\MS52-120322\0322-21.D | 03/22/2012 | 19:17 | |
| CRHE-188838-IDW-03212012 | J1201360-028 | J:\MS52\DATA\MS52-120322\0322-22.D | 03/22/2012 | 19:45 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012
**Time Analyzed:** 10:42

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120330\0330-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200322

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 15.2 | 25176 | PASS |
| 75 | 95 | 30 | 60 | 33.7 | 55912 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 166080 | PASS |
| 96 | 95 | 5 | 9 | 6.4 | 10595 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 90.7 | 150592 | PASS |
| 175 | 174 | 5 | 9 | 7.5 | 11247 | PASS |
| 176 | 174 | 95 | 101 | 95.4 | 143616 | PASS |
| 177 | 176 | 5 | 9 | 6.0 | 8649 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200322-2 | J:\MS53\DATA\MS53-120330\0330-02.D | 03/30/2012 | 11:12 | |
| Lab Control Sample | JWG1200321-1 | J:\MS53\DATA\MS53-120330\0330-03.D | 03/30/2012 | 11:42 | |
| Method Blank | JWG1200321-2 | J:\MS53\DATA\MS53-120330\0330-06.D | 03/30/2012 | 13:10 | |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120330\0330-07.D | 03/30/2012 | 13:40 | |
| CRHE-MW0030-010.0-03192012 | J1201360-002 | J:\MS53\DATA\MS53-120330\0330-08.D | 03/30/2012 | 14:10 | |
| CRHE-MW0023-065.0-03192012 | J1201360-003 | J:\MS53\DATA\MS53-120330\0330-09.D | 03/30/2012 | 14:40 | |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120330\0330-10.D | 03/30/2012 | 15:09 | |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120330\0330-11.D | 03/30/2012 | 15:39 | |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120330\0330-12.D | 03/30/2012 | 16:09 | |
| CRHE-MW0038-010.0-03192012 | J1201360-007 | J:\MS53\DATA\MS53-120330\0330-13.D | 03/30/2012 | 16:39 | |
| EB01-03192012 | J1201360-008 | J:\MS53\DATA\MS53-120330\0330-14.D | 03/30/2012 | 17:09 | |
| CRHE-IW0015I-040.0-03192012 | J1201360-009 | J:\MS53\DATA\MS53-120330\0330-15.D | 03/30/2012 | 17:39 | |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120330\0330-16.D | 03/30/2012 | 18:09 | |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120330\0330-17.D | 03/30/2012 | 18:39 | |
| CRHE-MW0033-048.5-03202012 | J1201360-012 | J:\MS53\DATA\MS53-120330\0330-18.D | 03/30/2012 | 19:09 | |
| CRHE-IW0021I-045.0-03202012 | J1201360-013 | J:\MS53\DATA\MS53-120330\0330-19.D | 03/30/2012 | 19:39 | |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120330\0330-20.D | 03/30/2012 | 20:09 | |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120330\0330-21.D | 03/30/2012 | 20:39 | |
| CRHE-MW0037-030.0-03202012 | J1201360-016 | J:\MS53\DATA\MS53-120330\0330-22.D | 03/30/2012 | 21:08 | |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120330\0330-23.D | 03/30/2012 | 21:38 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012
**Time Analyzed:** 08:51

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120402\0402-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200326

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.4 | 37064 | PASS |
| 75 | 95 | 30 | 60 | 35.7 | 80421 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 225429 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 14647 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 79.9 | 180139 | PASS |
| 175 | 174 | 5 | 9 | 7.7 | 13885 | PASS |
| 176 | 174 | 95 | 101 | 96.2 | 173248 | PASS |
| 177 | 176 | 5 | 9 | 6.3 | 10928 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200326-2 | J:\MS53\DATA\MS53-120402\0402-02.D | 04/02/2012 | 09:21 | |
| Lab Control Sample | JWG1200325-1 | J:\MS53\DATA\MS53-120402\0402-03.D | 04/02/2012 | 09:51 | |
| Method Blank | JWG1200325-2 | J:\MS53\DATA\MS53-120402\0402-06.D | 04/02/2012 | 11:20 | |
| Trip Blank | J1201360-029 | J:\MS53\DATA\MS53-120402\0402-07.D | 04/02/2012 | 11:50 | |
| CRHE-MW0032-045.0-03192012 | J1201360-001 | J:\MS53\DATA\MS53-120402\0402-08.D | 04/02/2012 | 12:20 | |
| CRHE-MW0031-045.0-03192012 | J1201360-004 | J:\MS53\DATA\MS53-120402\0402-09.D | 04/02/2012 | 12:49 | |
| CRHE-IW0020I-045.0-03192012 | J1201360-005 | J:\MS53\DATA\MS53-120402\0402-10.D | 04/02/2012 | 13:20 | |
| CRHE-MW0039-030.0-03192012 | J1201360-006 | J:\MS53\DATA\MS53-120402\0402-11.D | 04/02/2012 | 13:50 | |
| CRHE-MW0034-038.5-03202012 | J1201360-010 | J:\MS53\DATA\MS53-120402\0402-12.D | 04/02/2012 | 14:20 | |
| CRHE-IW0019I-040.0-03202012 | J1201360-011 | J:\MS53\DATA\MS53-120402\0402-13.D | 04/02/2012 | 14:50 | |
| CRHE-MW0035-045.0-03202012 | J1201360-014 | J:\MS53\DATA\MS53-120402\0402-14.D | 04/02/2012 | 15:19 | |
| CRHE-MW0028-040.0-03202012 | J1201360-015 | J:\MS53\DATA\MS53-120402\0402-15.D | 04/02/2012 | 15:49 | |
| CRHE-IW0017I-030.0-03202012 | J1201360-017 | J:\MS53\DATA\MS53-120402\0402-16.D | 04/02/2012 | 16:19 | |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120402\0402-17.D | 04/02/2012 | 16:49 | |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120402\0402-18.D | 04/02/2012 | 17:19 | |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120402\0402-19.D | 04/02/2012 | 17:49 | |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120402\0402-20.D | 04/02/2012 | 18:19 | |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120402\0402-21.D | 04/02/2012 | 18:49 | |
| CRHE-MW0024-010.0-03212012 | J1201360-023 | J:\MS53\DATA\MS53-120402\0402-22.D | 04/02/2012 | 19:19 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012
**Time Analyzed:** 10:53

## Tune Summary
## Volatile Organic Compounds by GC/MS

**File ID:** J:\MS53\DATA\MS53-120403\0403-01.D
**Instrument ID:** MS53
**Column:**

**Analysis Method:** 8260B
**Analysis Lot:** JWG1200334

| Target Mass | Relative to Mass | Lower Limit% | Upper Limit% | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.8 | 34616 | PASS |
| 75 | 95 | 30 | 60 | 36.5 | 75304 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 206165 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 13426 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 74.0 | 152600 | PASS |
| 175 | 174 | 5 | 9 | 8.1 | 12319 | PASS |
| 176 | 174 | 95 | 101 | 95.9 | 146363 | PASS |
| 177 | 176 | 5 | 9 | 6.7 | 9745 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| Continuing Calibration Verification | JWG1200334-2 | J:\MS53\DATA\MS53-120403\0403-03.D | 04/03/2012 | 11:53 | |
| Lab Control Sample | JWG1200333-3 | J:\MS53\DATA\MS53-120403\0403-04.D | 04/03/2012 | 12:25 | |
| Method Blank | JWG1200333-4 | J:\MS53\DATA\MS53-120403\0403-07.D | 04/03/2012 | 13:53 | |
| CRHE-IW0014I-040.0-03212012 | J1201360-018 | J:\MS53\DATA\MS53-120403\0403-08.D | 04/03/2012 | 14:23 | |
| CRHE-MW0022-065.0-03212012 | J1201360-021 | J:\MS53\DATA\MS53-120403\0403-09.D | 04/03/2012 | 14:52 | |
| CRHE-MW0029-045.0-03212012 | J1201360-019 | J:\MS53\DATA\MS53-120403\0403-10.D | 04/03/2012 | 15:22 | |
| CRHE-MW0026-035.0-03212012 | J1201360-020 | J:\MS53\DATA\MS53-120403\0403-11.D | 04/03/2012 | 15:51 | |
| CRHE-MW0027-045.0-03212012 | J1201360-022 | J:\MS53\DATA\MS53-120403\0403-12.D | 04/03/2012 | 16:21 | |
| CHRE-MW0036-010.0-03202012 | J1201360-030 | J:\MS53\DATA\MS53-120403\0403-13.D | 04/03/2012 | 16:50 | |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-14.D | 04/03/2012 | 17:20 | |
| CRHE-MW0025-030.0-03212012 | J1201360-024 | J:\MS53\DATA\MS53-120403\0403-16.D | 04/03/2012 | 18:18 | |

**Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\MS52\DATA\MS52-120227\0227-04.D | F | J:\MS52\DATA\MS52-120227\0227-09.D |
| B | J:\MS52\DATA\MS52-120227\0227-05.D | G | J:\MS52\DATA\MS52-120227\0227-10.D |
| C | J:\MS52\DATA\MS52-120227\0227-06.D | H | J:\MS52\DATA\MS52-120227\0227-11.D |
| D | J:\MS52\DATA\MS52-120227\0227-07.D | I | J:\MS52\DATA\MS52-120227\0227-12.D |
| E | J:\MS52\DATA\MS52-120227\0227-08.D | | |

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | A | 1.0 | 1.06 | B | 2.0 | 1.07 | C | 5.0 | 1.09 | D | 10 | 1.16 | E | 20 | 1.24 |
| | F | 50 | 1.29 | G | 100 | 1.41 | H | 150 | 1.24 | I | 200 | 1.35 | | | |
| 1,1,1-Trichloroethane (TCA) | A | 1.0 | 0.672 | B | 2.0 | 0.693 | C | 5.0 | 0.706 | D | 10 | 0.709 | E | 20 | 0.843 |
| | F | 50 | 0.863 | G | 100 | 0.927 | H | 150 | 0.774 | I | 200 | 0.890 | | | |
| 1,1,2,2-Tetrachloroethane | A | 1.0 | 0.996 | B | 2.0 | 0.870 | C | 5.0 | 0.993 | D | 10 | 0.943 | E | 20 | 0.984 |
| | F | 50 | 1.03 | G | 100 | 1.16 | H | 150 | 1.08 | I | 200 | 1.03 | | | |
| 1,1,2-Trichloroethane | A | 1.0 | 0.650 | B | 2.0 | 0.651 | C | 5.0 | 0.608 | D | 10 | 0.664 | E | 20 | 0.665 |
| | F | 50 | 0.704 | G | 100 | 0.758 | H | 150 | 0.685 | I | 200 | 0.694 | | | |
| 1,1-Dichloroethane | A | 1.0 | 0.636 | B | 2.0 | 0.665 | C | 5.0 | 0.745 | D | 10 | 0.712 | E | 20 | 0.795 |
| | F | 50 | 0.787 | G | 100 | 0.830 | H | 150 | 0.727 | I | 200 | 0.812 | | | |
| 1,1-Dichloroethene | A | 1.0 | 0.518 | B | 2.0 | 0.546 | C | 5.0 | 0.598 | D | 10 | 0.564 | E | 20 | 0.676 |
| | F | 50 | 0.699 | G | 100 | 0.729 | H | 150 | 0.616 | I | 200 | 0.713 | | | |
| 1,2,3-Trichlorobenzene | | | | | | | C | 5.0 | 1.51 | D | 10 | 1.53 | E | 20 | 1.65 |
| | F | 50 | 1.68 | G | 100 | 1.88 | H | 150 | 1.79 | I | 200 | 1.79 | | | |
| 1,2,4-Trichlorobenzene | | | | | | | C | 5.0 | 1.78 | D | 10 | 1.65 | E | 20 | 1.85 |
| | F | 50 | 1.95 | G | 100 | 2.14 | H | 150 | 2.02 | I | 200 | 2.06 | | | |
| 1,2-Dibromo-3-chloropropane (DBCP | | | | | | | C | 5.0 | 0.201 | D | 10 | 0.207 | E | 20 | 0.215 |
| | F | 50 | 0.224 | G | 100 | 0.265 | H | 150 | 0.268 | I | 200 | 0.246 | | | |
| 1,2-Dibromoethane (EDB) | A | 1.0 | 0.828 | B | 2.0 | 0.746 | C | 5.0 | 0.831 | D | 10 | 0.838 | E | 20 | 0.879 |
| | F | 50 | 0.910 | G | 100 | 1.02 | H | 150 | 0.922 | I | 200 | 0.926 | | | |
| 1,2-Dichlorobenzene | A | 1.0 | 2.20 | B | 2.0 | 2.23 | C | 5.0 | 2.29 | D | 10 | 2.27 | E | 20 | 2.42 |
| | F | 50 | 2.48 | G | 100 | 2.75 | H | 150 | 2.54 | I | 200 | 2.57 | | | |
| 1,2-Dichloroethane (EDC) | A | 1.0 | 0.451 | B | 2.0 | 0.543 | C | 5.0 | 0.534 | D | 10 | 0.526 | E | 20 | 0.550 |
| | F | 50 | 0.559 | G | 100 | 0.594 | H | 150 | 0.529 | I | 200 | 0.541 | | | |
| 1,2-Dichloroethane-d4 | A | 50 | 0.259 | B | 50 | 0.263 | C | 50 | 0.260 | D | 50 | 0.257 | E | 50 | 0.250 |
| | F | 50 | 0.246 | G | 50 | 0.250 | H | 50 | 0.238 | I | 50 | 0.232 | | | |
| 1,2-Dichloropropane | A | 1.0 | 0.317 | B | 2.0 | 0.359 | C | 5.0 | 0.385 | D | 10 | 0.389 | E | 20 | 0.419 |
| | F | 50 | 0.414 | G | 100 | 0.449 | H | 150 | 0.398 | I | 200 | 0.432 | | | |
| 1,3-Dichlorobenzene | A | 1.0 | 2.49 | B | 2.0 | 2.45 | C | 5.0 | 2.50 | D | 10 | 2.50 | E | 20 | 2.68 |
| | F | 50 | 2.78 | G | 100 | 2.98 | H | 150 | 2.75 | I | 200 | 2.89 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | A | 1.0 | 2.55 | B | 2.0 | 2.49 | C | 5.0 | 2.54 | D | 10 | 2.51 | E | 20 | 2.68 |
| | F | 50 | 2.71 | G | 100 | 2.93 | H | 150 | 2.66 | I | 200 | 2.76 | | | |
| 2-Butanone (MEK) | A | 5.0 | 0.110 | B | 10 | 0.121 | C | 25 | 0.134 | D | 50 | 0.129 | E | 100 | 0.122 |
| | F | 250 | 0.126 | G | 500 | 0.137 | H | 750 | 0.133 | I | 1000 | 0.120 | | | |
| 2-Hexanone | A | 5.0 | 0.483 | B | 10 | 0.458 | C | 25 | 0.508 | D | 50 | 0.502 | E | 100 | 0.493 |
| | F | 250 | 0.519 | G | 500 | 0.587 | H | 750 | 0.567 | I | 1000 | 0.513 | | | |
| 4-Bromofluorobenzene | A | 50 | 0.871 | B | 50 | 0.864 | C | 50 | 0.864 | D | 50 | 0.885 | E | 50 | 0.872 |
| | F | 50 | 0.901 | G | 50 | 0.940 | H | 50 | 1.01 | I | 50 | 1.05 | | | |
| 4-Methyl-2-pentanone (MIBK) | A | 5.0 | 0.687 | B | 10 | 0.676 | C | 25 | 0.718 | D | 50 | 0.734 | E | 100 | 0.712 |
| | F | 250 | 0.727 | G | 500 | 0.822 | H | 750 | 0.779 | I | 1000 | 0.708 | | | |
| Acetone | A | 5.0 | 0.109 | B | 10 | 0.114 | C | 25 | 0.0910 | D | 50 | 0.0862 | E | 100 | 0.0760 |
| | F | 250 | 0.0764 | G | 500 | 0.0848 | H | 750 | 0.0801 | I | 1000 | 0.0729 | | | |
| Benzene | A | 1.0 | 1.64 | B | 2.0 | 1.61 | C | 5.0 | 1.72 | D | 10 | 1.63 | E | 20 | 1.81 |
| | F | 50 | 1.84 | G | 100 | 1.93 | H | 150 | 1.66 | I | 200 | 1.84 | | | |
| Bromochloromethane | A | 1.0 | 0.229 | B | 2.0 | 0.251 | C | 5.0 | 0.275 | D | 10 | 0.266 | E | 20 | 0.289 |
| | F | 50 | 0.281 | G | 100 | 0.280 | H | 150 | 0.254 | I | 200 | 0.262 | | | |
| Bromodichloromethane | A | 1.0 | 0.550 | B | 2.0 | 0.529 | C | 5.0 | 0.562 | D | 10 | 0.550 | E | 20 | 0.610 |
| | F | 50 | 0.623 | G | 100 | 0.668 | H | 150 | 0.599 | I | 200 | 0.632 | | | |
| Bromoform | A | 1.0 | 0.578 | B | 2.0 | 0.610 | C | 5.0 | 0.604 | D | 10 | 0.656 | E | 20 | 0.670 |
| | F | 50 | 0.738 | G | 100 | 0.832 | H | 150 | 0.780 | I | 200 | 0.769 | | | |
| Bromomethane | A | 1.0 | 0.210 | B | 2.0 | 0.245 | C | 5.0 | 0.239 | D | 10 | 0.240 | E | 20 | 0.289 |
| | F | 50 | 0.312 | G | 100 | 0.316 | H | 150 | 0.267 | I | 200 | 0.285 | | | |
| Carbon Disulfide | A | 5.0 | 0.950 | B | 10 | 0.925 | C | 25 | 0.995 | D | 50 | 0.961 | E | 100 | 1.11 |
| | F | 250 | 1.12 | G | 500 | 1.16 | H | 750 | 0.967 | I | 1000 | 1.12 | | | |
| Carbon Tetrachloride | A | 1.0 | 0.499 | B | 2.0 | 0.583 | C | 5.0 | 0.602 | D | 10 | 0.603 | E | 20 | 0.705 |
| | F | 50 | 0.755 | G | 100 | 0.804 | H | 150 | 0.676 | I | 200 | 0.775 | | | |
| Chlorobenzene | A | 1.0 | 2.91 | B | 2.0 | 3.04 | C | 5.0 | 3.14 | D | 10 | 3.18 | E | 20 | 3.41 |
| | F | 50 | 3.49 | G | 100 | 3.79 | H | 150 | 3.26 | I | 200 | 3.61 | | | |
| Chloroethane | A | 1.0 | 0.284 | B | 2.0 | 0.292 | C | 5.0 | 0.287 | D | 10 | 0.265 | E | 20 | 0.321 |
| | F | 50 | 0.322 | G | 100 | 0.335 | H | 150 | 0.285 | I | 200 | 0.325 | | | |
| Chloroform | A | 1.0 | 0.865 | B | 2.0 | 0.772 | C | 5.0 | 0.799 | D | 10 | 0.779 | E | 20 | 0.844 |
| | F | 50 | 0.850 | G | 100 | 0.904 | H | 150 | 0.787 | I | 200 | 0.854 | | | |
| Chloromethane | A | 1.0 | 0.480 | B | 2.0 | 0.498 | C | 5.0 | 0.522 | D | 10 | 0.490 | E | 20 | 0.602 |
| | F | 50 | 0.595 | G | 100 | 0.630 | H | 150 | 0.530 | I | 200 | 0.616 | | | |
| cis-1,2-Dichloroethene | A | 1.0 | 0.521 | B | 2.0 | 0.547 | C | 5.0 | 0.560 | D | 10 | 0.524 | E | 20 | 0.600 |
| | F | 50 | 0.608 | G | 100 | 0.638 | H | 150 | 0.550 | I | 200 | 0.612 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | A | 1.0 | 1.59 | B | 2.0 | 1.51 | C | 5.0 | 1.57 | D | 10 | 1.55 | E | 20 | 1.74 |
| | F | 50 | 1.82 | G | 100 | 1.96 | H | 150 | 1.77 | I | 200 | 1.89 | | | |
| Cyclohexane | A | 1.0 | 0.520 | B | 2.0 | 0.584 | C | 5.0 | 0.628 | D | 10 | 0.623 | E | 20 | 0.741 |
| | F | 50 | 0.762 | G | 100 | 0.817 | H | 150 | 0.690 | I | 200 | 0.796 | | | |
| Dibromochloromethane | A | 1.0 | 0.936 | B | 2.0 | 0.974 | C | 5.0 | 1.04 | D | 10 | 1.01 | E | 20 | 1.10 |
| | F | 50 | 1.15 | G | 100 | 1.28 | H | 150 | 1.15 | I | 200 | 1.20 | | | |
| Dibromofluoromethane | A | 50 | 0.243 | B | 50 | 0.248 | C | 50 | 0.245 | D | 50 | 0.244 | E | 50 | 0.243 |
| | F | 50 | 0.240 | G | 50 | 0.232 | H | 50 | 0.237 | I | 50 | 0.232 | | | |
| Dichlorodifluoromethane | A | 1.0 | 0.485 | B | 2.0 | 0.502 | C | 5.0 | 0.513 | D | 10 | 0.488 | E | 20 | 0.600 |
| | F | 50 | 0.618 | G | 100 | 0.650 | H | 150 | 0.531 | I | 200 | 0.602 | | | |
| Ethylbenzene | A | 1.0 | 4.98 | B | 2.0 | 4.98 | C | 5.0 | 5.31 | D | 10 | 5.29 | E | 20 | 6.02 |
| | F | 50 | 6.24 | G | 100 | 6.74 | H | 150 | 5.77 | I | 200 | 6.43 | | | |
| Isopropylbenzene | A | 1.0 | 3.99 | B | 2.0 | 4.07 | C | 5.0 | 4.52 | D | 10 | 4.56 | E | 20 | 5.01 |
| | F | 50 | 5.26 | G | 100 | 5.79 | H | 150 | 5.23 | I | 200 | 5.74 | | | |
| m,p-Xylenes | A | 2.0 | 3.98 | B | 4.0 | 3.87 | C | 10 | 4.20 | D | 20 | 4.25 | E | 40 | 4.83 |
| | F | 100 | 4.88 | G | 200 | 5.27 | H | 300 | 4.48 | I | 400 | 4.97 | | | |
| Methyl Acetate | A | 1.0 | 0.534 | B | 2.0 | 0.515 | C | 5.0 | 0.528 | D | 10 | 0.519 | E | 20 | 0.510 |
| | F | 50 | 0.481 | G | 100 | 0.537 | H | 150 | 0.506 | I | 200 | 0.458 | | | |
| Methyl tert-Butyl Ether | A | 1.0 | 1.04 | B | 2.0 | 1.05 | C | 5.0 | 1.05 | D | 10 | 1.01 | E | 20 | 1.05 |
| | F | 50 | 1.10 | G | 100 | 1.17 | H | 150 | 1.11 | I | 200 | 1.10 | | | |
| Methylene Chloride | A | 1.0 | 0.840 | B | 2.0 | 0.616 | C | 5.0 | 0.514 | D | 10 | 0.453 | E | 20 | 0.512 |
| | F | 50 | 0.493 | G | 100 | 0.481 | H | 150 | 0.436 | I | 200 | 0.449 | | | |
| o-Xylene | A | 1.0 | 4.45 | B | 2.0 | 4.11 | C | 5.0 | 4.44 | D | 10 | 4.38 | E | 20 | 4.91 |
| | F | 50 | 5.04 | G | 100 | 5.37 | H | 150 | 4.67 | I | 200 | 5.10 | | | |
| Styrene | A | 1.0 | 2.66 | B | 2.0 | 3.13 | C | 5.0 | 3.22 | D | 10 | 3.25 | E | 20 | 3.70 |
| | F | 50 | 3.83 | G | 100 | 4.21 | H | 150 | 3.67 | I | 200 | 3.99 | | | |
| Tetrachloroethene (PCE) | A | 1.0 | 0.932 | B | 2.0 | 0.963 | C | 5.0 | 1.08 | D | 10 | 1.05 | E | 20 | 1.21 |
| | F | 50 | 1.23 | G | 100 | 1.32 | H | 150 | 1.11 | I | 200 | 1.27 | | | |
| Toluene | A | 1.0 | 4.59 | B | 2.0 | 4.55 | C | 5.0 | 4.69 | D | 10 | 4.68 | E | 20 | 5.27 |
| | F | 50 | 5.33 | G | 100 | 5.73 | H | 150 | 4.91 | I | 200 | 5.46 | | | |
| Toluene-d8 | A | 50 | 2.51 | B | 50 | 2.46 | C | 50 | 2.44 | D | 50 | 2.46 | E | 50 | 2.50 |
| | F | 50 | 2.47 | G | 50 | 2.52 | H | 50 | 2.45 | I | 50 | 2.52 | | | |
| trans-1,2-Dichloroethene | A | 1.0 | 0.580 | B | 2.0 | 0.560 | C | 5.0 | 0.577 | D | 10 | 0.557 | E | 20 | 0.650 |
| | F | 50 | 0.639 | G | 100 | 0.679 | H | 150 | 0.577 | I | 200 | 0.661 | | | |
| trans-1,3-Dichloropropene | A | 1.0 | 1.40 | B | 2.0 | 1.47 | C | 5.0 | 1.44 | D | 10 | 1.45 | E | 20 | 1.54 |
| | F | 50 | 1.64 | G | 100 | 1.85 | H | 150 | 1.67 | I | 200 | 1.74 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene (TCE) | A | 1.0 | 0.417 | B | 2.0 | 0.448 | C | 5.0 | 0.503 | D | 10 | 0.491 | E | 20 | 0.550 |
| | F | 50 | 0.557 | G | 100 | 0.591 | H | 150 | 0.512 | I | 200 | 0.578 | | | |
| Trichlorofluoromethane | A | 1.0 | 0.748 | B | 2.0 | 0.708 | C | 5.0 | 0.742 | D | 10 | 0.720 | E | 20 | 0.879 |
| | F | 50 | 0.881 | G | 100 | 0.938 | H | 150 | 0.779 | I | 200 | 0.893 | | | |
| Trichlorotrifluoroethane | A | 1.0 | 0.330 | B | 2.0 | 0.332 | C | 5.0 | 0.376 | D | 10 | 0.372 | E | 20 | 0.452 |
| | F | 50 | 0.462 | G | 100 | 0.471 | H | 150 | 0.393 | I | 200 | 0.453 | | | |
| Vinyl Chloride | A | 1.0 | 0.369 | B | 2.0 | 0.439 | C | 5.0 | 0.448 | D | 10 | 0.423 | E | 20 | 0.496 |
| | F | 50 | 0.465 | G | 100 | 0.461 | H | 150 | 0.365 | I | 200 | 0.444 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| 1,1,1,2-Tetrachloroethane | MS | AverageRF | % RSD | 10.3 | | ≤ 15 | 1.21 | | 0.01 |
| 1,1,1-Trichloroethane (TCA) | MS | AverageRF | % RSD | 12.3 | | ≤ 15 | 0.786 | | 0.01 |
| † 1,1,2,2-Tetrachloroethane | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 1.01 | | 0.3 |
| 1,1,2-Trichloroethane | MS | AverageRF | % RSD | 6.2 | | ≤ 15 | 0.675 | | 0.01 |
| † 1,1-Dichloroethane | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 0.745 | | 0.1 |
| ‡ 1,1-Dichloroethene | MS | AverageRF | % RSD | 12.4 | | ≤ 15 | 0.629 | | 0.01 |
| 1,2,3-Trichlorobenzene | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 1.69 | | 0.01 |
| 1,2,4-Trichlorobenzene | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 1.92 | | 0.01 |
| 1,2-Dibromo-3-chloropropane (DBCP) | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.232 | | 0.01 |
| 1,2-Dibromoethane (EDB) | MS | AverageRF | % RSD | 8.9 | | ≤ 15 | 0.878 | | 0.01 |
| 1,2-Dichlorobenzene | MS | AverageRF | % RSD | 7.7 | | ≤ 15 | 2.42 | | 0.01 |
| 1,2-Dichloroethane (EDC) | MS | AverageRF | % RSD | 7.1 | | ≤ 15 | 0.536 | | 0.01 |
| 1,2-Dichloroethane-d4 | SURR | AverageRF | % RSD | 4.2 | | ≤ 15 | 0.251 | | |
| ‡ 1,2-Dichloropropane | MS | AverageRF | % RSD | 10.1 | | ≤ 15 | 0.396 | | 0.01 |
| 1,3-Dichlorobenzene | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 2.67 | | 0.01 |
| 1,4-Dichlorobenzene | MS | AverageRF | % RSD | 5.3 | | ≤ 15 | 2.65 | | 0.01 |
| 2-Butanone (MEK) | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 0.126 | | 0.01 |
| 2-Hexanone | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.514 | | 0.01 |
| 4-Bromofluorobenzene | SURR | AverageRF | % RSD | 7.6 | | ≤ 15 | 0.918 | | |
| 4-Methyl-2-pentanone (MIBK) | MS | AverageRF | % RSD | 6.3 | | ≤ 15 | 0.729 | | 0.01 |
| Acetone | MS | Linear | R2 | 0.994 | | ≥ 0.99 | 0.0878 | | 0.01 |
| Benzene | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 1.74 | | 0.01 |
| Bromochloromethane | MS | AverageRF | % RSD | 7.0 | | ≤ 15 | 0.265 | | 0.01 |
| Bromodichloromethane | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.592 | | 0.01 |
| † Bromoform | MS | AverageRF | % RSD | 12.9 | | ≤ 15 | 0.693 | | 0.1 |
| Bromomethane | MS | AverageRF | % RSD | 13.5 | | ≤ 15 | 0.267 | | 0.01 |
| Carbon Disulfide | MS | AverageRF | % RSD | 8.9 | | ≤ 15 | 1.03 | | 0.01 |
| Carbon Tetrachloride | MS | Linear | R2 | 0.993 | | ≥ 0.99 | 0.667 | | 0.01 |
| † Chlorobenzene | MS | AverageRF | % RSD | 8.6 | | ≤ 15 | 3.32 | | 0.3 |
| Chloroethane | MS | AverageRF | % RSD | 8.1 | | ≤ 15 | 0.302 | | 0.01 |
| ‡ Chloroform | MS | AverageRF | % RSD | 5.5 | | ≤ 15 | 0.828 | | 0.01 |
| † Chloromethane | MS | AverageRF | % RSD | 10.7 | | ≤ 15 | 0.551 | | 0.1 |
| cis-1,2-Dichloroethene | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 0.573 | | 0.01 |
| cis-1,3-Dichloropropene | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 1.71 | | 0.01 |
| Cyclohexane | MS | AverageRF | % RSD | 14.9 | | ≤ 15 | 0.684 | | 0.01 |
| Dibromochloromethane | MS | AverageRF | % RSD | 10.2 | | ≤ 15 | 1.09 | | 0.01 |
| Dibromofluoromethane | SURR | AverageRF | % RSD | 2.3 | | ≤ 15 | 0.241 | | |
| Dichlorodifluoromethane | MS | AverageRF | % RSD | 11.4 | | ≤ 15 | 0.554 | | 0.01 |
| ‡ Ethylbenzene | MS | AverageRF | % RSD | 11.2 | | ≤ 15 | 5.75 | | 0.01 |
| Isopropylbenzene | MS | AverageRF | % RSD | 13.5 | | ≤ 15 | 4.91 | | 0.01 |
| m,p-Xylenes | MS | AverageRF | % RSD | 10.7 | | ≤ 15 | 4.53 | | 0.01 |
| Methyl Acetate | MS | AverageRF | % RSD | 5.1 | | ≤ 15 | 0.510 | | 0.01 |
| Methyl tert-Butyl Ether | MS | AverageRF | % RSD | 4.6 | | ≤ 15 | 1.08 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2756
**Instrument ID:** MS52

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| Methylene Chloride | MS | Linear | R2 | 0.998 | | ≥ 0.99 | 0.533 | | 0.01 |
| o-Xylene | MS | AverageRF | % RSD | 8.7 | | ≤ 15 | 4.72 | | 0.01 |
| Styrene | MS | AverageRF | % RSD | 13.9 | | ≤ 15 | 3.52 | | 0.01 |
| Tetrachloroethene (PCE) | MS | AverageRF | % RSD | 12.1 | | ≤ 15 | 1.13 | | 0.01 |
| ‡ Toluene | MS | AverageRF | % RSD | 8.6 | | ≤ 15 | 5.02 | | 0.01 |
| Toluene-d8 | SURR | AverageRF | % RSD | 1.2 | | ≤ 15 | 2.48 | | |
| trans-1,2-Dichloroethene | MS | AverageRF | % RSD | 7.8 | | ≤ 15 | 0.609 | | 0.01 |
| trans-1,3-Dichloropropene | MS | AverageRF | % RSD | 9.7 | | ≤ 15 | 1.58 | | 0.01 |
| Trichloroethene (TCE) | MS | AverageRF | % RSD | 11.4 | | ≤ 15 | 0.516 | | 0.01 |
| Trichlorofluoromethane | MS | AverageRF | % RSD | 10.8 | | ≤ 15 | 0.810 | | 0.01 |
| Trichlorotrifluoroethane | MS | AverageRF | % RSD | 13.9 | | ≤ 15 | 0.405 | | 0.01 |
| ‡ Vinyl Chloride | MS | AverageRF | % RSD | 10.0 | | ≤ 15 | 0.434 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012
**Date Analyzed:** 02/27/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2756
**Units:** ug/L

**File ID:** J:\MS52\DATA\MS52-120227\0227-16.D

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 21 | 1.21 | 1.25 | 3 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 21 | 0.786 | 0.827 | 5 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 1.01 | 1.01 | 0 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 21 | 0.675 | 0.713 | 6 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 22 | 0.745 | 0.819 | 10 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.629 | 0.681 | 8 | NA | ± 30 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 20 | 1.69 | 1.66 | -2 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 19 | 1.92 | 1.85 | -4 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 18 | 0.232 | 0.212 | -9 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 21 | 0.878 | 0.906 | 3 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 20 | 2.42 | 2.47 | 2 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.536 | 0.540 | 1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.396 | 0.425 | 7 | NA | ± 30 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 2.67 | 2.72 | 2 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 21 | 2.65 | 2.73 | 3 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 97 | 0.126 | 0.122 | -3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.514 | 0.515 | 0 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 100 | 0.729 | 0.730 | 0 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.0878 | 0.0775 | NA | -7 | ± 30 % | Linear |
| Benzene | 20 | 21 | 1.74 | 1.85 | 6 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 22 | 0.265 | 0.292 | 10 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.592 | 0.612 | 3 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.693 | 0.665 | -4 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.267 | 0.258 | -3 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 1.03 | 1.12 | 8 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 19 | 0.667 | 0.697 | NA | -3 | ± 30 % | Linear |
| Chlorobenzene | 20 | 21 | 3.32 | 3.51 | 6 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 21 | 0.302 | 0.321 | 7 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.828 | 0.846 | 2 | NA | ± 30 % | AverageRF |
| Chloromethane | 20 | 21 | 0.551 | 0.569 | 3 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.573 | 0.605 | 6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 21 | 1.71 | 1.79 | 5 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 22 | 0.684 | 0.743 | 9 | NA | ± 30 % | AverageRF |
| Dibromochloromethane | 20 | 20 | 1.09 | 1.10 | 1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.554 | 0.589 | 6 | NA | ± 30 % | AverageRF |
| Ethylbenzene | 20 | 21 | 5.75 | 6.10 | 6 | NA | ± 30 % | AverageRF |
| Isopropylbenzene | 20 | 21 | 4.91 | 5.23 | 7 | NA | ± 30 % | AverageRF |
| m,p-Xylenes | 40 | 43 | 4.53 | 4.90 | 8 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.510 | 0.512 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 1.08 | 1.10 | 2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 26 | 0.533 | 0.618 | NA | 29 | ± 30 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 02/27/2012
**Date Analyzed:** 02/27/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2756
**Units:** ug/L

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| o-Xylene | 20 | 21 | 4.72 | 4.99 | 6 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 22 | 3.52 | 3.83 | 9 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 21 | 1.13 | 1.21 | 7 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 21 | 5.02 | 5.34 | 6 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 21 | 0.609 | 0.653 | 7 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 1.58 | 1.57 | 0 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 22 | 0.516 | 0.579 | 12 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 21 | 0.810 | 0.857 | 6 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 21 | 0.405 | 0.435 | 7 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 23 | 0.434 | 0.493 | 13 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**† SPCC Compound** **‡ CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | J:\MS53\DATA\MS53-120307\0307-03.D | F | J:\MS53\DATA\MS53-120307\0307-09.D |
| B | J:\MS53\DATA\MS53-120307\0307-04.D | G | J:\MS53\DATA\MS53-120307\0307-10.D |
| C | J:\MS53\DATA\MS53-120307\0307-05.D | H | J:\MS53\DATA\MS53-120307\0307-11.D |
| D | J:\MS53\DATA\MS53-120307\0307-06.D | I | J:\MS53\DATA\MS53-120307\0307-15.D |
| E | J:\MS53\DATA\MS53-120307\0307-08.D | | |

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | A | 1.0 | 0.493 | B | 2.0 | 0.424 | C | 5.0 | 0.487 | D | 10 | 0.500 | E | 50 | 0.524 |
| | F | 100 | 0.512 | G | 150 | 0.473 | H | 200 | 0.463 | I | 20 | 0.523 | | | |
| 1,1,1-Trichloroethane (TCA) | A | 1.0 | 0.186 | B | 2.0 | 0.173 | C | 5.0 | 0.216 | D | 10 | 0.207 | E | 50 | 0.253 |
| | F | 100 | 0.246 | G | 150 | 0.241 | H | 200 | 0.241 | I | 20 | 0.227 | | | |
| 1,1,2,2-Tetrachloroethane | A | 1.0 | 0.721 | B | 2.0 | 0.736 | C | 5.0 | 0.779 | D | 10 | 0.812 | E | 50 | 0.777 |
| | F | 100 | 0.734 | G | 150 | 0.659 | H | 200 | 0.569 | I | 20 | 0.763 | | | |
| 1,1,2-Trichloroethane | A | 1.0 | 0.374 | B | 2.0 | 0.341 | C | 5.0 | 0.369 | D | 10 | 0.374 | E | 50 | 0.363 |
| | F | 100 | 0.380 | G | 150 | 0.348 | H | 200 | 0.339 | I | 20 | 0.381 | | | |
| 1,1-Dichloroethane | A | 1.0 | 0.341 | B | 2.0 | 0.323 | C | 5.0 | 0.390 | D | 10 | 0.382 | E | 50 | 0.427 |
| | F | 100 | 0.421 | G | 150 | 0.422 | H | 200 | 0.411 | I | 20 | 0.406 | | | |
| 1,1-Dichloroethene | A | 1.0 | 0.218 | B | 2.0 | 0.195 | C | 5.0 | 0.247 | D | 10 | 0.227 | E | 50 | 0.266 |
| | F | 100 | 0.240 | G | 150 | 0.219 | H | 200 | 0.206 | I | 20 | 0.257 | | | |
| 1,2,3-Trichlorobenzene | | | | | | | | | | D | 10 | 0.342 | E | 50 | 0.343 |
| | F | 100 | 0.373 | G | 150 | 0.354 | H | 200 | 0.354 | I | 20 | 0.337 | | | |
| 1,2,4-Trichlorobenzene | | | | | | | | | | D | 10 | 0.485 | E | 50 | 0.533 |
| | F | 100 | 0.564 | G | 150 | 0.552 | H | 200 | 0.552 | I | 20 | 0.505 | | | |
| 1,2-Dibromo-3-chloropropane (DBCP | | | | | | | C | 5.0 | 0.0716 | D | 10 | 0.0723 | E | 50 | 0.0750 |
| | F | 100 | 0.0823 | G | 150 | 0.0817 | H | 200 | 0.0823 | I | 20 | 0.0665 | | | |
| 1,2-Dibromoethane (EDB) | A | 1.0 | 0.375 | B | 2.0 | 0.367 | C | 5.0 | 0.413 | D | 10 | 0.423 | E | 50 | 0.415 |
| | F | 100 | 0.425 | G | 150 | 0.406 | H | 200 | 0.382 | I | 20 | 0.421 | | | |
| 1,2-Dichlorobenzene | A | 1.0 | 1.10 | B | 2.0 | 0.997 | C | 5.0 | 1.15 | D | 10 | 1.09 | E | 50 | 1.12 |
| | F | 100 | 1.12 | G | 150 | 1.03 | H | 200 | 1.01 | I | 20 | 1.16 | | | |
| 1,2-Dichloroethane (EDC) | A | 1.0 | 0.136 | B | 2.0 | 0.117 | C | 5.0 | 0.138 | D | 10 | 0.137 | E | 50 | 0.147 |
| | F | 100 | 0.145 | G | 150 | 0.145 | H | 200 | 0.143 | I | 20 | 0.141 | | | |
| 1,2-Dichloroethane-d4 | A | 50 | 0.147 | B | 50 | 0.149 | C | 50 | 0.145 | D | 50 | 0.148 | E | 50 | 0.146 |
| | F | 50 | 0.144 | G | 50 | 0.146 | H | 50 | 0.141 | I | 50 | 0.141 | | | |
| 1,2-Dichloropropane | A | 1.0 | 0.207 | B | 2.0 | 0.201 | C | 5.0 | 0.223 | D | 10 | 0.224 | E | 50 | 0.245 |
| | F | 100 | 0.240 | G | 150 | 0.233 | H | 200 | 0.230 | I | 20 | 0.234 | | | |
| 1,3-Dichlorobenzene | A | 1.0 | 1.27 | B | 2.0 | 1.14 | C | 5.0 | 1.33 | D | 10 | 1.26 | E | 50 | 1.26 |
| | F | 100 | 1.16 | G | 150 | 1.06 | H | 200 | 0.987 | I | 20 | 1.31 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | A | 1.0 | 1.21 | B | 2.0 | 1.11 | C | 5.0 | 1.28 | D | 10 | 1.25 | E | 50 | 1.31 |
| | F | 100 | 1.24 | G | 150 | 1.18 | H | 200 | 1.09 | I | 20 | 1.36 | | | |
| 2-Butanone (MEK) | A | 5.0 | 0.00960 | B | 10 | 0.0116 | C | 25 | 0.0117 | D | 50 | 0.0121 | E | 250 | 0.0134 |
| | F | 500 | 0.0126 | G | 750 | 0.0128 | H | 1000 | 0.0131 | I | 100 | 0.0122 | | | |
| 2-Hexanone | | | | B | 10 | 0.293 | C | 25 | 0.288 | D | 50 | 0.283 | E | 250 | 0.263 |
| | F | 500 | 0.273 | G | 750 | 0.250 | H | 1000 | 0.238 | I | 100 | 0.278 | | | |
| 4-Bromofluorobenzene | A | 50 | 1.02 | B | 50 | 0.970 | C | 50 | 0.993 | D | 50 | 0.952 | E | 50 | 0.907 |
| | F | 50 | 0.857 | G | 50 | 0.815 | H | 50 | 0.793 | I | 50 | 0.954 | | | |
| 4-Methyl-2-pentanone (MIBK) | A | 5.0 | 0.422 | B | 10 | 0.421 | C | 25 | 0.431 | D | 50 | 0.435 | E | 250 | 0.405 |
| | F | 500 | 0.401 | G | 750 | 0.380 | H | 1000 | 0.364 | I | 100 | 0.428 | | | |
| Acetone | A | 5.0 | 0.0341 | B | 10 | 0.0312 | C | 25 | 0.0313 | D | 50 | 0.0309 | E | 250 | 0.0284 |
| | F | 500 | 0.0286 | G | 750 | 0.0280 | H | 1000 | 0.0265 | I | 100 | 0.0274 | | | |
| Benzene | A | 1.0 | 0.820 | B | 2.0 | 0.794 | C | 5.0 | 0.904 | D | 10 | 0.885 | E | 50 | 0.990 |
| | F | 100 | 0.952 | G | 150 | 0.913 | H | 200 | 0.875 | I | 20 | 0.955 | | | |
| Bromochloromethane | A | 1.0 | 0.114 | B | 2.0 | 0.111 | C | 5.0 | 0.133 | D | 10 | 0.136 | E | 50 | 0.146 |
| | F | 100 | 0.145 | G | 150 | 0.148 | H | 200 | 0.145 | I | 20 | 0.142 | | | |
| Bromodichloromethane | A | 1.0 | 0.207 | B | 2.0 | 0.202 | C | 5.0 | 0.227 | D | 10 | 0.231 | E | 50 | 0.252 |
| | F | 100 | 0.246 | G | 150 | 0.244 | H | 200 | 0.233 | I | 20 | 0.241 | | | |
| Bromoform | A | 1.0 | 0.172 | B | 2.0 | 0.166 | C | 5.0 | 0.209 | D | 10 | 0.224 | E | 50 | 0.249 |
| | F | 100 | 0.246 | G | 150 | 0.236 | H | 200 | 0.224 | I | 20 | 0.232 | | | |
| Bromomethane | A | 1.0 | 0.172 | B | 2.0 | 0.160 | C | 5.0 | 0.182 | D | 10 | 0.184 | E | 50 | 0.217 |
| | F | 100 | 0.173 | G | 150 | 0.157 | H | 200 | 0.147 | I | 20 | 0.190 | | | |
| Carbon Disulfide | A | 5.0 | 0.669 | B | 10 | 0.622 | C | 25 | 0.755 | D | 50 | 0.708 | E | 250 | 0.796 |
| | F | 500 | 0.685 | G | 750 | 0.613 | H | 1000 | 0.560 | I | 100 | 0.787 | | | |
| Carbon Tetrachloride | A | 1.0 | 0.132 | B | 2.0 | 0.133 | C | 5.0 | 0.168 | D | 10 | 0.158 | E | 50 | 0.198 |
| | F | 100 | 0.195 | G | 150 | 0.190 | H | 200 | 0.193 | I | 20 | 0.178 | | | |
| Chlorobenzene | A | 1.0 | 1.44 | B | 2.0 | 1.39 | C | 5.0 | 1.57 | D | 10 | 1.54 | E | 50 | 1.56 |
| | F | 100 | 1.52 | G | 150 | 1.37 | H | 200 | 1.29 | I | 20 | 1.64 | | | |
| Chloroethane | A | 1.0 | 0.154 | B | 2.0 | 0.143 | C | 5.0 | 0.161 | D | 10 | 0.167 | E | 50 | 0.188 |
| | F | 100 | 0.162 | G | 150 | 0.150 | H | 200 | 0.143 | I | 20 | 0.178 | | | |
| Chloroform | A | 1.0 | 0.323 | B | 2.0 | 0.293 | C | 5.0 | 0.343 | D | 10 | 0.328 | E | 50 | 0.370 |
| | F | 100 | 0.368 | G | 150 | 0.370 | H | 200 | 0.357 | I | 20 | 0.350 | | | |
| Chloromethane | A | 1.0 | 0.306 | B | 2.0 | 0.286 | C | 5.0 | 0.324 | D | 10 | 0.314 | E | 50 | 0.389 |
| | F | 100 | 0.331 | G | 150 | 0.310 | H | 200 | 0.296 | I | 20 | 0.350 | | | |
| cis-1,2-Dichloroethene | A | 1.0 | 0.246 | B | 2.0 | 0.242 | C | 5.0 | 0.291 | D | 10 | 0.285 | E | 50 | 0.315 |
| | F | 100 | 0.310 | G | 150 | 0.308 | H | 200 | 0.301 | I | 20 | 0.307 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | A | 1.0 | 0.867 | B | 2.0 | 0.838 | C | 5.0 | 0.964 | D | 10 | 0.976 | E | 50 | 0.970 |
| | F | 100 | 1.01 | G | 150 | 0.946 | H | 200 | 0.861 | I | 20 | 0.984 | | | |
| Cyclohexane | A | 1.0 | 0.302 | B | 2.0 | 0.267 | C | 5.0 | 0.366 | D | 10 | 0.311 | E | 50 | 0.419 |
| | F | 100 | 0.412 | G | 150 | 0.404 | H | 200 | 0.413 | I | 20 | 0.389 | | | |
| Dibromochloromethane | A | 1.0 | 0.442 | B | 2.0 | 0.394 | C | 5.0 | 0.445 | D | 10 | 0.461 | E | 50 | 0.462 |
| | F | 100 | 0.473 | G | 150 | 0.437 | H | 200 | 0.412 | I | 20 | 0.476 | | | |
| Dibromofluoromethane | A | 50 | 0.255 | B | 50 | 0.258 | C | 50 | 0.256 | D | 50 | 0.256 | E | 50 | 0.258 |
| | F | 50 | 0.260 | G | 50 | 0.261 | H | 50 | 0.255 | I | 50 | 0.256 | | | |
| Dichlorodifluoromethane | A | 1.0 | 0.110 | B | 2.0 | 0.138 | C | 5.0 | 0.165 | D | 10 | 0.155 | E | 50 | 0.201 |
| | F | 100 | 0.180 | G | 150 | 0.172 | H | 200 | 0.171 | I | 20 | 0.181 | | | |
| Ethylbenzene | A | 1.0 | 2.47 | B | 2.0 | 2.16 | C | 5.0 | 2.70 | D | 10 | 2.58 | E | 50 | 2.63 |
| | F | 100 | 2.56 | G | 150 | 2.23 | H | 200 | 2.03 | I | 20 | 2.78 | | | |
| Isopropylbenzene | A | 1.0 | 2.13 | B | 2.0 | 1.81 | C | 5.0 | 2.30 | D | 10 | 2.11 | E | 50 | 2.35 |
| | F | 100 | 2.21 | G | 150 | 2.04 | H | 200 | 1.94 | I | 20 | 2.39 | | | |
| m,p-Xylenes | A | 2.0 | 1.84 | B | 4.0 | 1.65 | C | 10 | 1.94 | D | 20 | 1.91 | E | 100 | 1.86 |
| | F | 200 | 1.67 | G | 300 | 1.42 | H | 400 | 1.26 | I | 40 | 2.04 | | | |
| Methyl Acetate | A | 1.0 | 0.314 | B | 2.0 | 0.285 | C | 5.0 | 0.285 | D | 10 | 0.294 | E | 50 | 0.296 |
| | F | 100 | 0.291 | G | 150 | 0.285 | H | 200 | 0.270 | I | 20 | 0.287 | | | |
| Methyl tert-Butyl Ether | A | 1.0 | 0.310 | B | 2.0 | 0.317 | C | 5.0 | 0.363 | D | 10 | 0.361 | E | 50 | 0.381 |
| | F | 100 | 0.376 | G | 150 | 0.374 | H | 200 | 0.377 | I | 20 | 0.359 | | | |
| Methylene Chloride | A | 1.0 | 0.228 | B | 2.0 | 0.210 | C | 5.0 | 0.255 | D | 10 | 0.243 | E | 50 | 0.278 |
| | F | 100 | 0.266 | G | 150 | 0.259 | H | 200 | 0.256 | I | 20 | 0.264 | | | |
| o-Xylene | A | 1.0 | 1.82 | B | 2.0 | 1.66 | C | 5.0 | 2.00 | D | 10 | 1.97 | E | 50 | 1.96 |
| | F | 100 | 1.85 | G | 150 | 1.63 | H | 200 | 1.43 | I | 20 | 2.02 | | | |
| Styrene | A | 1.0 | 1.51 | B | 2.0 | 1.37 | C | 5.0 | 1.63 | D | 10 | 1.63 | E | 50 | 1.61 |
| | F | 100 | 1.58 | G | 150 | 1.37 | H | 200 | 1.28 | I | 20 | 1.68 | | | |
| Tetrachloroethene (PCE) | A | 1.0 | 0.392 | B | 2.0 | 0.356 | C | 5.0 | 0.466 | D | 10 | 0.436 | E | 50 | 0.492 |
| | F | 100 | 0.500 | G | 150 | 0.461 | H | 200 | 0.441 | I | 20 | 0.511 | | | |
| Toluene | A | 1.0 | 2.37 | B | 2.0 | 2.18 | C | 5.0 | 2.58 | D | 10 | 2.43 | E | 50 | 2.54 |
| | F | 100 | 2.47 | G | 150 | 2.16 | H | 200 | 1.99 | I | 20 | 2.73 | | | |
| Toluene-d8 | A | 50 | 2.41 | B | 50 | 2.43 | C | 50 | 2.45 | D | 50 | 2.48 | E | 50 | 2.35 |
| | F | 50 | 2.44 | G | 50 | 2.41 | H | 50 | 2.34 | I | 50 | 2.48 | | | |
| trans-1,2-Dichloroethene | A | 1.0 | 0.258 | B | 2.0 | 0.248 | C | 5.0 | 0.305 | D | 10 | 0.285 | E | 50 | 0.345 |
| | F | 100 | 0.338 | G | 150 | 0.333 | H | 200 | 0.326 | I | 20 | 0.324 | | | |
| trans-1,3-Dichloropropene | A | 1.0 | 0.620 | B | 2.0 | 0.584 | C | 5.0 | 0.677 | D | 10 | 0.694 | E | 50 | 0.674 |
| | F | 100 | 0.714 | G | 150 | 0.664 | H | 200 | 0.623 | I | 20 | 0.697 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene (TCE) | A | 1.0 | 0.181 | B | 2.0 | 0.172 | C | 5.0 | 0.213 | D | 10 | 0.204 | E | 50 | 0.233 |
| | F | 100 | 0.228 | G | 150 | 0.221 | H | 200 | 0.209 | I | 20 | 0.224 | | | |
| Trichlorofluoromethane | | | | B | 2.0 | 0.137 | C | 5.0 | 0.190 | D | 10 | 0.176 | E | 50 | 0.225 |
| | F | 100 | 0.216 | G | 150 | 0.209 | H | 200 | 0.206 | I | 20 | 0.205 | | | |
| Trichlorotrifluoroethane | A | 1.0 | 0.154 | B | 2.0 | 0.138 | C | 5.0 | 0.181 | D | 10 | 0.175 | E | 50 | 0.223 |
| | F | 100 | 0.197 | G | 150 | 0.186 | H | 200 | 0.187 | I | 20 | 0.202 | | | |
| Vinyl Chloride | A | 1.0 | 0.208 | B | 2.0 | 0.198 | C | 5.0 | 0.254 | D | 10 | 0.242 | E | 50 | 0.277 |
| | | | | | | | | | | I | 20 | 0.272 | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| 1,1,1,2-Tetrachloroethane | MS | AverageRF | % RSD | 6.6 | | ≤ 15 | 0.489 | | 0.01 |
| 1,1,1-Trichloroethane (TCA) | MS | AverageRF | % RSD | 12.6 | | ≤ 15 | 0.221 | | 0.01 |
| † 1,1,2,2-Tetrachloroethane | MS | AverageRF | % RSD | 10.1 | | ≤ 15 | 0.728 | | 0.3 |
| 1,1,2-Trichloroethane | MS | AverageRF | % RSD | 4.6 | | ≤ 15 | 0.363 | | 0.01 |
| † 1,1-Dichloroethane | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 0.391 | | 0.1 |
| ‡ 1,1-Dichloroethene | MS | AverageRF | % RSD | 10.3 | | ≤ 15 | 0.230 | | 0.01 |
| 1,2,3-Trichlorobenzene | MS | AverageRF | % RSD | 3.7 | | ≤ 15 | 0.351 | | 0.01 |
| 1,2,4-Trichlorobenzene | MS | AverageRF | % RSD | 5.8 | | ≤ 15 | 0.532 | | 0.01 |
| 1,2-Dibromo-3-chloropropane (DBCP) | MS | AverageRF | % RSD | 8.3 | | ≤ 15 | 0.0760 | | 0.01 |
| 1,2-Dibromoethane (EDB) | MS | AverageRF | % RSD | 5.6 | | ≤ 15 | 0.403 | | 0.01 |
| 1,2-Dichlorobenzene | MS | AverageRF | % RSD | 5.5 | | ≤ 15 | 1.09 | | 0.01 |
| 1,2-Dichloroethane (EDC) | MS | AverageRF | % RSD | 6.6 | | ≤ 15 | 0.139 | | 0.01 |
| 1,2-Dichloroethane-d4 | SURR | AverageRF | % RSD | 1.8 | | ≤ 15 | 0.145 | | |
| ‡ 1,2-Dichloropropane | MS | AverageRF | % RSD | 6.4 | | ≤ 15 | 0.227 | | 0.01 |
| 1,3-Dichlorobenzene | MS | AverageRF | % RSD | 9.8 | | ≤ 15 | 1.20 | | 0.01 |
| 1,4-Dichlorobenzene | MS | AverageRF | % RSD | 7.2 | | ≤ 15 | 1.22 | | 0.01 |
| 2-Butanone (MEK) | MS | AverageRF | % RSD | 9.2 | | ≤ 15 | 0.0121 | | 0.01 |
| 2-Hexanone | MS | AverageRF | % RSD | 7.0 | | ≤ 15 | 0.271 | | 0.01 |
| 4-Bromofluorobenzene | SURR | AverageRF | % RSD | 8.7 | | ≤ 15 | 0.917 | | |
| 4-Methyl-2-pentanone (MIBK) | MS | AverageRF | % RSD | 6.0 | | ≤ 15 | 0.410 | | 0.01 |
| Acetone | MS | AverageRF | % RSD | 8.2 | | ≤ 15 | 0.0296 | | 0.01 |
| Benzene | MS | AverageRF | % RSD | 7.1 | | ≤ 15 | 0.899 | | 0.01 |
| Bromochloromethane | MS | AverageRF | % RSD | 10.2 | | ≤ 15 | 0.135 | | 0.01 |
| Bromodichloromethane | MS | AverageRF | % RSD | 7.5 | | ≤ 15 | 0.231 | | 0.01 |
| † Bromoform | MS | AverageRF | % RSD | 13.8 | | ≤ 15 | 0.218 | | 0.1 |
| Bromomethane | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.176 | | 0.01 |
| Carbon Disulfide | MS | AverageRF | % RSD | 11.8 | | ≤ 15 | 0.689 | | 0.01 |
| Carbon Tetrachloride | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.172 | | 0.01 |
| † Chlorobenzene | MS | AverageRF | % RSD | 7.7 | | ≤ 15 | 1.48 | | 0.3 |
| Chloroethane | MS | AverageRF | % RSD | 9.6 | | ≤ 15 | 0.161 | | 0.01 |
| ‡ Chloroform | MS | AverageRF | % RSD | 7.5 | | ≤ 15 | 0.345 | | 0.01 |
| † Chloromethane | MS | AverageRF | % RSD | 9.7 | | ≤ 15 | 0.323 | | 0.1 |
| cis-1,2-Dichloroethene | MS | AverageRF | % RSD | 9.5 | | ≤ 15 | 0.290 | | 0.01 |
| cis-1,3-Dichloropropene | MS | AverageRF | % RSD | 6.7 | | ≤ 15 | 0.935 | | 0.01 |
| Cyclohexane | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.365 | | 0.01 |
| Dibromochloromethane | MS | AverageRF | % RSD | 6.2 | | ≤ 15 | 0.445 | | 0.01 |
| Dibromofluoromethane | SURR | AverageRF | % RSD | 0.8 | | ≤ 15 | 0.257 | | |
| Dichlorodifluoromethane | MS | Linear | R2 | 0.998 | | ≥ 0.99 | 0.164 | | 0.01 |
| ‡ Ethylbenzene | MS | AverageRF | % RSD | 10.6 | | ≤ 15 | 2.46 | | 0.01 |
| Isopropylbenzene | MS | AverageRF | % RSD | 9.0 | | ≤ 15 | 2.14 | | 0.01 |
| m,p-Xylenes | MS | AverageRF | % RSD | 14.9 | | ≤ 15 | 1.73 | | 0.01 |
| Methyl Acetate | MS | AverageRF | % RSD | 4.1 | | ≤ 15 | 0.290 | | 0.01 |
| Methyl tert-Butyl Ether | MS | AverageRF | % RSD | 7.3 | | ≤ 15 | 0.358 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012

## Initial Calibration Summary
## Volatile Organic Compounds by GC/MS

**ICAL ID:** CAL2752
**Instrument ID:** MS53

**Column:** MS

| Analyte Name | Compound Type | Calibration Evaluation | | | | | RRF Evaluation | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval. | Eval. Result | Q | Control Criteria | Average RRF | Q | Minimum RRF |
| Methylene Chloride | MS | AverageRF | % RSD | 8.3 | | ≤ 15 | 0.251 | | 0.01 |
| o-Xylene | MS | AverageRF | % RSD | 11.2 | | ≤ 15 | 1.81 | | 0.01 |
| Styrene | MS | AverageRF | % RSD | 9.4 | | ≤ 15 | 1.52 | | 0.01 |
| Tetrachloroethene (PCE) | MS | AverageRF | % RSD | 11.3 | | ≤ 15 | 0.451 | | 0.01 |
| ‡ Toluene | MS | AverageRF | % RSD | 9.9 | | ≤ 15 | 2.38 | | 0.01 |
| Toluene-d8 | SURR | AverageRF | % RSD | 2.1 | | ≤ 15 | 2.42 | | |
| trans-1,2-Dichloroethene | MS | AverageRF | % RSD | 11.5 | | ≤ 15 | 0.307 | | 0.01 |
| trans-1,3-Dichloropropene | MS | AverageRF | % RSD | 6.5 | | ≤ 15 | 0.661 | | 0.01 |
| Trichloroethene (TCE) | MS | AverageRF | % RSD | 10.0 | | ≤ 15 | 0.209 | | 0.01 |
| Trichlorofluoromethane | MS | AverageRF | % RSD | 14.3 | | ≤ 15 | 0.196 | | 0.01 |
| Trichlorotrifluoroethane | MS | AverageRF | % RSD | 13.8 | | ≤ 15 | 0.183 | | 0.01 |
| ‡ Vinyl Chloride | MS | Linear | R2 | 1.000 | | ≥ 0.99 | 0.242 | | 0.01 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012
**Date Analyzed:** 03/07/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2752
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120307\0307-16.D

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 21 | 0.489 | 0.523 | 7 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 21 | 0.221 | 0.234 | 6 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 22 | 0.728 | 0.785 | 8 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 21 | 0.363 | 0.386 | 6 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 21 | 0.391 | 0.419 | 7 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 23 | 0.230 | 0.261 | 13 | NA | ± 30 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 20 | 0.351 | 0.349 | 0 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 20 | 0.532 | 0.523 | -2 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 19 | 0.0760 | 0.0717 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 21 | 0.403 | 0.427 | 6 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 22 | 1.09 | 1.19 | 10 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 21 | 0.139 | 0.142 | 3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.227 | 0.240 | 6 | NA | ± 30 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 22 | 1.20 | 1.35 | 12 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 22 | 1.22 | 1.33 | 9 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 110 | 0.0121 | 0.0131 | 8 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.271 | 0.280 | 3 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 110 | 0.410 | 0.432 | 5 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.0296 | 0.0276 | -7 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 22 | 0.899 | 0.979 | 9 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 21 | 0.135 | 0.143 | 6 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.231 | 0.244 | 5 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 22 | 0.218 | 0.239 | 10 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 22 | 0.176 | 0.192 | 9 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.689 | 0.795 | 15 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 19 | 0.172 | 0.181 | NA | -3 | ± 30 % | Linear |
| Chlorobenzene | 20 | 22 | 1.48 | 1.62 | 10 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 22 | 0.161 | 0.175 | 9 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 21 | 0.345 | 0.364 | 6 | NA | ± 30 % | AverageRF |
| Chloromethane | 20 | 22 | 0.323 | 0.351 | 9 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.290 | 0.306 | 6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 21 | 0.935 | 0.996 | 6 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.365 | 0.398 | NA | 0 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 21 | 0.445 | 0.478 | 7 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 18 | 0.164 | 0.164 | NA | -11 | ± 30 % | Linear |
| Ethylbenzene | 20 | 23 | 2.46 | 2.81 | 14 | NA | ± 30 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 2.14 | 2.41 | 13 | NA | ± 30 % | AverageRF |
| m,p-Xylenes | 40 | 47 | 1.73 | 2.03 | 17 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 21 | 0.290 | 0.301 | 4 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.358 | 0.363 | 2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 22 | 0.251 | 0.271 | 8 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† SPCC Compound ‡ CCC Compound

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**ICAL Date:** 03/07/2012
**Date Analyzed:** 03/07/2012

## Second Source Calibration Verification
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL ID:** CAL2752
**Units:** ug/L

| Analyte Name | Expected | Result | Average RF | SSV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| o-Xylene | 20 | 23 | 1.81 | 2.07 | 14 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 22 | 1.52 | 1.70 | 12 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 23 | 0.451 | 0.515 | 14 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 23 | 2.38 | 2.71 | 14 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 21 | 0.307 | 0.328 | 7 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 21 | 0.661 | 0.696 | 5 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 22 | 0.209 | 0.229 | 10 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 21 | 0.196 | 0.206 | 5 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 22 | 0.183 | 0.199 | 9 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.242 | 0.264 | NA | -2 | ± 30 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 02/27/2012
**ICAL ID:** CAL2756
**Analysis Lot:** JWG1200306
**Units:** ug/L

**File ID:** J:\MS52\DATA\MS52-120322\0322-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 18 | 0.01 | 1.21 | 1.10 | -9 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 18 | 0.01 | 0.786 | 0.715 | -9 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 1.01 | 0.998 | -1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.675 | 0.656 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 19 | 0.1 | 0.745 | 0.708 | -5 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 17 | 0.01 | 0.629 | 0.526 | -16 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 1.69 | 1.63 | -4 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 19 | 0.01 | 1.92 | 1.86 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 18 | 0.01 | 0.232 | 0.213 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.878 | 0.824 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 18 | 0.01 | 2.42 | 2.22 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 18 | 0.01 | 0.536 | 0.491 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 50 | | 0.251 | 0.251 | 0 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 19 | 0.01 | 0.396 | 0.378 | -4 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 19 | 0.01 | 2.67 | 2.49 | -7 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 18 | 0.01 | 2.65 | 2.44 | -8 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.126 | 0.129 | 3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 100 | 0.01 | 0.514 | 0.521 | 1 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 47 | | 0.918 | 0.861 | -6 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 100 | 0.01 | 0.729 | 0.733 | 1 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 98 | 0.01 | 0.0878 | 0.0782 | NA | -2 | ± 30 % | Linear |
| Benzene | 20 | 19 | 0.01 | 1.74 | 1.63 | -6 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 20 | 0.01 | 0.265 | 0.260 | -2 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 18 | 0.01 | 0.592 | 0.536 | -9 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 18 | 0.1 | 0.693 | 0.631 | -9 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.01 | 0.267 | 0.247 | -7 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.01 | 1.03 | 1.20 | 16 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 17 | 0.01 | 0.667 | 0.591 | NA | -17 | ± 30 % | Linear |
| Chlorobenzene | 20 | 19 | 0.3 | 3.32 | 3.19 | -4 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 19 | 0.01 | 0.302 | 0.288 | -4 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 18 | 0.01 | 0.828 | 0.729 | -12 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 17 | 0.1 | 0.551 | 0.480 | -13 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 19 | 0.01 | 0.573 | 0.541 | -6 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 19 | 0.01 | 1.71 | 1.63 | -5 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.684 | 0.674 | -2 | NA | ± 30 % | AverageRF |
| Dibromochloromethane | 20 | 18 | 0.01 | 1.09 | 0.995 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 50 | | 0.241 | 0.238 | -1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 18 | 0.01 | 0.554 | 0.489 | -12 | NA | ± 30 % | AverageRF |
| Ethylbenzene | 20 | 19 | 0.01 | 5.75 | 5.57 | -3 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 21 | 0.01 | 4.91 | 5.09 | 4 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/22/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 02/27/2012
**ICAL ID:** CAL2756
**Analysis Lot:** JWG1200306
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 39 | 0.01 | 4.53 | 4.39 | -3 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.510 | 0.509 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 1.08 | 1.05 | -2 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 17 | 0.01 | 0.533 | 0.395 | NA | -17 | ± 30 % | Linear |
| o-Xylene | 20 | 19 | 0.01 | 4.72 | 4.49 | -5 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 3.52 | 3.47 | -1 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 20 | 0.01 | 1.13 | 1.12 | -1 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 19 | 0.01 | 5.02 | 4.81 | -4 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 51 | | 2.48 | 2.51 | 1 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 18 | 0.01 | 0.609 | 0.556 | -9 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 18 | 0.01 | 1.58 | 1.46 | -8 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 19 | 0.01 | 0.516 | 0.490 | -5 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 18 | 0.01 | 0.810 | 0.722 | -11 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 17 | 0.01 | 0.405 | 0.353 | -13 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.01 | 0.434 | 0.432 | -1 | NA | ± 20 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200322
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120330\0330-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 19 | 0.01 | 0.489 | 0.459 | -6 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.208 | -6 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.719 | -1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.354 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 20 | 0.1 | 0.391 | 0.398 | 2 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.01 | 0.230 | 0.256 | 11 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 18 | 0.01 | 0.351 | 0.323 | -8 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.468 | -12 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 15 | 0.01 | 0.0760 | 0.0577 | -24 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.403 | 0.373 | -7 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 20 | 0.01 | 1.09 | 1.08 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.01 | 0.139 | 0.136 | -2 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 49 | | 0.145 | 0.144 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.238 | 5 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 0.01 | 1.20 | 1.22 | 2 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 21 | 0.01 | 1.22 | 1.26 | 3 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.0121 | 0.0127 | 5 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 94 | 0.01 | 0.271 | 0.254 | -6 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 54 | | 0.917 | 0.993 | 8 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.384 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 93 | 0.01 | 0.0296 | 0.0274 | -7 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 21 | 0.01 | 0.899 | 0.927 | 3 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.132 | -3 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 20 | 0.01 | 0.231 | 0.228 | -2 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 18 | 0.1 | 0.218 | 0.201 | -8 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 18 | 0.01 | 0.176 | 0.162 | -8 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 0.01 | 0.689 | 0.769 | 12 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 17 | 0.01 | 0.172 | 0.159 | NA | -15 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.45 | -2 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 20 | 0.01 | 0.161 | 0.160 | 0 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.01 | 0.345 | 0.338 | -2 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.378 | 17 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.290 | 0.296 | 2 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.934 | 0 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.387 | NA | -2 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 19 | 0.01 | 0.445 | 0.411 | -8 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 49 | | 0.257 | 0.254 | -1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.194 | NA | 6 | ± 30 % | Linear |
| Ethylbenzene | 20 | 20 | 0.01 | 2.46 | 2.49 | 1 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 0.01 | 2.14 | 2.50 | 17 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 03/30/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200322
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.76 | 2 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.290 | 0.290 | 0 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.357 | 0 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 20 | 0.01 | 0.251 | 0.252 | 0 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 20 | 0.01 | 1.81 | 1.80 | -1 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.50 | -1 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.428 | -5 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.33 | -2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.32 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.299 | -2 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 19 | 0.01 | 0.661 | 0.637 | -4 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.207 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.191 | -2 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 20 | 0.01 | 0.183 | 0.183 | 0 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 21 | 0.01 | 0.242 | 0.278 | NA | 3 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200326
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120402\0402-02.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 19 | 0.01 | 0.489 | 0.460 | -6 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.212 | -4 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.729 | 0 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.352 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 20 | 0.1 | 0.391 | 0.399 | 2 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 23 | 0.01 | 0.230 | 0.263 | 14 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 0.351 | 0.329 | -6 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.470 | -12 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 16 | 0.01 | 0.0760 | 0.0614 | -19 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 18 | 0.01 | 0.403 | 0.371 | -8 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 19 | 0.01 | 1.09 | 1.02 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 19 | 0.01 | 0.139 | 0.132 | -5 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 47 | | 0.145 | 0.137 | -6 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.237 | 5 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 20 | 0.01 | 1.20 | 1.21 | 1 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 20 | 0.01 | 1.22 | 1.21 | -1 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 97 | 0.01 | 0.0121 | 0.0118 | -3 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 92 | 0.01 | 0.271 | 0.249 | -8 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 53 | | 0.917 | 0.967 | 5 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.386 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 88 | 0.01 | 0.0296 | 0.0261 | -12 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 21 | 0.01 | 0.899 | 0.965 | 7 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.129 | -5 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 20 | 0.01 | 0.231 | 0.234 | 1 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.1 | 0.218 | 0.211 | -3 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 19 | 0.01 | 0.176 | 0.165 | -6 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 120 | 0.01 | 0.689 | 0.804 | 17 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 18 | 0.01 | 0.172 | 0.170 | NA | -9 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.46 | -1 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 20 | 0.01 | 0.161 | 0.163 | 1 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 20 | 0.01 | 0.345 | 0.336 | -2 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.375 | 16 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 21 | 0.01 | 0.290 | 0.305 | 5 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.946 | 1 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.392 | NA | -1 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 18 | 0.01 | 0.445 | 0.407 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 50 | | 0.257 | 0.259 | 1 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.191 | NA | 5 | ± 30 % | Linear |
| Ethylbenzene | 20 | 19 | 0.01 | 2.46 | 2.36 | -4 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 23 | 0.01 | 2.14 | 2.43 | 13 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/02/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200326
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.76 | 2 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 20 | 0.01 | 0.290 | 0.283 | -2 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.360 | 1 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 21 | 0.01 | 0.251 | 0.261 | 4 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 21 | 0.01 | 1.81 | 1.87 | 3 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.52 | 0 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.429 | -5 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.42 | 2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.32 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.309 | 1 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.661 | 0.653 | -1 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.208 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.194 | -1 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 20 | 0.01 | 0.183 | 0.186 | 2 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 20 | 0.01 | 0.242 | 0.276 | NA | 2 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200334
**Units:** ug/L

**File ID:** J:\MS53\DATA\MS53-120403\0403-03.D

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20 | 18 | 0.01 | 0.489 | 0.451 | -8 | NA | ± 30 % | AverageRF |
| 1,1,1-Trichloroethane (TCA) | 20 | 19 | 0.01 | 0.221 | 0.210 | -5 | NA | ± 30 % | AverageRF |
| 1,1,2,2-Tetrachloroethane | 20 | 20 | 0.3 | 0.728 | 0.734 | 1 | NA | ± 30 % | AverageRF |
| 1,1,2-Trichloroethane | 20 | 19 | 0.01 | 0.363 | 0.354 | -3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethane | 20 | 21 | 0.1 | 0.391 | 0.401 | 3 | NA | ± 30 % | AverageRF |
| 1,1-Dichloroethene | 20 | 22 | 0.01 | 0.230 | 0.251 | 9 | NA | ± 20 % | AverageRF |
| 1,2,3-Trichlorobenzene | 20 | 19 | 0.01 | 0.351 | 0.329 | -6 | NA | ± 30 % | AverageRF |
| 1,2,4-Trichlorobenzene | 20 | 18 | 0.01 | 0.532 | 0.481 | -10 | NA | ± 30 % | AverageRF |
| 1,2-Dibromo-3-chloropropane (DBCP | 20 | 16 | 0.01 | 0.0760 | 0.0607 | -20 | NA | ± 30 % | AverageRF |
| 1,2-Dibromoethane (EDB) | 20 | 19 | 0.01 | 0.403 | 0.375 | -7 | NA | ± 30 % | AverageRF |
| 1,2-Dichlorobenzene | 20 | 19 | 0.01 | 1.09 | 1.05 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane (EDC) | 20 | 20 | 0.01 | 0.139 | 0.137 | -1 | NA | ± 30 % | AverageRF |
| 1,2-Dichloroethane-d4 | 50 | 48 | | 0.145 | 0.140 | -3 | NA | ± 30 % | AverageRF |
| 1,2-Dichloropropane | 20 | 21 | 0.01 | 0.227 | 0.233 | 3 | NA | ± 20 % | AverageRF |
| 1,3-Dichlorobenzene | 20 | 21 | 0.01 | 1.20 | 1.23 | 3 | NA | ± 30 % | AverageRF |
| 1,4-Dichlorobenzene | 20 | 20 | 0.01 | 1.22 | 1.20 | -2 | NA | ± 30 % | AverageRF |
| 2-Butanone (MEK) | 100 | 100 | 0.01 | 0.0121 | 0.0124 | 2 | NA | ± 30 % | AverageRF |
| 2-Hexanone | 100 | 93 | 0.01 | 0.271 | 0.252 | -7 | NA | ± 30 % | AverageRF |
| 4-Bromofluorobenzene | 50 | 51 | | 0.917 | 0.942 | 3 | NA | ± 30 % | AverageRF |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94 | 0.01 | 0.410 | 0.385 | -6 | NA | ± 30 % | AverageRF |
| Acetone | 100 | 92 | 0.01 | 0.0296 | 0.0273 | -8 | NA | ± 30 % | AverageRF |
| Benzene | 20 | 20 | 0.01 | 0.899 | 0.915 | 2 | NA | ± 30 % | AverageRF |
| Bromochloromethane | 20 | 19 | 0.01 | 0.135 | 0.128 | -5 | NA | ± 30 % | AverageRF |
| Bromodichloromethane | 20 | 21 | 0.01 | 0.231 | 0.238 | 3 | NA | ± 30 % | AverageRF |
| Bromoform | 20 | 19 | 0.1 | 0.218 | 0.202 | -7 | NA | ± 30 % | AverageRF |
| Bromomethane | 20 | 18 | 0.01 | 0.176 | 0.157 | -11 | NA | ± 30 % | AverageRF |
| Carbon Disulfide | 100 | 110 | 0.01 | 0.689 | 0.769 | 12 | NA | ± 30 % | AverageRF |
| Carbon Tetrachloride | 20 | 18 | 0.01 | 0.172 | 0.166 | NA | -11 | ± 30 % | Linear |
| Chlorobenzene | 20 | 20 | 0.3 | 1.48 | 1.45 | -2 | NA | ± 30 % | AverageRF |
| Chloroethane | 20 | 21 | 0.01 | 0.161 | 0.165 | 3 | NA | ± 30 % | AverageRF |
| Chloroform | 20 | 19 | 0.01 | 0.345 | 0.329 | -5 | NA | ± 20 % | AverageRF |
| Chloromethane | 20 | 23 | 0.1 | 0.323 | 0.369 | 14 | NA | ± 30 % | AverageRF |
| cis-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.290 | 0.289 | 0 | NA | ± 30 % | AverageRF |
| cis-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.935 | 0.922 | -1 | NA | ± 30 % | AverageRF |
| Cyclohexane | 20 | 20 | 0.01 | 0.365 | 0.392 | NA | -1 | ± 30 % | Linear |
| Dibromochloromethane | 20 | 18 | 0.01 | 0.445 | 0.406 | -9 | NA | ± 30 % | AverageRF |
| Dibromofluoromethane | 50 | 48 | | 0.257 | 0.248 | -4 | NA | ± 30 % | AverageRF |
| Dichlorodifluoromethane | 20 | 21 | 0.01 | 0.164 | 0.189 | NA | 4 | ± 30 % | Linear |
| Ethylbenzene | 20 | 20 | 0.01 | 2.46 | 2.51 | 2 | NA | ± 20 % | AverageRF |
| Isopropylbenzene | 20 | 22 | 0.01 | 2.14 | 2.38 | 11 | NA | ± 30 % | AverageRF |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

**Client:** GeoSyntec Consultants
**Project:** KSC CRHE/FR1681

**Service Request:** J1201360
**Date Analyzed:** 04/03/2012

## Continuing Calibration Verification Summary
## Volatile Organic Compounds by GC/MS

**ICAL Type:** Internal Standard
**Analysis Method:** 8260B

**ICAL Date:** 03/07/2012
**ICAL ID:** CAL2752
**Analysis Lot:** JWG1200334
**Units:** ug/L

| Analyte Name | Expected | Result | Min RF | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 40 | 41 | 0.01 | 1.73 | 1.78 | 3 | NA | ± 30 % | AverageRF |
| Methyl Acetate | 20 | 19 | 0.01 | 0.290 | 0.272 | -6 | NA | ± 30 % | AverageRF |
| Methyl tert-Butyl Ether | 20 | 20 | 0.01 | 0.358 | 0.358 | 0 | NA | ± 30 % | AverageRF |
| Methylene Chloride | 20 | 20 | 0.01 | 0.251 | 0.246 | -2 | NA | ± 30 % | AverageRF |
| o-Xylene | 20 | 20 | 0.01 | 1.81 | 1.82 | 0 | NA | ± 30 % | AverageRF |
| Styrene | 20 | 20 | 0.01 | 1.52 | 1.51 | 0 | NA | ± 30 % | AverageRF |
| Tetrachloroethene (PCE) | 20 | 19 | 0.01 | 0.451 | 0.420 | -7 | NA | ± 30 % | AverageRF |
| Toluene | 20 | 20 | 0.01 | 2.38 | 2.44 | 2 | NA | ± 20 % | AverageRF |
| Toluene-d8 | 50 | 48 | | 2.42 | 2.31 | -4 | NA | ± 30 % | AverageRF |
| trans-1,2-Dichloroethene | 20 | 20 | 0.01 | 0.307 | 0.304 | -1 | NA | ± 30 % | AverageRF |
| trans-1,3-Dichloropropene | 20 | 20 | 0.01 | 0.661 | 0.651 | -2 | NA | ± 30 % | AverageRF |
| Trichloroethene (TCE) | 20 | 20 | 0.01 | 0.209 | 0.206 | -1 | NA | ± 30 % | AverageRF |
| Trichlorofluoromethane | 20 | 20 | 0.01 | 0.196 | 0.191 | -2 | NA | ± 30 % | AverageRF |
| Trichlorotrifluoroethane | 20 | 21 | 0.01 | 0.183 | 0.192 | 5 | NA | ± 30 % | AverageRF |
| Vinyl Chloride | 20 | 21 | 0.01 | 0.242 | 0.280 | NA | 3 | ± 20 % | Linear |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

† **SPCC Compound** ‡ **CCC Compound**

# Organic Analysis:
# Volatile Organic Compounds by GC/MS

## Validation Package

## Sample Prep and Screen Data



p:\Stealth\Crystal.rpt\DividerF.rpt

# *Preparation Information*

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200305 | **Prep Method:** | EPA 5035 | **Prep Date:** | 03/22/12 09:17 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Client ID | Product | Matrix | Amt. Ext. | Final Vol. | Solids |
|---|---|---|---|---|---|---|
| J1201360-025 | CRHE-188849-IDW-0321201 | 8260B | SOIL | 5.9300g | 5mL | 84 |
| J1201360-026 | CRHE-188797-IDW-0321201 | 8260B | SOIL | 5.1200g | 5mL | 88 |
| J1201360-027 | CRHE-188842-IDW-0321201 | 8260B | SOIL | 5.9600g | 5mL | 83 |
| J1201360-028 | CRHE-188838-IDW-0321201 | 8260B | SOIL | 5.3500g | 5mL | 81 |
| JWG1200305-1 | Lab Control Sample | 8260B | SOIL | 5.00g | 5ml | 100 |
| JWG1200305-2 | Method Blank | 8260B | SOIL | 5.00g | 5ml | 100 |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201360-025 | 264703 | 42346 | 1uL | | | |
| J1201360-026 | 264704 | 42346 | 1uL | | | |
| J1201360-027 | 264705 | 42346 | 1uL | | | |
| J1201360-028 | 264706 | 42346 | 1uL | | | |
| JWG1200305-1 | 264707 | 42346 | 1uL | 42183/40123 | 20uL | |
| JWG1200305-2 | 264708 | 42346 | 1uL | | | |

**Comments:** _____

Started By: SAllen Assisted By: _____ Training Yes No

Completed By: SAllen Assisted By: _____ Yes No

Reviewed By: _____ Date: _____ Storage: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

# *Preparation Information*

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200321 | **Prep Method:** | EPA 5030B | **Prep Date:** | 03/30/12 10:42 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Client ID | Product | Matrix | Amt. Ext. | Final Vol. |
|---|---|---|---|---|---|
| J1201360-001 | CRHE-MW0032-045.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-002 | CRHE-MW0030-010.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-003 | CRHE-MW0023-065.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-004 | CRHE-MW0031-045.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-005 | CRHE-IW0020I-045.0-03192 | 8260B | WATER | 10ml | 10ml |
| J1201360-006 | CRHE-MW0039-030.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-007 | CRHE-MW0038-010.0-0319: | 8260B | WATER | 10ml | 10ml |
| J1201360-008 | EB01-03192012 | 8260B | WATER | 10ml | 10ml |
| J1201360-009 | CRHE-IW0015I-040.0-03192 | 8260B | WATER | 10ml | 10ml |
| J1201360-010 | CRHE-MW0034-038.5-0320: | 8260B | WATER | 10ml | 10ml |
| J1201360-011 | CRHE-IW0019I-040.0-03202 | 8260B | WATER | 10ml | 10ml |
| J1201360-012 | CRHE-MW0033-048.5-0320: | 8260B | WATER | 10ml | 10ml |
| J1201360-013 | CRHE-IW0021I-045.0-03202 | 8260B | WATER | 10ml | 10ml |
| J1201360-014 | CRHE-MW0035-045.0-0320: | 8260B | WATER | 10ml | 10ml |
| J1201360-015 | CRHE-MW0028-040.0-0320: | 8260B | WATER | 10ml | 10ml |
| J1201360-016 | CRHE-MW0037-030.0-0320: | 8260B | WATER | 10ml | 10ml |
| J1201360-017 | CRHE-IW0017I-030.0-03202 | 8260B | WATER | 10ml | 10ml |
| JWG1200321-1 | Lab Control Sample | 8260B | WATER | 10ml | 10ml |
| JWG1200321-2 | Method Blank | 8260B | WATER | 10ml | 10ml |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201360-001 | 264821 | 40951 | 1uL | | | |
| J1201360-002 | 264822 | 40951 | 1uL | | | |
| J1201360-003 | 264823 | 40951 | 1uL | | | |
| J1201360-004 | 264824 | 40951 | 1uL | | | |
| J1201360-005 | 264825 | 40951 | 1uL | | | |
| J1201360-006 | 264826 | 40951 | 1uL | | | |
| J1201360-007 | 264827 | 40951 | 1uL | | | |
| J1201360-008 | 264828 | 40951 | 1uL | | | |
| J1201360-009 | 264829 | 40951 | 1uL | | | |
| J1201360-010 | 264830 | 40951 | 1uL | | | |
| J1201360-011 | 264831 | 40951 | 1uL | | | |
| J1201360-012 | 264832 | 40951 | 1uL | | | |
| J1201360-013 | 264833 | 40951 | 1uL | | | |
| J1201360-014 | 264834 | 40951 | 1uL | | | |
| J1201360-015 | 264835 | 40951 | 1uL | | | |

**Comments:**

Started By: SAllen Assisted By: _____ Training: Yes No

Completed By: SAllen Assisted By: _____ Yes No

Reviewed By: _____ Date: _____ Storage: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined: Yes No

Received By: _____ Date: _____

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200321 | **Prep Method:** | EPA 5030B | **Prep Date:** | 03/30/12 10:42 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201360-016 | 264836 | 40951 | 1uL | | | |
| J1201360-017 | 264837 | 40951 | 1uL | | | |
| JWG1200321-1 | 264838 | 40951 | 1uL | 42546/40123 | 20uL | |
| JWG1200321-2 | 264839 | 40951 | 1uL | | | |

**Comments**

Started By: SAllen Assisted By: Training Yes No

Completed By: SAllen Assisted By: Yes No

Reviewed By: Date: Storage:

Chain of Custody

Relinquished By: Date:

Received By: Date: Extracts Examined Yes No

# *Preparation Information*

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200325 | **Prep Method:** | EPA 5030B | **Prep Date:** | 04/02/12 08:51 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Client ID | Product | Matrix | Amt. Ext. | Final Vol. |
|---|---|---|---|---|---|
| J1201360-001 | CRHE-MW0032-045.0-0319 | 8260B | WATER | 10ml | 10ml |
| J1201360-004 | CRHE-MW0031-045.0-0319 | 8260B | WATER | 10ml | 10ml |
| J1201360-005 | CRHE-IW0020I-045.0-03192 | 8260B | WATER | 10ml | 10ml |
| J1201360-006 | CRHE-MW0039-030.0-0319 | 8260B | WATER | 10ml | 10ml |
| J1201360-010 | CRHE-MW0034-038.5-0320 | 8260B | WATER | 10ml | 10ml |
| J1201360-011 | CRHE-IW0019I-040.0-03202 | 8260B | WATER | 10ml | 10ml |
| J1201360-014 | CRHE-MW0035-045.0-0320 | 8260B | WATER | 10ml | 10ml |
| J1201360-015 | CRHE-MW0028-040.0-0320 | 8260B | WATER | 10ml | 10ml |
| J1201360-017 | CRHE-IW0017I-030.0-03202 | 8260B | WATER | 10ml | 10ml |
| J1201360-018 | CRHE-IW0014I-040.0-03212 | 8260B | WATER | 10ml | 10ml |
| J1201360-019 | CRHE-MW0029-045.0-0321 | 8260B | WATER | 10ml | 10ml |
| J1201360-020 | CRHE-MW0026-035.0-0321 | 8260B | WATER | 10ml | 10ml |
| J1201360-021 | CRHE-MW0022-065.0-0321 | 8260B | WATER | 10ml | 10ml |
| J1201360-022 | CRHE-MW0027-045.0-0321 | 8260B | WATER | 10ml | 10ml |
| J1201360-023 | CRHE-MW0024-010.0-0321 | 8260B | WATER | 10ml | 10ml |
| J1201360-029 | Trip Blank | 8260B | WATER | 10ml | 10ml |
| JWG1200325-1 | Lab Control Sample | 8260B | WATER | 10ml | 10ml |
| JWG1200325-2 | Method Blank | 8260B | WATER | 10ml | 10ml |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201360-001 | 264845 | 40951 | 1uL | | | |
| J1201360-004 | 264846 | 40951 | 1uL | | | |
| J1201360-005 | 264847 | 40951 | 1uL | | | |
| J1201360-006 | 264848 | 40951 | 1uL | | | |
| J1201360-010 | 264849 | 40951 | 1uL | | | |
| J1201360-011 | 264850 | 40951 | 1uL | | | |
| J1201360-014 | 264851 | 40951 | 1uL | | | |
| J1201360-015 | 264852 | 40951 | 1uL | | | |
| J1201360-017 | 264853 | 40951 | 1uL | | | |
| J1201360-018 | 264854 | 40951 | 1uL | | | |
| J1201360-019 | 264855 | 40951 | 1uL | | | |
| J1201360-020 | 264856 | 40951 | 1uL | | | |
| J1201360-021 | 264857 | 40951 | 1uL | | | |
| J1201360-022 | 264858 | 40951 | 1uL | | | |
| J1201360-023 | 264843 | 40951 | 1uL | | | |
| J1201360-029 | 264844 | 40951 | 1uL | | | |

**Comments:**

Started By: SAllen  Assisted By: _____  Training: Yes / No

Completed By: SAllen  Assisted By: _____  Yes / No

Reviewed By: _____  Date: _____  Storage: _____

Chain of Custody

Relinquished By: _____  Date: _____  Extracts Examined: Yes / No

Received By: _____  Date: _____

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200325 | **Prep Method:** | EPA 5030B | **Prep Date:** | 04/02/12 08:51 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| JWG1200325-1 | 264859 | 40951 | 1uL | 42546/42796 | 20uL | |
| JWG1200325-2 | 264860 | 40951 | 1uL | | | |

**Comments:**

Started By: SAllen Assisted By: Training Yes No

Completed By: SAllen Assisted By: Yes No

Reviewed By: Date: Storage:

Chain of Custody

Relinquished By: Date: Extracts Examined

Received By: Date: Yes No

# *Preparation Information*

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200333 | **Prep Method:** | EPA 5030B | **Prep Date:** | 04/03/12 10:53 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Client ID | Product | Matrix | Amt. Ext. | Final Vol. |
|---|---|---|---|---|---|
| J1201360-018 | CRHE-IW0014I-040.0-03212 | 8260B | WATER | 10ml | 10ml |
| J1201360-019 | CRHE-MW0029-045.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-020 | CRHE-MW0026-035.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-021 | CRHE-MW0022-065.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-022 | CRHE-MW0027-045.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-024 | CRHE-MW0025-030.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-024 | CRHE-MW0025-030.0-0321[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201360-030 | CHRE-MW0036-010.0-0320[illegible] | 8260B | WATER | 10ml | 10ml |
| J1201388-017 | GAIN-FW-22B-02-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-018 | GAIN-FW-22B-01-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-019 | GAIN-FB-03-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-020 | GAIN-EB-03-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-021 | GAIN-Trip Blank-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-023 | GAIN-FW-29B-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-024 | GAIN-FW-99-032112 | 8260B | WATER | 10ml | 10ml |
| J1201388-025 | GAIN-FW-29C-032112 | 8260B | WATER | 10ml | 10ml |
| JWG1200333-1 | Matrix Spike | 8260B | WATER | 10ml | 10ml |
| JWG1200333-2 | Duplicate Matrix Spike | 8260B | WATER | 10ml | 10ml |
| JWG1200333-3 | Lab Control Sample | 8260B | WATER | 10ml | 10ml |
| JWG1200333-4 | Method Blank | 8260B | WATER | 10ml | 10ml |

| Lab Code | Parent Lab Code | Comments |
|---|---|---|
| JWG1200333-1 | J1201388-023 | |
| JWG1200333-2 | J1201388-023 | |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201360-018 | 264883 | 40951 | 1uL | | | |
| J1201360-019 | 264884 | 40951 | 1uL | | | |
| J1201360-020 | 264885 | 40951 | 1uL | | | |
| J1201360-021 | 264886 | 40951 | 1uL | | | |
| J1201360-022 | 264887 | 40951 | 1uL | | | |
| J1201360-024 | 264881 | 40951 | 1uL | | | |
| J1201360-024 | 264888 | 40951 | 1uL | | | |
| J1201360-030 | 264882 | 40951 | 1uL | | | |
| J1201388-017 | 264889 | 40951 | 1uL | | | |
| J1201388-018 | 264890 | 40951 | 1uL | | | |

**Comments:**

Started By: SAllen Assisted By: _____ Training: Yes No

Completed By: SAllen Assisted By: _____ Yes No

Reviewed By: _____ Date: _____ Storage: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined: Yes No

Received By: _____ Date: _____

| | | | | | |
|---|---|---|---|---|---|
| **Group ID:** | JWG1200333 | **Prep Method:** | EPA 5030B | **Prep Date:** | 04/03/12 10:53 |
| **Department:** | VolatileOrganic | | | | |

| Lab Code | Prep Event ID | Surrogate Solution ID | Amount Added | Spike Solution ID | Amount Added | Witness |
|---|---|---|---|---|---|---|
| J1201388-019 | 264891 | 40951 | 1uL | | | |
| J1201388-020 | 264892 | 40951 | 1uL | | | |
| J1201388-021 | 264893 | 40951 | 1uL | | | |
| J1201388-023 | 264894 | 40951 | 1uL | | | |
| J1201388-024 | 264895 | 40951 | 1uL | | | |
| J1201388-025 | 264896 | 40951 | 1uL | | | |
| JWG1200333-1 | 264897 | 40951 | 1uL | 42873/42796 | 20uL | |
| JWG1200333-2 | 264898 | 40951 | 1uL | 42873/42796 | 20uL | |
| JWG1200333-3 | 264899 | 40951 | 1uL | 42873/42796 | 20uL | |
| JWG1200333-4 | 264900 | 40951 | 1uL | | | |

**Comments:**

Started By: SAllen Assisted By: Training Yes No

Completed By: SAllen Assisted By: Yes No

Reviewed By: Date: Storage:

Chain of Custody

Relinquished By: Date: Extracts Examined

Received By: Date: Yes No

Southeast ACCUTEST LABORATORIES

12/26/13

Technical Report for

Geosyntec Consultants

Contractors Rd Heavy Equipment Area; KSC, FL

FR1681

Accutest Job Number: FA10890

Sampling Date: 12/11/13

Report to:

Geosyntec Consultants
316 S Baylen St Suite 201
Pensacola, FL 32502
jjohnson@geosyntec.com; elawson@geosyntec.com

ATTN: Jill Johnson

Total number of pages in report: **64**

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL (E83510), LA (03051), KS (E-10327), IA (366), IL (200063), NC (573), NJ (FL002), SC (96038001) DoD ELAP (L-A-B L2229), CA (04226CA), TX (T104704404), PA (68-03573), VA (460177), AK, AR, GA, KY, MA, NV, OK, UT, WA

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# Sample Summary

Geosyntec Consultants

**Job No:** FA10890

Contractors Rd Heavy Equipment Area; KSC, FL
Project No: FR1681

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| FA10890-1 | 12/11/13 | 18:00 | JB | 12/13/13 | AQ | Ground Water | CRHE-MW0025-030.0-20131211 |
| FA10890-2 | 12/11/13 | 15:04 | JB | 12/13/13 | AQ | Ground Water | CRHE-MW0035-045.0-20131211 |
| FA10890-3 | 12/11/13 | 16:02 | JB | 12/13/13 | AQ | Ground Water | CRHE-IW0019I-040.0-20131211 |
| FA10890-4 | 12/11/13 | 16:49 | JB | 12/13/13 | AQ | Ground Water | CRHE-MW0029-045.0-20131211 |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** Geosyntec Consultants **Job No:** FA10890

**Site:** Contractors Rd Heavy Equipment Area; KSC, FL **Report Date** 12/26/2013 5:25:38 PM

4 Samples were collected on 12/11/2013 and were received at Accutest SE on 12/13/2013 properly preserved, at 2.6 Deg. C and intact. These Samples received an Accutest job number of FA10890. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

## Volatiles by GCMS By Method SW846 8260B

**Matrix:** AQ **Batch ID:** VI249

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA10790-6MS, FA10790-6MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for 2-Chloroethyl vinyl ether, Methyl Tert Butyl Ether are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Matrix Spike Duplicate Recovery(s) for 2-Chloroethyl vinyl ether are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for 1,1,2-Trichloroethane are outside control limits. Outside control limits due to high level in sample relative to spike amount.

FA10890-1 for Carbon disulfide: Associated ICV outside control limits.

FA10890-1 for Methylene chloride: Suspected laboratory contaminant.

FA10890-2 for Carbon disulfide: Associated ICV outside control limits.

FA10890-3 for Carbon disulfide: Associated ICV outside control limits.

FA10890-3 for Methylene chloride: Suspected laboratory contaminant.

FA10890-4 for Carbon disulfide: Associated ICV outside control limits.

FA10890-4 for Methylene chloride: Suspected laboratory contaminant.

**Matrix:** AQ **Batch ID:** VI251

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA10935-5MS, FA10935-5MSD were used as the QC samples indicated.

## Volatiles by GCMS By Method SW846 8260B BY SIM

**Matrix:** AQ **Batch ID:** VZ858

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA10934-3MS, FA10934-3MSD were used as the QC samples indicated.

## Volatiles by GC By Method RSKSOP-147/175

**Matrix:** AQ **Batch ID:** GXY2532

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA10834-3MS, FA10834-5DUP were used as the QC samples indicated.

**Matrix:** AQ **Batch ID:** GXY2533

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA10933-2DUP, FA10933-2MS were used as the QC samples indicated.

## Wet Chemistry By Method EPA 300/SW846 9056A

**Matrix:** AQ **Batch ID:** GP23125

All samples were prepped within the recommended method holding time.
All samples were analyzed within the recommended method holding time.
All method blanks for this batch meet method specific criteria.
Sample(s) FA10701-1MS, FA10701-1MSD were used as the QC samples for Sulfate.
FA10890-1 for Sulfate: Dilution required due to matrix interference.
FA10890-2 for Sulfate: Dilution required due to matrix interference.
FA10890-4 for Sulfate: Dilution required due to matrix interference.

## Wet Chemistry By Method SM20 4500S F

**Matrix:** AQ **Batch ID:** GN59331

All samples were analyzed within the recommended method holding time.
All method blanks for this batch meet method specific criteria.
Sample(s) FA10834-1MS, FA10834-1MSD were used as the QC samples for Sulfide.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used

Narrative prepared by:

_____

Lovelie Metzgar, QA Officer (signature on file)

Date: December 26, 2013

# Summary of Hits



**Job Number:** FA10890
**Account:** Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL
**Collected:** 12/11/13



| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | PQL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| **FA10890-1** | **CRHE-MW0025-030.0-20131211** | | | | | |
| cis-1,2-Dichloroethylene | | 8900 | 200 | 47 | ug/l | SW846 8260B |
| trans-1,2-Dichloroethylene | | 97.6 I | 200 | 46 | ug/l | SW846 8260B |
| Methylene chloride [a] | | 576 I | 1000 | 400 | ug/l | SW846 8260B |
| Vinyl chloride | | 13100 | 200 | 88 | ug/l | SW846 8260B |
| 1,4-Dioxane | | 14.5 | 2.0 | 1.0 | ug/l | SW846 8260B BY SIM |
| Methane | | 1180 | 5.0 | 1.6 | ug/l | RSKSOP-147/175 |
| Ethane | | 382 | 1.0 | 0.32 | ug/l | RSKSOP-147/175 |
| Ethene | | 672 | 1.0 | 0.43 | ug/l | RSKSOP-147/175 |
| Sulfate [b] | | 7.8 I | 10 | 3.0 | mg/l | EPA 300/SW846 9056A |
| **FA10890-2** | **CRHE-MW0035-045.0-20131211** | | | | | |
| 1,1-Dichloroethane | | 0.35 I | 1.0 | 0.21 | ug/l | SW846 8260B |
| cis-1,2-Dichloroethylene | | 0.83 I | 1.0 | 0.24 | ug/l | SW846 8260B |
| trans-1,2-Dichloroethylene | | 2.3 | 1.0 | 0.23 | ug/l | SW846 8260B |
| Toluene | | 0.24 I | 1.0 | 0.20 | ug/l | SW846 8260B |
| Vinyl chloride | | 477 | 10 | 4.4 | ug/l | SW846 8260B |
| 1,4-Dioxane | | 3.9 | 2.0 | 1.0 | ug/l | SW846 8260B BY SIM |
| Methane | | 1260 | 5.0 | 1.6 | ug/l | RSKSOP-147/175 |
| Ethane | | 6.4 | 1.0 | 0.32 | ug/l | RSKSOP-147/175 |
| Ethene | | 331 | 1.0 | 0.43 | ug/l | RSKSOP-147/175 |
| Sulfide | | 0.55 I | 0.77 | 0.22 | mg/l | SM20 4500S F |
| **FA10890-3** | **CRHE-IW0019I-040.0-20131211** | | | | | |
| Chlorobenzene | | 1.0 I | 5.0 | 1.0 | ug/l | SW846 8260B |
| 1,1-Dichloroethylene | | 1.9 I | 5.0 | 1.0 | ug/l | SW846 8260B |
| cis-1,2-Dichloroethylene | | 510 | 20 | 4.7 | ug/l | SW846 8260B |
| trans-1,2-Dichloroethylene | | 10.8 | 5.0 | 1.1 | ug/l | SW846 8260B |
| Methylene chloride [a] | | 18.0 I | 25 | 10 | ug/l | SW846 8260B |
| Vinyl chloride | | 360 | 5.0 | 2.2 | ug/l | SW846 8260B |
| Methane | | 1870 | 2.0 | 0.64 | ug/l | RSKSOP-147/175 |
| Ethene | | 2.6 | 1.0 | 0.43 | ug/l | RSKSOP-147/175 |
| Sulfate | | 15.3 | 10 | 3.0 | mg/l | EPA 300/SW846 9056A |
| **FA10890-4** | **CRHE-MW0029-045.0-20131211** | | | | | |
| cis-1,2-Dichloroethylene | | 1650 | 20 | 4.7 | ug/l | SW846 8260B |
| trans-1,2-Dichloroethylene | | 31.8 | 20 | 4.6 | ug/l | SW846 8260B |
| Methylene chloride [a] | | 61.8 I | 100 | 40 | ug/l | SW846 8260B |
| Trichloroethylene | | 398 | 20 | 6.3 | ug/l | SW846 8260B |
| Vinyl chloride | | 339 | 20 | 8.8 | ug/l | SW846 8260B |
| 1,4-Dioxane | | 1.3 I | 2.0 | 1.0 | ug/l | SW846 8260B BY SIM |

# Summary of Hits

**Job Number:** FA10890
**Account:** Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL
**Collected:** 12/11/13



| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | PQL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Methane | | 1260 | 5.0 | 1.6 | ug/l | RSKSOP-147/175 |
| Ethane | | 15.5 | 1.0 | 0.32 | ug/l | RSKSOP-147/175 |
| Ethene | | 31.5 | 1.0 | 0.43 | ug/l | RSKSOP-147/175 |
| Sulfide | | 0.48 I | 0.77 | 0.22 | mg/l | SM20 4500S F |

(a) Suspected laboratory contaminant.
(b) Dilution required due to matrix interference.

Southeast ACCUTEST LABORATORIES

4

## Sample Results

Report of Analysis

# Report of Analysis





**Client Sample ID:** CRHE-MW0025-030.0-20131211
**Lab Sample ID:** FA10890-1
**Matrix:** AQ - Ground Water
**Method:** SW846 8260B BY SIM
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

**Date Sampled:** 12/11/13
**Date Received:** 12/13/13
**Percent Solids:** n/a

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | Z21397.D | 1 | 12/18/13 | KW | n/a | n/a | VZ858 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 123-91-1 | 1,4-Dioxane | 14.5 | 2.0 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-D4 | 104% | | 74-125% |
| 2037-26-5 | Toluene-D8 | 100% | | 88-111% |

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





**Client Sample ID:** CRHE-MW0025-030.0-20131211
**Lab Sample ID:** FA10890-1
**Matrix:** AQ - Ground Water
**Method:** SW846 8260B
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

**Date Sampled:** 12/11/13
**Date Received:** 12/13/13
**Percent Solids:** n/a

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | I16708.D | 200 | 12/23/13 | WV | n/a | n/a | VI249 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA 8260 List**

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | 2000 U | 5000 | 2000 | ug/l | |
| 107-02-8 | Acrolein | 1400 U | 4000 | 1400 | ug/l | |
| 107-13-1 | Acrylonitrile | 400 U | 2000 | 400 | ug/l | |
| 71-43-2 | Benzene | 42 U | 200 | 42 | ug/l | |
| 108-86-1 | Bromobenzene | 44 U | 200 | 44 | ug/l | |
| 74-97-5 | Bromochloromethane | 45 U | 200 | 45 | ug/l | |
| 75-27-4 | Bromodichloromethane | 40 U | 200 | 40 | ug/l | |
| 75-25-2 | Bromoform | 69 U | 200 | 69 | ug/l | |
| 104-51-8 | n-Butylbenzene | 40 U | 200 | 40 | ug/l | |
| 135-98-8 | sec-Butylbenzene | 42 U | 200 | 42 | ug/l | |
| 98-06-6 | tert-Butylbenzene | 59 U | 200 | 59 | ug/l | |
| 108-90-7 | Chlorobenzene | 40 U | 200 | 40 | ug/l | |
| 75-00-3 | Chloroethane | 100 U | 400 | 100 | ug/l | |
| 67-66-3 | Chloroform | 53 U | 200 | 53 | ug/l | |
| 95-49-8 | o-Chlorotoluene | 43 U | 200 | 43 | ug/l | |
| 106-43-4 | p-Chlorotoluene | 40 U | 200 | 40 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | 250 U | 1000 | 250 | ug/l | |
| 75-15-0 | Carbon disulfide [a] | 99 U | 400 | 99 | ug/l | |
| 56-23-5 | Carbon tetrachloride | 63 U | 200 | 63 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | 43 U | 200 | 43 | ug/l | |
| 75-35-4 | 1,1-Dichloroethylene | 40 U | 200 | 40 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | 50 U | 200 | 50 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 140 U | 400 | 140 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | 60 U | 200 | 60 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | 44 U | 200 | 44 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | 52 U | 200 | 52 | ug/l | |
| 142-28-9 | 1,3-Dichloropropane | 54 U | 200 | 54 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | 49 U | 200 | 49 | ug/l | |
| 124-48-1 | Dibromochloromethane | 40 U | 200 | 40 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | 100 U | 400 | 100 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethylene | 8900 | 200 | 47 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | 44 U | 200 | 44 | ug/l | |

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





**Client Sample ID:** CRHE-MW0025-030.0-20131211
**Lab Sample ID:** FA10890-1
**Matrix:** AQ - Ground Water
**Method:** SW846 8260B
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

**Date Sampled:** 12/11/13
**Date Received:** 12/13/13
**Percent Solids:** n/a

**VOA 8260 List**

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 541-73-1 | m-Dichlorobenzene | 51 U | 200 | 51 | ug/l | |
| 95-50-1 | o-Dichlorobenzene | 43 U | 200 | 43 | ug/l | |
| 106-46-7 | p-Dichlorobenzene | 40 U | 200 | 40 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethylene | 97.6 | 200 | 46 | ug/l | I |
| 10061-02-6 | trans-1,3-Dichloropropene | 42 U | 200 | 42 | ug/l | |
| 100-41-4 | Ethylbenzene | 58 U | 200 | 58 | ug/l | |
| 591-78-6 | 2-Hexanone | 400 U | 2000 | 400 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | 100 U | 400 | 100 | ug/l | |
| 98-82-8 | Isopropylbenzene | 40 U | 200 | 40 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | 40 U | 200 | 40 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone | 450 U | 1000 | 450 | ug/l | |
| 74-83-9 | Methyl bromide | 160 U | 400 | 160 | ug/l | |
| 74-87-3 | Methyl chloride | 100 U | 400 | 100 | ug/l | |
| 74-95-3 | Methylene bromide | 69 U | 400 | 69 | ug/l | |
| 75-09-2 | Methylene chloride [b] | 576 | 1000 | 400 | ug/l | I |
| 78-93-3 | Methyl ethyl ketone | 620 U | 1000 | 620 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 42 U | 200 | 42 | ug/l | |
| 91-20-3 | Naphthalene | 200 U | 1000 | 200 | ug/l | |
| 103-65-1 | n-Propylbenzene | 45 U | 200 | 45 | ug/l | |
| 100-42-5 | Styrene | 40 U | 200 | 40 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 46 U | 200 | 46 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 40 U | 200 | 40 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 48 U | 200 | 48 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | 40 U | 200 | 40 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | 100 U | 200 | 100 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | 110 U | 400 | 110 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | 100 U | 200 | 100 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 40 U | 400 | 40 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 40 U | 400 | 40 | ug/l | |
| 127-18-4 | Tetrachloroethylene | 64 U | 200 | 64 | ug/l | |
| 108-88-3 | Toluene | 40 U | 200 | 40 | ug/l | |
| 79-01-6 | Trichloroethylene | 63 U | 200 | 63 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | 100 U | 400 | 100 | ug/l | |
| 75-01-4 | Vinyl chloride | 13100 | 200 | 88 | ug/l | |
| 108-05-4 | Vinyl Acetate | 630 U | 2000 | 630 | ug/l | |
| | m,p-Xylene | 59 U | 400 | 59 | ug/l | |
| 95-47-6 | o-Xylene | 40 U | 200 | 40 | ug/l | |

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | CRHE-MW0025-030.0-20131211 | | |
| **Lab Sample ID:** | FA10890-1 | **Date Sampled:** | 12/11/13 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 12/13/13 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | Contractors Rd Heavy Equipment Area; KSC, FL | | |

**VOA 8260 List**

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 99% | | 83-118% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | | 79-125% |
| 2037-26-5 | Toluene-D8 | 97% | | 85-112% |
| 460-00-4 | 4-Bromofluorobenzene | 105% | | 83-118% |

(a) Associated ICV outside control limits.
(b) Suspected laboratory contaminant.

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





**Client Sample ID:** CRHE-MW0025-030.0-20131211
**Lab Sample ID:** FA10890-1
**Matrix:** AQ - Ground Water
**Method:** RSKSOP-147/175
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

**Date Sampled:** 12/11/13
**Date Received:** 12/13/13
**Percent Solids:** n/a

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | XY058916.D | 1 | 12/16/13 | SH | n/a | n/a | GXY2532 |
| Run #2 | XY058926.D | 10 | 12/16/13 | SH | n/a | n/a | GXY2532 |

| | Initial Volume | Headspace Volume | Volume Injected | Temperature |
|---|---|---|---|---|
| Run #1 | 38.0 ml | 5.0 ml | 500 ul | 21 Deg. C |
| Run #2 | 38.0 ml | 5.0 ml | 500 ul | 21 Deg. C |

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 74-82-8 | Methane | 1180 [a] | 5.0 | 1.6 | ug/l | |
| 74-84-0 | Ethane | 382 | 1.0 | 0.32 | ug/l | |
| 74-85-1 | Ethene | 672 | 1.0 | 0.43 | ug/l | |

(a) Result is from Run# 2

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | CRHE-MW0025-030.0-20131211 | | |
| **Lab Sample ID:** | FA10890-1 | **Date Sampled:** | 12/11/13 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 12/13/13 |
| | | **Percent Solids:** | n/a |
| **Project:** | Contractors Rd Heavy Equipment Area; KSC, FL | | |

**General Chemistry**

| Analyte | Result | PQL | MDL | Units | DF | Analyzed | By | Method |
|---|---|---|---|---|---|---|---|---|
| Sulfate [a] | 7.8 I | 10 | 3.0 | mg/l | 5 | 12/17/13 13:26 | AA | EPA 300/SW846 9056A |
| Sulfide | 0.22 U | 0.77 | 0.22 | mg/l | 1 | 12/16/13 10:50 | LE | SM20 4500S F |

(a) Dilution required due to matrix interference.

PQL = Practical Quantitation Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
I = Indicates a result > = MDL but < PQL

# Report of Analysis





**Client Sample ID:** CRHE-MW0035-045.0-20131211
**Lab Sample ID:** FA10890-2
**Matrix:** AQ - Ground Water
**Method:** SW846 8260B BY SIM
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

**Date Sampled:** 12/11/13
**Date Received:** 12/13/13
**Percent Solids:** n/a

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | Z21398.D | 1 | 12/18/13 | KW | n/a | n/a | VZ858 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 123-91-1 | 1,4-Dioxane | 3.9 | 2.0 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-D4 | 102% | | 74-125% |
| 2037-26-5 | Toluene-D8 | 99% | | 88-111% |

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





**Client Sample ID:** CRHE-MW0035-045.0-20131211
**Lab Sample ID:** FA10890-2
**Matrix:** AQ - Ground Water
**Method:** SW846 8260B
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

**Date Sampled:** 12/11/13
**Date Received:** 12/13/13
**Percent Solids:** n/a

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | I16709.D | 1 | 12/23/13 | WV | n/a | n/a | VI249 |
| Run #2 | I16767.D | 10 | 12/24/13 | WV | n/a | n/a | VI251 |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | 5.0 ml |

**VOA 8260 List**

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | 10 U | 25 | 10 | ug/l | |
| 107-02-8 | Acrolein | 6.9 U | 20 | 6.9 | ug/l | |
| 107-13-1 | Acrylonitrile | 2.0 U | 10 | 2.0 | ug/l | |
| 71-43-2 | Benzene | 0.21 U | 1.0 | 0.21 | ug/l | |
| 108-86-1 | Bromobenzene | 0.22 U | 1.0 | 0.22 | ug/l | |
| 74-97-5 | Bromochloromethane | 0.23 U | 1.0 | 0.23 | ug/l | |
| 75-27-4 | Bromodichloromethane | 0.20 U | 1.0 | 0.20 | ug/l | |
| 75-25-2 | Bromoform | 0.34 U | 1.0 | 0.34 | ug/l | |
| 104-51-8 | n-Butylbenzene | 0.20 U | 1.0 | 0.20 | ug/l | |
| 135-98-8 | sec-Butylbenzene | 0.21 U | 1.0 | 0.21 | ug/l | |
| 98-06-6 | tert-Butylbenzene | 0.29 U | 1.0 | 0.29 | ug/l | |
| 108-90-7 | Chlorobenzene | 0.20 U | 1.0 | 0.20 | ug/l | |
| 75-00-3 | Chloroethane | 0.50 U | 2.0 | 0.50 | ug/l | |
| 67-66-3 | Chloroform | 0.26 U | 1.0 | 0.26 | ug/l | |
| 95-49-8 | o-Chlorotoluene | 0.21 U | 1.0 | 0.21 | ug/l | |
| 106-43-4 | p-Chlorotoluene | 0.20 U | 1.0 | 0.20 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | 1.3 U | 5.0 | 1.3 | ug/l | |
| 75-15-0 | Carbon disulfide [a] | 0.49 U | 2.0 | 0.49 | ug/l | |
| 56-23-5 | Carbon tetrachloride | 0.31 U | 1.0 | 0.31 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | 0.35 | 1.0 | 0.21 | ug/l | I |
| 75-35-4 | 1,1-Dichloroethylene | 0.20 U | 1.0 | 0.20 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | 0.25 U | 1.0 | 0.25 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.71 U | 2.0 | 0.71 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | 0.30 U | 1.0 | 0.30 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | 0.22 U | 1.0 | 0.22 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | 0.26 U | 1.0 | 0.26 | ug/l | |
| 142-28-9 | 1,3-Dichloropropane | 0.27 U | 1.0 | 0.27 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | 0.25 U | 1.0 | 0.25 | ug/l | |
| 124-48-1 | Dibromochloromethane | 0.20 U | 1.0 | 0.20 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 U | 2.0 | 0.50 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethylene | 0.83 | 1.0 | 0.24 | ug/l | I |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 U | 1.0 | 0.22 | ug/l | |

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | CRHE-MW0035-045.0-20131211 | | |
| **Lab Sample ID:** | FA10890-2 | **Date Sampled:** | 12/11/13 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 12/13/13 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | Contractors Rd Heavy Equipment Area; KSC, FL | | |

**VOA 8260 List**

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 541-73-1 | m-Dichlorobenzene | 0.25 U | 1.0 | 0.25 | ug/l | |
| 95-50-1 | o-Dichlorobenzene | 0.22 U | 1.0 | 0.22 | ug/l | |
| 106-46-7 | p-Dichlorobenzene | 0.20 U | 1.0 | 0.20 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethylene | 2.3 | 1.0 | 0.23 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.21 U | 1.0 | 0.21 | ug/l | |
| 100-41-4 | Ethylbenzene | 0.29 U | 1.0 | 0.29 | ug/l | |
| 591-78-6 | 2-Hexanone | 2.0 U | 10 | 2.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | 0.50 U | 2.0 | 0.50 | ug/l | |
| 98-82-8 | Isopropylbenzene | 0.20 U | 1.0 | 0.20 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | 0.20 U | 1.0 | 0.20 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone | 2.3 U | 5.0 | 2.3 | ug/l | |
| 74-83-9 | Methyl bromide | 0.79 U | 2.0 | 0.79 | ug/l | |
| 74-87-3 | Methyl chloride | 0.50 U | 2.0 | 0.50 | ug/l | |
| 74-95-3 | Methylene bromide | 0.34 U | 2.0 | 0.34 | ug/l | |
| 75-09-2 | Methylene chloride | 2.0 U | 5.0 | 2.0 | ug/l | |
| 78-93-3 | Methyl ethyl ketone | 3.1 U | 5.0 | 3.1 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 0.21 U | 1.0 | 0.21 | ug/l | |
| 91-20-3 | Naphthalene | 1.0 U | 5.0 | 1.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 0.23 U | 1.0 | 0.23 | ug/l | |
| 100-42-5 | Styrene | 0.20 U | 1.0 | 0.20 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 0.23 U | 1.0 | 0.23 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.20 U | 1.0 | 0.20 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.24 U | 1.0 | 0.24 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | 0.20 U | 1.0 | 0.20 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.50 U | 1.0 | 0.50 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | 0.56 U | 2.0 | 0.56 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 U | 1.0 | 0.50 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 0.20 U | 2.0 | 0.20 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 0.20 U | 2.0 | 0.20 | ug/l | |
| 127-18-4 | Tetrachloroethylene | 0.32 U | 1.0 | 0.32 | ug/l | |
| 108-88-3 | Toluene | 0.24 | 1.0 | 0.20 | ug/l | I |
| 79-01-6 | Trichloroethylene | 0.31 U | 1.0 | 0.31 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | 0.50 U | 2.0 | 0.50 | ug/l | |
| 75-01-4 | Vinyl chloride | 477 [b] | 10 | 4.4 | ug/l | |
| 108-05-4 | Vinyl Acetate | 3.1 U | 10 | 3.1 | ug/l | |
| | m,p-Xylene | 0.30 U | 2.0 | 0.30 | ug/l | |
| 95-47-6 | o-Xylene | 0.20 U | 1.0 | 0.20 | ug/l | |

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | CRHE-MW0035-045.0-20131211 | | |
| **Lab Sample ID:** | FA10890-2 | **Date Sampled:** | 12/11/13 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 12/13/13 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | Contractors Rd Heavy Equipment Area; KSC, FL | | |

**VOA 8260 List**

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 99% | 100% | 83-118% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | 98% | 79-125% |
| 2037-26-5 | Toluene-D8 | 98% | 100% | 85-112% |
| 460-00-4 | 4-Bromofluorobenzene | 103% | 104% | 83-118% |

(a) Associated ICV outside control limits.
(b) Result is from Run# 2

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





**Client Sample ID:** CRHE-MW0035-045.0-20131211
**Lab Sample ID:** FA10890-2
**Matrix:** AQ - Ground Water
**Method:** RSKSOP-147/175
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

**Date Sampled:** 12/11/13
**Date Received:** 12/13/13
**Percent Solids:** n/a

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | XY058917.D | 1 | 12/16/13 | SH | n/a | n/a | GXY2532 |
| Run #2 | XY058927.D | 10 | 12/16/13 | SH | n/a | n/a | GXY2532 |

| | Initial Volume | Headspace Volume | Volume Injected | Temperature |
|---|---|---|---|---|
| Run #1 | 38.0 ml | 5.0 ml | 500 ul | 21 Deg. C |
| Run #2 | 38.0 ml | 5.0 ml | 500 ul | 21 Deg. C |

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 74-82-8 | Methane | 1260 [a] | 5.0 | 1.6 | ug/l | |
| 74-84-0 | Ethane | 6.4 | 1.0 | 0.32 | ug/l | |
| 74-85-1 | Ethene | 331 | 1.0 | 0.43 | ug/l | |

(a) Result is from Run# 2

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | CRHE-MW0035-045.0-20131211 | | |
| **Lab Sample ID:** | FA10890-2 | **Date Sampled:** | 12/11/13 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 12/13/13 |
| | | **Percent Solids:** | n/a |
| **Project:** | Contractors Rd Heavy Equipment Area; KSC, FL | | |

**General Chemistry**

| Analyte | Result | PQL | MDL | Units | DF | Analyzed | By | Method |
|---|---|---|---|---|---|---|---|---|
| Sulfate [a] | 6.0 U | 20 | 6.0 | mg/l | 10 | 12/17/13 13:42 | AA | EPA 300/SW846 9056A |
| Sulfide | 0.55 I | 0.77 | 0.22 | mg/l | 1 | 12/16/13 10:50 | LE | SM20 4500S F |

(a) Dilution required due to matrix interference.

PQL = Practical Quantitation Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
I = Indicates a result > = MDL but < PQL

# Report of Analysis





**Client Sample ID:** CRHE-IW0019I-040.0-20131211
**Lab Sample ID:** FA10890-3
**Matrix:** AQ - Ground Water
**Method:** SW846 8260B BY SIM
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

**Date Sampled:** 12/11/13
**Date Received:** 12/13/13
**Percent Solids:** n/a

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | Z21399.D | 1 | 12/18/13 | KW | n/a | n/a | VZ858 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 123-91-1 | 1,4-Dioxane | 1.0 U | 2.0 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-D4 | 103% | | 74-125% |
| 2037-26-5 | Toluene-D8 | 98% | | 88-111% |

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | CRHE-IW0019I-040.0-20131211 | | |
| **Lab Sample ID:** | FA10890-3 | **Date Sampled:** | 12/11/13 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 12/13/13 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | Contractors Rd Heavy Equipment Area; KSC, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | I16710.D | 5 | 12/23/13 | WV | n/a | n/a | VI249 |
| Run #2 | I16768.D | 20 | 12/24/13 | WV | n/a | n/a | VI251 |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | 5.0 ml |

**VOA 8260 List**

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | 50 U | 130 | 50 | ug/l | |
| 107-02-8 | Acrolein | 35 U | 100 | 35 | ug/l | |
| 107-13-1 | Acrylonitrile | 10 U | 50 | 10 | ug/l | |
| 71-43-2 | Benzene | 1.1 U | 5.0 | 1.1 | ug/l | |
| 108-86-1 | Bromobenzene | 1.1 U | 5.0 | 1.1 | ug/l | |
| 74-97-5 | Bromochloromethane | 1.1 U | 5.0 | 1.1 | ug/l | |
| 75-27-4 | Bromodichloromethane | 1.0 U | 5.0 | 1.0 | ug/l | |
| 75-25-2 | Bromoform | 1.7 U | 5.0 | 1.7 | ug/l | |
| 104-51-8 | n-Butylbenzene | 1.0 U | 5.0 | 1.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | 1.1 U | 5.0 | 1.1 | ug/l | |
| 98-06-6 | tert-Butylbenzene | 1.5 U | 5.0 | 1.5 | ug/l | |
| 108-90-7 | Chlorobenzene | 1.0 | 5.0 | 1.0 | ug/l | I |
| 75-00-3 | Chloroethane | 2.5 U | 10 | 2.5 | ug/l | |
| 67-66-3 | Chloroform | 1.3 U | 5.0 | 1.3 | ug/l | |
| 95-49-8 | o-Chlorotoluene | 1.1 U | 5.0 | 1.1 | ug/l | |
| 106-43-4 | p-Chlorotoluene | 1.0 U | 5.0 | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | 6.4 U | 25 | 6.4 | ug/l | |
| 75-15-0 | Carbon disulfide [a] | 2.5 U | 10 | 2.5 | ug/l | |
| 56-23-5 | Carbon tetrachloride | 1.6 U | 5.0 | 1.6 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | 1.1 U | 5.0 | 1.1 | ug/l | |
| 75-35-4 | 1,1-Dichloroethylene | 1.9 | 5.0 | 1.0 | ug/l | I |
| 563-58-6 | 1,1-Dichloropropene | 1.2 U | 5.0 | 1.2 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 3.6 U | 10 | 3.6 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | 1.5 U | 5.0 | 1.5 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | 1.1 U | 5.0 | 1.1 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | 1.3 U | 5.0 | 1.3 | ug/l | |
| 142-28-9 | 1,3-Dichloropropane | 1.3 U | 5.0 | 1.3 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | 1.2 U | 5.0 | 1.2 | ug/l | |
| 124-48-1 | Dibromochloromethane | 1.0 U | 5.0 | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | 2.5 U | 10 | 2.5 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethylene | 510 [b] | 20 | 4.7 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.1 U | 5.0 | 1.1 | ug/l | |

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





**Client Sample ID:** CRHE-IW0019I-040.0-20131211
**Lab Sample ID:** FA10890-3
**Matrix:** AQ - Ground Water
**Method:** SW846 8260B
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

**Date Sampled:** 12/11/13
**Date Received:** 12/13/13
**Percent Solids:** n/a

**VOA 8260 List**

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 541-73-1 | m-Dichlorobenzene | 1.3 U | 5.0 | 1.3 | ug/l | |
| 95-50-1 | o-Dichlorobenzene | 1.1 U | 5.0 | 1.1 | ug/l | |
| 106-46-7 | p-Dichlorobenzene | 1.0 U | 5.0 | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethylene | 10.8 | 5.0 | 1.1 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | 1.0 U | 5.0 | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 1.5 U | 5.0 | 1.5 | ug/l | |
| 591-78-6 | 2-Hexanone | 10 U | 50 | 10 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | 2.5 U | 10 | 2.5 | ug/l | |
| 98-82-8 | Isopropylbenzene | 1.0 U | 5.0 | 1.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | 1.0 U | 5.0 | 1.0 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone | 11 U | 25 | 11 | ug/l | |
| 74-83-9 | Methyl bromide | 3.9 U | 10 | 3.9 | ug/l | |
| 74-87-3 | Methyl chloride | 2.5 U | 10 | 2.5 | ug/l | |
| 74-95-3 | Methylene bromide | 1.7 U | 10 | 1.7 | ug/l | |
| 75-09-2 | Methylene chloride [c] | 18.0 | 25 | 10 | ug/l | I |
| 78-93-3 | Methyl ethyl ketone | 16 U | 25 | 16 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 1.1 U | 5.0 | 1.1 | ug/l | |
| 91-20-3 | Naphthalene | 5.0 U | 25 | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 1.1 U | 5.0 | 1.1 | ug/l | |
| 100-42-5 | Styrene | 1.0 U | 5.0 | 1.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1.2 U | 5.0 | 1.2 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 1.0 U | 5.0 | 1.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.2 U | 5.0 | 1.2 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | 1.0 U | 5.0 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | 2.5 U | 5.0 | 2.5 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | 2.8 U | 10 | 2.8 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | 2.5 U | 5.0 | 2.5 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.0 U | 10 | 1.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.0 U | 10 | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethylene | 1.6 U | 5.0 | 1.6 | ug/l | |
| 108-88-3 | Toluene | 1.0 U | 5.0 | 1.0 | ug/l | |
| 79-01-6 | Trichloroethylene | 1.6 U | 5.0 | 1.6 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | 2.5 U | 10 | 2.5 | ug/l | |
| 75-01-4 | Vinyl chloride | 360 | 5.0 | 2.2 | ug/l | |
| 108-05-4 | Vinyl Acetate | 16 U | 50 | 16 | ug/l | |
| | m,p-Xylene | 1.5 U | 10 | 1.5 | ug/l | |
| 95-47-6 | o-Xylene | 1.0 U | 5.0 | 1.0 | ug/l | |

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | CRHE-IW0019I-040.0-20131211 | | |
| **Lab Sample ID:** | FA10890-3 | **Date Sampled:** | 12/11/13 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 12/13/13 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | Contractors Rd Heavy Equipment Area; KSC, FL | | |

**VOA 8260 List**

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 100% | 100% | 83-118% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | 99% | 79-125% |
| 2037-26-5 | Toluene-D8 | 97% | 100% | 85-112% |
| 460-00-4 | 4-Bromofluorobenzene | 104% | 105% | 83-118% |

(a) Associated ICV outside control limits.
(b) Result is from Run# 2
(c) Suspected laboratory contaminant.

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





**Client Sample ID:** CRHE-IW0019I-040.0-20131211
**Lab Sample ID:** FA10890-3
**Matrix:** AQ - Ground Water
**Method:** RSKSOP-147/175
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

**Date Sampled:** 12/11/13
**Date Received:** 12/13/13
**Percent Solids:** n/a

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | XY058918.D | 1 | 12/16/13 | SH | n/a | n/a | GXY2532 |
| Run #2 | XY058928.D | 2 | 12/16/13 | SH | n/a | n/a | GXY2532 |

| | Initial Volume | Headspace Volume | Volume Injected | Temperature |
|---|---|---|---|---|
| Run #1 | 38.0 ml | 5.0 ml | 500 ul | 21 Deg. C |
| Run #2 | 38.0 ml | 5.0 ml | 250 ul | 21 Deg. C |

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 74-82-8 | Methane | 1870 [a] | 2.0 | 0.64 | ug/l | |
| 74-84-0 | Ethane | 0.32 U | 1.0 | 0.32 | ug/l | |
| 74-85-1 | Ethene | 2.6 | 1.0 | 0.43 | ug/l | |

(a) Result is from Run# 2

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | CRHE-IW0019I-040.0-20131211 | | |
| **Lab Sample ID:** | FA10890-3 | **Date Sampled:** | 12/11/13 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 12/13/13 |
| | | **Percent Solids:** | n/a |
| **Project:** | Contractors Rd Heavy Equipment Area; KSC, FL | | |

**General Chemistry**

| Analyte | Result | PQL | MDL | Units | DF | Analyzed | By | Method |
|---|---|---|---|---|---|---|---|---|
| Sulfate | 15.3 | 10 | 3.0 | mg/l | 5 | 12/17/13 13:58 | AA | EPA 300/SW846 9056A |
| Sulfide | 0.23 U | 0.78 | 0.23 | mg/l | 1 | 12/16/13 10:50 | LE | SM20 4500S F |

PQL = Practical Quantitation Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
I = Indicates a result > = MDL but < PQL

# Report of Analysis





**Client Sample ID:** CRHE-MW0029-045.0-20131211
**Lab Sample ID:** FA10890-4
**Matrix:** AQ - Ground Water
**Method:** SW846 8260B BY SIM
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

**Date Sampled:** 12/11/13
**Date Received:** 12/13/13
**Percent Solids:** n/a

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | Z21400.D | 1 | 12/18/13 | KW | n/a | n/a | VZ858 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 123-91-1 | 1,4-Dioxane | 1.3 | 2.0 | 1.0 | ug/l | I |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-D4 | 103% | | 74-125% |
| 2037-26-5 | Toluene-D8 | 99% | | 88-111% |

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





**Client Sample ID:** CRHE-MW0029-045.0-20131211
**Lab Sample ID:** FA10890-4
**Matrix:** AQ - Ground Water
**Method:** SW846 8260B
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

**Date Sampled:** 12/11/13
**Date Received:** 12/13/13
**Percent Solids:** n/a

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | I16711.D | 20 | 12/23/13 | WV | n/a | n/a | VI249 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA 8260 List**

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | 200 U | 500 | 200 | ug/l | |
| 107-02-8 | Acrolein | 140 U | 400 | 140 | ug/l | |
| 107-13-1 | Acrylonitrile | 40 U | 200 | 40 | ug/l | |
| 71-43-2 | Benzene | 4.2 U | 20 | 4.2 | ug/l | |
| 108-86-1 | Bromobenzene | 4.4 U | 20 | 4.4 | ug/l | |
| 74-97-5 | Bromochloromethane | 4.5 U | 20 | 4.5 | ug/l | |
| 75-27-4 | Bromodichloromethane | 4.0 U | 20 | 4.0 | ug/l | |
| 75-25-2 | Bromoform | 6.9 U | 20 | 6.9 | ug/l | |
| 104-51-8 | n-Butylbenzene | 4.0 U | 20 | 4.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | 4.2 U | 20 | 4.2 | ug/l | |
| 98-06-6 | tert-Butylbenzene | 5.9 U | 20 | 5.9 | ug/l | |
| 108-90-7 | Chlorobenzene | 4.0 U | 20 | 4.0 | ug/l | |
| 75-00-3 | Chloroethane | 10 U | 40 | 10 | ug/l | |
| 67-66-3 | Chloroform | 5.3 U | 20 | 5.3 | ug/l | |
| 95-49-8 | o-Chlorotoluene | 4.3 U | 20 | 4.3 | ug/l | |
| 106-43-4 | p-Chlorotoluene | 4.0 U | 20 | 4.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | 25 U | 100 | 25 | ug/l | |
| 75-15-0 | Carbon disulfide [a] | 9.9 U | 40 | 9.9 | ug/l | |
| 56-23-5 | Carbon tetrachloride | 6.3 U | 20 | 6.3 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | 4.3 U | 20 | 4.3 | ug/l | |
| 75-35-4 | 1,1-Dichloroethylene | 4.0 U | 20 | 4.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | 5.0 U | 20 | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 14 U | 40 | 14 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | 6.0 U | 20 | 6.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | 4.4 U | 20 | 4.4 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | 5.2 U | 20 | 5.2 | ug/l | |
| 142-28-9 | 1,3-Dichloropropane | 5.4 U | 20 | 5.4 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | 4.9 U | 20 | 4.9 | ug/l | |
| 124-48-1 | Dibromochloromethane | 4.0 U | 20 | 4.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | 10 U | 40 | 10 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethylene | 1650 | 20 | 4.7 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | 4.4 U | 20 | 4.4 | ug/l | |

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | CRHE-MW0029-045.0-20131211 | | |
| **Lab Sample ID:** | FA10890-4 | **Date Sampled:** | 12/11/13 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 12/13/13 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | Contractors Rd Heavy Equipment Area; KSC, FL | | |

**VOA 8260 List**

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 541-73-1 | m-Dichlorobenzene | 5.1 U | 20 | 5.1 | ug/l | |
| 95-50-1 | o-Dichlorobenzene | 4.3 U | 20 | 4.3 | ug/l | |
| 106-46-7 | p-Dichlorobenzene | 4.0 U | 20 | 4.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethylene | 31.8 | 20 | 4.6 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | 4.2 U | 20 | 4.2 | ug/l | |
| 100-41-4 | Ethylbenzene | 5.8 U | 20 | 5.8 | ug/l | |
| 591-78-6 | 2-Hexanone | 40 U | 200 | 40 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | 10 U | 40 | 10 | ug/l | |
| 98-82-8 | Isopropylbenzene | 4.0 U | 20 | 4.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | 4.0 U | 20 | 4.0 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone | 45 U | 100 | 45 | ug/l | |
| 74-83-9 | Methyl bromide | 16 U | 40 | 16 | ug/l | |
| 74-87-3 | Methyl chloride | 10 U | 40 | 10 | ug/l | |
| 74-95-3 | Methylene bromide | 6.9 U | 40 | 6.9 | ug/l | |
| 75-09-2 | Methylene chloride [b] | 61.8 | 100 | 40 | ug/l | I |
| 78-93-3 | Methyl ethyl ketone | 62 U | 100 | 62 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 4.2 U | 20 | 4.2 | ug/l | |
| 91-20-3 | Naphthalene | 20 U | 100 | 20 | ug/l | |
| 103-65-1 | n-Propylbenzene | 4.5 U | 20 | 4.5 | ug/l | |
| 100-42-5 | Styrene | 4.0 U | 20 | 4.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 4.6 U | 20 | 4.6 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 4.0 U | 20 | 4.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 4.8 U | 20 | 4.8 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | 4.0 U | 20 | 4.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | 10 U | 20 | 10 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | 11 U | 40 | 11 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | 10 U | 20 | 10 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 4.0 U | 40 | 4.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 4.0 U | 40 | 4.0 | ug/l | |
| 127-18-4 | Tetrachloroethylene | 6.4 U | 20 | 6.4 | ug/l | |
| 108-88-3 | Toluene | 4.0 U | 20 | 4.0 | ug/l | |
| 79-01-6 | Trichloroethylene | 398 | 20 | 6.3 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | 10 U | 40 | 10 | ug/l | |
| 75-01-4 | Vinyl chloride | 339 | 20 | 8.8 | ug/l | |
| 108-05-4 | Vinyl Acetate | 63 U | 200 | 63 | ug/l | |
| | m,p-Xylene | 5.9 U | 40 | 5.9 | ug/l | |
| 95-47-6 | o-Xylene | 4.0 U | 20 | 4.0 | ug/l | |

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | CRHE-MW0029-045.0-20131211 | | |
| **Lab Sample ID:** | FA10890-4 | **Date Sampled:** | 12/11/13 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 12/13/13 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | Contractors Rd Heavy Equipment Area; KSC, FL | | |

**VOA 8260 List**

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 100% | | 83-118% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | | 79-125% |
| 2037-26-5 | Toluene-D8 | 97% | | 85-112% |
| 460-00-4 | 4-Bromofluorobenzene | 103% | | 83-118% |

(a) Associated ICV outside control limits.
(b) Suspected laboratory contaminant.

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





**Client Sample ID:** CRHE-MW0029-045.0-20131211
**Lab Sample ID:** FA10890-4
**Matrix:** AQ - Ground Water
**Method:** RSKSOP-147/175
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

**Date Sampled:** 12/11/13
**Date Received:** 12/13/13
**Percent Solids:** n/a

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | XY058923.D | 1 | 12/16/13 | SH | n/a | n/a | GXY2532 |
| Run #2 | XY058934.D | 10 | 12/17/13 | SH | n/a | n/a | GXY2533 |

| | Initial Volume | Headspace Volume | Volume Injected | Temperature |
|---|---|---|---|---|
| Run #1 | 38.0 ml | 5.0 ml | 500 ul | 21 Deg. C |
| Run #2 | 38.0 ml | 5.0 ml | 500 ul | 21 Deg. C |

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 74-82-8 | Methane | 1260 [a] | 5.0 | 1.6 | ug/l | |
| 74-84-0 | Ethane | 15.5 | 1.0 | 0.32 | ug/l | |
| 74-85-1 | Ethene | 31.5 | 1.0 | 0.43 | ug/l | |

(a) Result is from Run# 2

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | CRHE-MW0029-045.0-20131211 | | |
| **Lab Sample ID:** | FA10890-4 | **Date Sampled:** | 12/11/13 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 12/13/13 |
| | | **Percent Solids:** | n/a |
| **Project:** | Contractors Rd Heavy Equipment Area; KSC, FL | | |

**General Chemistry**

| Analyte | Result | PQL | MDL | Units | DF | Analyzed | By | Method |
|---|---|---|---|---|---|---|---|---|
| Sulfate [a] | 6.0 U | 20 | 6.0 | mg/l | 10 | 12/17/13 14:13 | AA | EPA 300/SW846 9056A |
| Sulfide | 0.48 I | 0.77 | 0.22 | mg/l | 1 | 12/16/13 10:50 | LE | SM20 4500S F |

(a) Dilution required due to matrix interference.

PQL = Practical Quantitation Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
I = Indicates a result > = MDL but < PQL

Southeast ACCUTEST LABORATORIES



## Misc. Forms

# Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

# CHAIN OF CUSTODY

ACCUTEST.

4405 Vineland Rd., Suite C15
Orlando, FL 32811
407.425.6700, fax 407.425.0707

Accutest Job #: FA 10890
Accutest Control #:

**Client Information**

Name: Geosyntec Consultants
Address: 316 South Baylen Street, Suite 201
City: Pensacola, Fl 32502 State: Zip:
Send Report to: JJohnson@Geosyntec.com
Phone #: 850-477-6547

**Facility Information**

Project Name: Contractors Road Heavy Equipment Area
Location: KSC, FL
Project No.: FR1681
FAX #: 850.477.6707

**Analytical Information**

| | Field ID / Point of Collection | Collection Date | Time | Sampled By | Matrix | # of bottles | Preservation HCL | NaOH | HNO3 | ZnAc | H2SO4 | Other | None | V8260 | V8260SIMDIOX | VRSK1147DGMEE | S | SO4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CRHE-MW0025-030.0-20131211 | 12/11/2013 | 1800 | JKB | GW | 13 | 9 | 3 | | 3 | | | 1 | 3 | 3 | 3 | 3 | 1 |
| 2 | CRHE-MW0035-045.0-20131211 | 12/11/2013 | 1504 | JKB | GW | 13 | 9 | 3 | | 3 | | | 1 | 3 | 3 | 3 | 3 | 1 |
| 3 | CRHE-IW0019I-040.0-20131211 | 12/11/2013 | 1602 | JKB | GW | 13 | 9 | 3 | | 3 | | | 1 | 3 | 3 | 3 | 3 | 1 |
| 4 | CRHE-MW0029-045.0-20131211 | 12/11/2013 | 1649 | JKB | GW | 13 | 9 | 3 | | 3 | | | 1 | 3 | 3 | 3 | 3 | 1 |

**Turnaround Information**

- [ ] 21 Day Standard — Approved By:
- [X] 14 Day
- [ ] 7 Days *EMERGENCY*
- [ ] Other _____ (Days)

RUSH TAT is for FAX data
Data unless previously approved.

**Data Deliverable Information**

- [ ] NJ Reduced
- [ ] NJ Full
- [ ] FULL CLP
- [ ] Disk Deliverable
- [X] Other (Specify): NASA KEDD
- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] ASP Category B
- [ ] State Forms

**Comments / Remarks**

Sample Custody must be documented below each time samples change possession, including courier delivery.

| | | | | | |
|---|---|---|---|---|---|
| Relinquished by Sampler: 1 | Date Time: 12/12/13 1120 | Received By: 1 | 11:20 12-12-13 | Relinquished By: 2 | Date Time: 12-12-13 19:30 |
| Received By: 2 | Relinquished by Sampler: 3 | Date Time: | Received By: 3 | Relinquished By: 4 | Date Time: |
| Received By: 4 | Relinquished by Sampler: 5 | Date Time: | Received By: 5 | Seal # | Preserved where applicable ☐ |
| On Ice: ☐ 2.6 | | | | | |

Received By: 2 J. Romar (AISE) 12-13-13

**FA10890: Chain of Custody**
**Page 1 of 2**

# ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA 10890 CLIENT: GEOSYNTEC PROJECT: FA1681

DATE/TIME RECEIVED: 12-13-13 08:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: FEDEX UPS (ACCUTEST COURIER) GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS:

## COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

## TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

## MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM _____ 5-GRAM _____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

## TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 3.0
- [ ] CORRECTED TEMPS: 2.6

## SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE [signature] 12-13-13 REVIEWER SIGNATURE/DATE [signature] 12/13/13

NF 12/10 receipt confirmation 122910.xls

5.1 5

**FA10890: Chain of Custody**

**Page 2 of 2**

Southeast ACCUTEST LABORATORIES



## GC/MS Volatiles

### QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VZ858-MB | Z21390.D | 1 | 12/17/13 | KW | n/a | n/a | VZ858 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B BY SIM

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 123-91-1 | 1,4-Dioxane | ND | 2.0 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-D4 | 103% | 74-125% |
| 2037-26-5 | Toluene-D8 | 100% | 88-111% |

# Method Blank Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VI249-MB | I16705.D | 1 | 12/23/13 | WV | n/a | n/a | VI249 |



**The QC reported here applies to the following samples:** **Method:** SW846 8260B

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | 25 | 10 | ug/l | |
| 107-02-8 | Acrolein | ND | 20 | 6.9 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 10 | 2.0 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | 0.21 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 1.0 | 0.22 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 1.0 | 0.23 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | 0.20 | ug/l | |
| 75-25-2 | Bromoform | ND | 1.0 | 0.34 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 1.0 | 0.20 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 1.0 | 0.21 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 1.0 | 0.29 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | 0.20 | ug/l | |
| 75-00-3 | Chloroethane | ND | 2.0 | 0.50 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | 0.26 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 1.0 | 0.21 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 1.0 | 0.20 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 5.0 | 1.3 | ug/l | |
| 75-15-0 | Carbon disulfide | ND | 2.0 | 0.49 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | 0.31 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | 0.21 | ug/l | |
| 75-35-4 | 1,1-Dichloroethylene | ND | 1.0 | 0.20 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 1.0 | 0.25 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 2.0 | 0.71 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 1.0 | 0.30 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | 0.22 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | 0.26 | ug/l | |
| 142-28-9 | 1,3-Dichloropropane | ND | 1.0 | 0.27 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 1.0 | 0.25 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | 0.20 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 2.0 | 0.50 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | 1.0 | 0.24 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | 0.22 | ug/l | |
| 541-73-1 | m-Dichlorobenzene | ND | 1.0 | 0.25 | ug/l | |
| 95-50-1 | o-Dichlorobenzene | ND | 1.0 | 0.22 | ug/l | |
| 106-46-7 | p-Dichlorobenzene | ND | 1.0 | 0.20 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | 1.0 | 0.23 | ug/l | |

# Method Blank Summary

**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VI249-MB | I16705.D | 1 | 12/23/13 | WV | n/a | n/a | VI249 |



**The QC reported here applies to the following samples:** **Method:** SW846 8260B

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | 0.21 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.29 | ug/l | |
| 591-78-6 | 2-Hexanone | ND | 10 | 2.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 2.0 | 0.50 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 1.0 | 0.20 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 1.0 | 0.20 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 5.0 | 2.3 | ug/l | |
| 74-83-9 | Methyl bromide | ND | 2.0 | 0.79 | ug/l | |
| 74-87-3 | Methyl chloride | ND | 2.0 | 0.50 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 2.0 | 0.34 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 5.0 | 2.0 | ug/l | |
| 78-93-3 | Methyl ethyl ketone | ND | 5.0 | 3.1 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | 0.21 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | 1.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 1.0 | 0.23 | ug/l | |
| 100-42-5 | Styrene | ND | 1.0 | 0.20 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 1.0 | 0.23 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | 0.20 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | 0.24 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | 0.20 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 1.0 | 0.50 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 2.0 | 0.56 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 1.0 | 0.50 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 2.0 | 0.20 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 2.0 | 0.20 | ug/l | |
| 127-18-4 | Tetrachloroethylene | ND | 1.0 | 0.32 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.20 | ug/l | |
| 79-01-6 | Trichloroethylene | ND | 1.0 | 0.31 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 2.0 | 0.50 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.44 | ug/l | |
| 108-05-4 | Vinyl Acetate | ND | 10 | 3.1 | ug/l | |
| | m,p-Xylene | ND | 2.0 | 0.30 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | 0.20 | ug/l | |

# Method Blank Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VI249-MB | I16705.D | 1 | 12/23/13 | WV | n/a | n/a | VI249 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 99% | 83-118% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 96% | 79-125% |
| 2037-26-5 | Toluene-D8 | 96% | 85-112% |
| 460-00-4 | 4-Bromofluorobenzene | 104% | 83-118% |

# Method Blank Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VI251-MB | I16762.D | 1 | 12/24/13 | WV | n/a | n/a | VI251 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

FA10890-2, FA10890-3

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethylene | ND | 1.0 | 0.24 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.44 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 99% | 83-118% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 97% | 79-125% |
| 2037-26-5 | Toluene-D8 | 97% | 85-112% |
| 460-00-4 | 4-Bromofluorobenzene | 106% | 83-118% |

# Blank Spike Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VZ858-BS | Z21389.D | 1 | 12/17/13 | KW | n/a | n/a | VZ858 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B BY SIM

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 123-91-1 | 1,4-Dioxane | 50 | 48.1 | 96 | 65-121 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-D4 | 104% | 74-125% |
| 2037-26-5 | Toluene-D8 | 101% | 88-111% |

* = Outside of Control Limits.

# Blank Spike Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VI249-BS | I16706.D | 1 | 12/23/13 | WV | n/a | n/a | VI249 |



**The QC reported here applies to the following samples:** **Method:** SW846 8260B

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | 125 | 89.7 | 72 | 50-147 |
| 107-02-8 | Acrolein | 125 | 135 | 108 | 31-154 |
| 107-13-1 | Acrylonitrile | 125 | 98.5 | 79 | 58-126 |
| 71-43-2 | Benzene | 25 | 25.6 | 102 | 81-122 |
| 108-86-1 | Bromobenzene | 25 | 25.5 | 102 | 80-121 |
| 74-97-5 | Bromochloromethane | 25 | 24.3 | 97 | 76-123 |
| 75-27-4 | Bromodichloromethane | 25 | 24.3 | 97 | 79-123 |
| 75-25-2 | Bromoform | 25 | 25.7 | 103 | 66-123 |
| 104-51-8 | n-Butylbenzene | 25 | 24.7 | 99 | 79-126 |
| 135-98-8 | sec-Butylbenzene | 25 | 29.1 | 116 | 83-133 |
| 98-06-6 | tert-Butylbenzene | 25 | 27.3 | 109 | 80-133 |
| 108-90-7 | Chlorobenzene | 25 | 26.7 | 107 | 82-124 |
| 75-00-3 | Chloroethane | 25 | 23.7 | 95 | 62-144 |
| 67-66-3 | Chloroform | 25 | 24.2 | 97 | 80-124 |
| 95-49-8 | o-Chlorotoluene | 25 | 27.6 | 110 | 81-127 |
| 106-43-4 | p-Chlorotoluene | 25 | 29.7 | 119 | 83-130 |
| 110-75-8 | 2-Chloroethyl vinyl ether | 125 | 123 | 98 | 56-122 |
| 75-15-0 | Carbon disulfide | 25 | 19.6 | 78 | 66-148 |
| 56-23-5 | Carbon tetrachloride | 25 | 27.9 | 112 | 76-136 |
| 75-34-3 | 1,1-Dichloroethane | 25 | 24.6 | 98 | 81-122 |
| 75-35-4 | 1,1-Dichloroethylene | 25 | 24.9 | 100 | 78-137 |
| 563-58-6 | 1,1-Dichloropropene | 25 | 29.5 | 118 | 79-131 |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 25 | 24.7 | 99 | 64-123 |
| 106-93-4 | 1,2-Dibromoethane | 25 | 24.7 | 99 | 75-120 |
| 107-06-2 | 1,2-Dichloroethane | 25 | 24.3 | 97 | 75-125 |
| 78-87-5 | 1,2-Dichloropropane | 25 | 24.5 | 98 | 76-124 |
| 142-28-9 | 1,3-Dichloropropane | 25 | 24.0 | 96 | 80-118 |
| 594-20-7 | 2,2-Dichloropropane | 25 | 28.5 | 114 | 74-139 |
| 124-48-1 | Dibromochloromethane | 25 | 24.9 | 100 | 78-122 |
| 75-71-8 | Dichlorodifluoromethane | 25 | 31.8 | 127 | 42-167 |
| 156-59-2 | cis-1,2-Dichloroethylene | 25 | 26.7 | 107 | 78-120 |
| 10061-01-5 | cis-1,3-Dichloropropene | 25 | 25.4 | 102 | 75-118 |
| 541-73-1 | m-Dichlorobenzene | 25 | 28.8 | 115 | 84-125 |
| 95-50-1 | o-Dichlorobenzene | 25 | 28.6 | 114 | 82-124 |
| 106-46-7 | p-Dichlorobenzene | 25 | 25.3 | 101 | 78-120 |
| 156-60-5 | trans-1,2-Dichloroethylene | 25 | 24.9 | 100 | 76-127 |

* = Outside of Control Limits.

# Blank Spike Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VI249-BS | I16706.D | 1 | 12/23/13 | WV | n/a | n/a | VI249 |



**The QC reported here applies to the following samples:** **Method:** SW846 8260B

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 10061-02-6 | trans-1,3-Dichloropropene | 25 | 26.4 | 106 | 80-120 |
| 100-41-4 | Ethylbenzene | 25 | 25.5 | 102 | 81-121 |
| 591-78-6 | 2-Hexanone | 125 | 110 | 88 | 61-129 |
| 87-68-3 | Hexachlorobutadiene | 25 | 31.1 | 124 | 75-142 |
| 98-82-8 | Isopropylbenzene | 25 | 28.5 | 114 | 83-132 |
| 99-87-6 | p-Isopropyltoluene | 25 | 28.2 | 113 | 79-130 |
| 108-10-1 | 4-Methyl-2-pentanone | 125 | 116 | 93 | 66-122 |
| 74-83-9 | Methyl bromide | 25 | 24.5 | 98 | 59-143 |
| 74-87-3 | Methyl chloride | 25 | 27.0 | 108 | 50-159 |
| 74-95-3 | Methylene bromide | 25 | 23.7 | 95 | 78-119 |
| 75-09-2 | Methylene chloride | 25 | 24.7 | 99 | 69-135 |
| 78-93-3 | Methyl ethyl ketone | 125 | 104 | 83 | 56-143 |
| 1634-04-4 | Methyl Tert Butyl Ether | 25 | 23.5 | 94 | 72-117 |
| 91-20-3 | Naphthalene | 25 | 26.0 | 104 | 63-132 |
| 103-65-1 | n-Propylbenzene | 25 | 28.7 | 115 | 82-133 |
| 100-42-5 | Styrene | 25 | 24.6 | 98 | 78-119 |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 25 | 26.3 | 105 | 77-122 |
| 71-55-6 | 1,1,1-Trichloroethane | 25 | 27.1 | 108 | 75-130 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 25 | 22.5 | 90 | 72-120 |
| 79-00-5 | 1,1,2-Trichloroethane | 25 | 22.6 | 90 | 76-119 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 25 | 27.6 | 110 | 68-131 |
| 96-18-4 | 1,2,3-Trichloropropane | 25 | 23.2 | 93 | 77-120 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 25 | 29.7 | 119 | 73-129 |
| 95-63-6 | 1,2,4-Trimethylbenzene | 25 | 25.0 | 100 | 79-120 |
| 108-67-8 | 1,3,5-Trimethylbenzene | 25 | 24.2 | 97 | 79-120 |
| 127-18-4 | Tetrachloroethylene | 25 | 27.4 | 110 | 76-135 |
| 108-88-3 | Toluene | 25 | 24.9 | 100 | 80-120 |
| 79-01-6 | Trichloroethylene | 25 | 26.4 | 106 | 81-126 |
| 75-69-4 | Trichlorofluoromethane | 25 | 20.6 | 82 | 71-156 |
| 75-01-4 | Vinyl chloride | 25 | 28.4 | 114 | 69-159 |
| 108-05-4 | Vinyl Acetate | 125 | 117 | 94 | 43-154 |
| | m,p-Xylene | 50 | 56.5 | 113 | 79-126 |
| 95-47-6 | o-Xylene | 25 | 27.0 | 108 | 80-127 |

* = Outside of Control Limits.

# Blank Spike Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VI249-BS | I16706.D | 1 | 12/23/13 | WV | n/a | n/a | VI249 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 99% | 83-118% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 96% | 79-125% |
| 2037-26-5 | Toluene-D8 | 92% | 85-112% |
| 460-00-4 | 4-Bromofluorobenzene | 101% | 83-118% |

* = Outside of Control Limits.

# Blank Spike Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VI251-BS | I16761.D | 1 | 12/24/13 | WV | n/a | n/a | VI251 |



**The QC reported here applies to the following samples:** **Method:** SW846 8260B

FA10890-2, FA10890-3

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethylene | 25 | 24.2 | 97 | 78-120 |
| 75-01-4 | Vinyl chloride | 25 | 31.4 | 126 | 69-159 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 99% | 83-118% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 96% | 79-125% |
| 2037-26-5 | Toluene-D8 | 93% | 85-112% |
| 460-00-4 | 4-Bromofluorobenzene | 101% | 83-118% |

* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| FA10934-3MS | Z21411.D | 1 | 12/18/13 | KW | n/a | n/a | VZ858 |
| FA10934-3MSD | Z21412.D | 1 | 12/18/13 | KW | n/a | n/a | VZ858 |
| FA10934-3 | Z21403.D | 1 | 12/18/13 | KW | n/a | n/a | VZ858 |



**The QC reported here applies to the following samples:** **Method:** SW846 8260B BY SIM

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Compound | FA10934-3 ug/l | Q | Spike ug/l | MS ug/l | MS % | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| 123-91-1 | 1,4-Dioxane | ND | | 50 | 46.7 | 93 | 49.2 | 98 | 5 | 65-121/27 |

| CAS No. | Surrogate Recoveries | MS | MSD | FA10934-3 | Limits |
|---|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-D4 | 102% | 101% | 102% | 74-125% |
| 2037-26-5 | Toluene-D8 | 99% | 99% | 98% | 88-111% |

* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| FA10790-6MS | I16727.D | 50 | 12/23/13 | WV | n/a | n/a | VI249 |
| FA10790-6MSD | I16728.D | 50 | 12/23/13 | WV | n/a | n/a | VI249 |
| FA10790-6 | I16717.D | 50 | 12/23/13 | WV | n/a | n/a | VI249 |



**The QC reported here applies to the following samples:** **Method:** SW846 8260B

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Compound | FA10790-6 ug/l | Q | Spike ug/l | MS ug/l | MS % | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | | 6250 | 3340 | 53 | 3610 | 58 | 8 | 50-147/21 |
| 107-02-8 | Acrolein | ND | | 6250 | 7380 | 118 | 6960 | 111 | 6 | 31-154/29 |
| 107-13-1 | Acrylonitrile | ND | | 6250 | 4380 | 70 | 4900 | 78 | 11 | 58-126/16 |
| 71-43-2 | Benzene | ND | | 1250 | 1200 | 96 | 1210 | 97 | 1 | 81-122/14 |
| 108-86-1 | Bromobenzene | ND | | 1250 | 1110 | 89 | 1110 | 89 | 0 | 80-121/14 |
| 74-97-5 | Bromochloromethane | ND | | 1250 | 1080 | 86 | 1130 | 90 | 5 | 76-123/14 |
| 75-27-4 | Bromodichloromethane | ND | | 1250 | 1110 | 89 | 1120 | 90 | 1 | 79-123/19 |
| 75-25-2 | Bromoform | ND | | 1250 | 976 | 78 | 1020 | 82 | 4 | 66-123/21 |
| 104-51-8 | n-Butylbenzene | ND | | 1250 | 1090 | 87 | 1070 | 86 | 2 | 79-126/16 |
| 135-98-8 | sec-Butylbenzene | ND | | 1250 | 1290 | 103 | 1280 | 102 | 1 | 83-133/16 |
| 98-06-6 | tert-Butylbenzene | ND | | 1250 | 1220 | 98 | 1240 | 99 | 2 | 80-133/16 |
| 108-90-7 | Chlorobenzene | ND | | 1250 | 1200 | 96 | 1210 | 97 | 1 | 82-124/14 |
| 75-00-3 | Chloroethane | ND | | 1250 | 1110 | 89 | 1160 | 93 | 4 | 62-144/20 |
| 67-66-3 | Chloroform | ND | | 1250 | 1150 | 92 | 1150 | 92 | 0 | 80-124/15 |
| 95-49-8 | o-Chlorotoluene | ND | | 1250 | 1270 | 102 | 1260 | 101 | 1 | 81-127/15 |
| 106-43-4 | p-Chlorotoluene | ND | | 1250 | 1330 | 106 | 1320 | 106 | 1 | 83-130/15 |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | | 6250 | 294 | 5* | 240 | 4* | 20 | 56-122/23 |
| 75-15-0 | Carbon disulfide | ND | | 1250 | 966 | 77 | 972 | 78 | 1 | 66-148/23 |
| 56-23-5 | Carbon tetrachloride | ND | | 1250 | 1270 | 102 | 1250 | 100 | 2 | 76-136/23 |
| 75-34-3 | 1,1-Dichloroethane | ND | | 1250 | 1150 | 92 | 1160 | 93 | 1 | 81-122/15 |
| 75-35-4 | 1,1-Dichloroethylene | ND | | 1250 | 1130 | 90 | 1160 | 93 | 3 | 78-137/18 |
| 563-58-6 | 1,1-Dichloropropene | ND | | 1250 | 1350 | 108 | 1340 | 107 | 1 | 79-131/16 |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | 1250 | 1050 | 84 | 1140 | 91 | 8 | 64-123/18 |
| 106-93-4 | 1,2-Dibromoethane | ND | | 1250 | 1030 | 82 | 1090 | 87 | 6 | 75-120/13 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 1250 | 1090 | 87 | 1130 | 90 | 4 | 75-125/14 |
| 78-87-5 | 1,2-Dichloropropane | ND | | 1250 | 1150 | 92 | 1180 | 94 | 3 | 76-124/14 |
| 142-28-9 | 1,3-Dichloropropane | ND | | 1250 | 1050 | 84 | 1120 | 90 | 6 | 80-118/13 |
| 594-20-7 | 2,2-Dichloropropane | ND | | 1250 | 1160 | 93 | 1200 | 96 | 3 | 74-139/17 |
| 124-48-1 | Dibromochloromethane | ND | | 1250 | 1030 | 82 | 1070 | 86 | 4 | 78-122/19 |
| 75-71-8 | Dichlorodifluoromethane | ND | | 1250 | 1500 | 120 | 1520 | 122 | 1 | 42-167/19 |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | 1250 | 1160 | 93 | 1190 | 95 | 3 | 78-120/15 |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | | 1250 | 1060 | 85 | 1090 | 87 | 3 | 75-118/23 |
| 541-73-1 | m-Dichlorobenzene | ND | | 1250 | 1270 | 102 | 1270 | 102 | 0 | 84-125/14 |
| 95-50-1 | o-Dichlorobenzene | ND | | 1250 | 1240 | 99 | 1250 | 100 | 1 | 82-124/14 |
| 106-46-7 | p-Dichlorobenzene | ND | | 1250 | 1110 | 89 | 1110 | 89 | 0 | 78-120/15 |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | 1250 | 1200 | 96 | 1180 | 94 | 2 | 76-127/17 |

* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| FA10790-6MS | I16727.D | 50 | 12/23/13 | WV | n/a | n/a | VI249 |
| FA10790-6MSD | I16728.D | 50 | 12/23/13 | WV | n/a | n/a | VI249 |
| FA10790-6 | I16717.D | 50 | 12/23/13 | WV | n/a | n/a | VI249 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Compound | FA10790-6 ug/l | Q | Spike ug/l | MS ug/l | MS % | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| 10061-02-6 | trans-1,3-Dichloropropene | ND | | 1250 | 1150 | 92 | 1190 | 95 | 3 | 80-120/22 |
| 100-41-4 | Ethylbenzene | ND | | 1250 | 1160 | 93 | 1160 | 93 | 0 | 81-121/14 |
| 591-78-6 | 2-Hexanone | ND | | 6250 | 4090 | 65 | 4580 | 73 | 11 | 61-129/18 |
| 87-68-3 | Hexachlorobutadiene | ND | | 1250 | 1370 | 110 | 1370 | 110 | 0 | 75-142/19 |
| 98-82-8 | Isopropylbenzene | ND | | 1250 | 1220 | 98 | 1250 | 100 | 2 | 83-132/15 |
| 99-87-6 | p-Isopropyltoluene | ND | | 1250 | 1220 | 98 | 1220 | 98 | 0 | 79-130/16 |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | 6250 | 4800 | 77 | 5300 | 85 | 10 | 66-122/16 |
| 74-83-9 | Methyl bromide | ND | | 1250 | 1110 | 89 | 1120 | 90 | 1 | 59-143/19 |
| 74-87-3 | Methyl chloride | ND | | 1250 | 1400 | 112 | 1480 | 118 | 6 | 50-159/19 |
| 74-95-3 | Methylene bromide | ND | | 1250 | 1030 | 82 | 1070 | 86 | 4 | 78-119/14 |
| 75-09-2 | Methylene chloride | 157 | J | 1250 | 1370 | 97 | 1400 | 99 | 2 | 69-135/16 |
| 78-93-3 | Methyl ethyl ketone | ND | | 6250 | 3770 | 60 | 4100 | 66 | 8 | 56-143/18 |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | | 1250 | 859 | 69* | 962 | 77 | 11 | 72-117/14 |
| 91-20-3 | Naphthalene | ND | | 1250 | 1000 | 80 | 1100 | 88 | 10 | 63-132/25 |
| 103-65-1 | n-Propylbenzene | ND | | 1250 | 1300 | 104 | 1290 | 103 | 1 | 82-133/15 |
| 100-42-5 | Styrene | ND | | 1250 | 1050 | 84 | 1070 | 86 | 2 | 78-119/23 |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 14.4 | J | 1250 | 1170 | 92 | 1200 | 95 | 3 | 77-122/19 |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | 1250 | 1230 | 98 | 1250 | 100 | 2 | 75-130/16 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | 1250 | 987 | 79 | 1040 | 83 | 5 | 72-120/14 |
| 79-00-5 | 1,1,2-Trichloroethane | 3200 | | 1250 | 3870 | 54* [a] | 3960 | 61* [a] | 2 | 76-119/14 |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | 1250 | 1170 | 94 | 1230 | 98 | 5 | 68-131/25 |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | 1250 | 1020 | 82 | 1050 | 84 | 3 | 77-120/16 |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | 1250 | 1260 | 101 | 1280 | 102 | 2 | 73-129/20 |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | 1250 | 1090 | 87 | 1090 | 87 | 0 | 79-120/18 |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | 1250 | 1070 | 86 | 1060 | 85 | 1 | 79-120/19 |
| 127-18-4 | Tetrachloroethylene | ND | | 1250 | 1160 | 93 | 1150 | 92 | 1 | 76-135/16 |
| 108-88-3 | Toluene | ND | | 1250 | 1170 | 94 | 1180 | 94 | 1 | 80-120/14 |
| 79-01-6 | Trichloroethylene | ND | | 1250 | 1200 | 96 | 1180 | 94 | 2 | 81-126/15 |
| 75-69-4 | Trichlorofluoromethane | ND | | 1250 | 978 | 78 | 1000 | 80 | 2 | 71-156/21 |
| 75-01-4 | Vinyl chloride | ND | | 1250 | 1320 | 106 | 1380 | 110 | 4 | 69-159/18 |
| 108-05-4 | Vinyl Acetate | ND | | 6250 | 5560 | 89 | 5940 | 95 | 7 | 43-154/14 |
| | m,p-Xylene | ND | | 2500 | 2510 | 100 | 2530 | 101 | 1 | 79-126/15 |
| 95-47-6 | o-Xylene | ND | | 1250 | 1170 | 94 | 1190 | 95 | 2 | 80-127/14 |

* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| FA10790-6MS | I16727.D | 50 | 12/23/13 | WV | n/a | n/a | VI249 |
| FA10790-6MSD | I16728.D | 50 | 12/23/13 | WV | n/a | n/a | VI249 |
| FA10790-6 | I16717.D | 50 | 12/23/13 | WV | n/a | n/a | VI249 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Surrogate Recoveries | MS | MSD | FA10790-6 | Limits |
|---|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 101% | 101% | 98% | 83-118% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 97% | 97% | 97% | 79-125% |
| 2037-26-5 | Toluene-D8 | 92% | 93% | 98% | 85-112% |
| 460-00-4 | 4-Bromofluorobenzene | 98% | 99% | 104% | 83-118% |

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| FA10935-5MS | I16770.D | 50 | 12/24/13 | WV | n/a | n/a | VI251 |
| FA10935-5MSD | I16771.D | 50 | 12/24/13 | WV | n/a | n/a | VI251 |
| FA10935-5 | I16775.D | 50 | 12/24/13 | WV | n/a | n/a | VI251 |



**The QC reported here applies to the following samples:** **Method:** SW846 8260B

FA10890-2, FA10890-3

| CAS No. | Compound | FA10935-5 ug/l | Q | Spike ug/l | MS ug/l | MS % | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | 1250 | 1220 | 98 | 1180 | 94 | 3 | 78-120/15 |
| 75-01-4 | Vinyl chloride | ND | | 1250 | 1380 | 110 | 1420 | 114 | 3 | 69-159/18 |

| CAS No. | Surrogate Recoveries | MS | MSD | FA10935-5 | Limits |
|---|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 101% | 98% | 99% | 83-118% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 98% | 98% | 99% | 79-125% |
| 2037-26-5 | Toluene-D8 | 92% | 93% | 98% | 85-112% |
| 460-00-4 | 4-Bromofluorobenzene | 98% | 100% | 103% | 83-118% |

* = Outside of Control Limits.

Southeast ACCUTEST LABORATORIES

## GC Volatiles

# QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| GXY2532-MB | XY058899.D | 1 | 12/16/13 | SH | n/a | n/a | GXY2532 |

**The QC reported here applies to the following samples:** **Method:** RSKSOP-147/175

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 74-82-8 | Methane | ND | 0.50 | 0.16 | ug/l | |
| 74-84-0 | Ethane | ND | 1.0 | 0.32 | ug/l | |
| 74-85-1 | Ethene | ND | 1.0 | 0.43 | ug/l | |

# Method Blank Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| GXY2533-MB | XY058932.D | 1 | 12/17/13 | SH | n/a | n/a | GXY2533 |

**The QC reported here applies to the following samples:** **Method:** RSKSOP-147/175

FA10890-4

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 74-82-8 | Methane | ND | 0.50 | 0.16 | ug/l | |

# Blank Spike Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| GXY2532-BS | XY058900.D | 1 | 12/16/13 | SH | n/a | n/a | GXY2532 |

**The QC reported here applies to the following samples:** **Method:** RSKSOP-147/175

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 74-82-8 | Methane | 108 | 111 | 103 | 61-144 |
| 74-84-0 | Ethane | 219 | 226 | 103 | 64-143 |
| 74-85-1 | Ethene | 290 | 300 | 103 | 64-141 |

* = Outside of Control Limits.

# Blank Spike Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| GXY2533-BS | XY058933.D | 1 | 12/17/13 | SH | n/a | n/a | GXY2533 |

**The QC reported here applies to the following samples:** **Method:** RSKSOP-147/175

FA10890-4

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 74-82-8 | Methane | 108 | 111 | 103 | 61-144 |



* = Outside of Control Limits.

# Matrix Spike Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| FA10834-3MS | XY058922.D | 1 | 12/16/13 | SH | n/a | n/a | GXY2532 |
| FA10834-3 | XY058907.D | 1 | 12/16/13 | SH | n/a | n/a | GXY2532 |

**The QC reported here applies to the following samples:** **Method:** RSKSOP-147/175

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Compound | FA10834-3 ug/l | Q | Spike ug/l | MS ug/l | MS % | Limits |
|---|---|---|---|---|---|---|---|
| 74-82-8 | Methane | 7.4 | | 108 | 130 | 114 | 61-144 |
| 74-84-0 | Ethane | 1.0 U | | 219 | 250 | 114 | 64-143 |
| 74-85-1 | Ethene | 1.0 U | | 290 | 330 | 114 | 64-141 |

* = Outside of Control Limits.

# Matrix Spike Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| FA10933-2MS | XY058958.D | 10 | 12/17/13 | SH | n/a | n/a | GXY2533 |
| FA10933-2 | XY058935.D | 1 | 12/17/13 | SH | n/a | n/a | GXY2533 |
| FA10933-2 | XY058954.D | 10 | 12/17/13 | SH | n/a | n/a | GXY2533 |

**The QC reported here applies to the following samples:** **Method:** RSKSOP-147/175

FA10890-4

| CAS No. | Compound | FA10933-2 ug/l | Q | Spike ug/l | MS ug/l | MS % | Limits |
|---|---|---|---|---|---|---|---|
| 74-82-8 | Methane | 3050 [a] | | 1080 | 4500 | 134 | 61-144 |

(a) Result is from Run #2.

* = Outside of Control Limits.

# Duplicate Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| FA10834-5DUP | XY058921.D | 1 | 12/16/13 | SH | n/a | n/a | GXY2532 |
| FA10834-5 | XY058911.D | 1 | 12/16/13 | SH | n/a | n/a | GXY2532 |

**The QC reported here applies to the following samples:** **Method:** RSKSOP-147/175

FA10890-1, FA10890-2, FA10890-3, FA10890-4

| CAS No. | Compound | FA10834-5 ug/l | Q | DUP ug/l | Q | RPD | Limits |
|---|---|---|---|---|---|---|---|
| 74-82-8 | Methane | 29.4 | | 31.0 | | 5 | 33 |
| 74-84-0 | Ethane | 1.0 U | | ND | | nc | 20 |
| 74-85-1 | Ethene | 1.0 U | | ND | | nc | 19 |

* = Outside of Control Limits.

# Duplicate Summary



**Job Number:** FA10890
**Account:** GSYFLP Geosyntec Consultants
**Project:** Contractors Rd Heavy Equipment Area; KSC, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| FA10933-2DUP | XY058957.D | 10 | 12/17/13 | SH | n/a | n/a | GXY2533 |
| FA10933-2 | XY058935.D | 1 | 12/17/13 | SH | n/a | n/a | GXY2533 |
| FA10933-2 | XY058954.D | 10 | 12/17/13 | SH | n/a | n/a | GXY2533 |

**The QC reported here applies to the following samples:** **Method:** RSKSOP-147/175

FA10890-4

| CAS No. | Compound | FA10933-2 ug/l | Q | DUP ug/l | Q | RPD | Limits |
|---|---|---|---|---|---|---|---|
| 74-82-8 | Methane | 3050 [a] | | 3900 | | 24 | 33 |

(a) Result is from Run #2.

* = Outside of Control Limits.

Southeast ACCUTEST LABORATORIES

General Chemistry

# QC Data Summaries



Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA10890
Account: GSYFLP - Geosyntec Consultants
Project: Contractors Rd Heavy Equipment Area; KSC, FL

| Analyte | Batch ID | RL | MB Result | Units | Spike Amount | BSP Result | BSP %Recov | QC Limits |
|---|---|---|---|---|---|---|---|---|
| Chloride | GP23125/GN59367 | 2.0 | 0.0 | mg/l | 50 | 50.6 | 101.2 | 90-110% |
| Fluoride | GP23125/GN59367 | 0.20 | 0.0 | mg/l | 2.5 | 2.33 | 93.2 | 90-110% |
| Nitrogen, Nitrate | GP23125/GN59367 | 0.10 | 0.0 | mg/l | 2.5 | 2.46 | 98.4 | 90-110% |
| Nitrogen, Nitrite | GP23125/GN59367 | 0.10 | 0.0 | mg/l | 2.5 | 2.31 | 92.4 | 90-110% |
| Sulfate | GP23125/GN59367 | 2.0 | 0.0 | mg/l | 50 | 50.3 | 100.6 | 90-110% |
| Sulfide | GN59331 | 1.0 | 0.0 | mg/l | 10.4 | 10.0 | 96.2 | 76-112% |

Associated Samples:
Batch GN59331: FA10890-1, FA10890-2, FA10890-3, FA10890-4
Batch GP23125: FA10890-1, FA10890-2, FA10890-3, FA10890-4
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA10890
Account: GSYFLP - Geosyntec Consultants
Project: Contractors Rd Heavy Equipment Area; KSC, FL

| Analyte | Batch ID | QC Sample | Units | Original Result | Spike Amount | MS Result | %Rec | QC Limits |
|---|---|---|---|---|---|---|---|---|
| Chloride | GP23125/GN59367 | FA10701-1 | mg/l | 2.1 | 50 | 51.6 | 99.0 | 90-110% |
| Fluoride | GP23125/GN59367 | FA10701-1 | mg/l | 0.20 | 2.5 | 2.6 | 96.0 | 90-110% |
| Nitrogen, Nitrate | GP23125/GN59367 | FA10701-1 | mg/l | 0.48 | 2.5 | 3.1 | 104.8 | 90-110% |
| Nitrogen, Nitrite | GP23125/GN59367 | FA10701-1 | mg/l | 0.050 U | 2.5 | 2.3 | 92.0 | 90-110% |
| Sulfate | GP23125/GN59367 | FA10701-1 | mg/l | 22.8 | 50 | 71.3 | 97.0 | 90-110% |
| Sulfide | GN59331 | FA10834-1 | mg/l | 3.5 | 8.00 | 12.3 | 110.0 | 76-112% |

Associated Samples:
Batch GN59331: FA10890-1, FA10890-2, FA10890-3, FA10890-4
Batch GP23125: FA10890-1, FA10890-2, FA10890-3, FA10890-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA10890
Account: GSYFLP - Geosyntec Consultants
Project: Contractors Rd Heavy Equipment Area; KSC, FL

| Analyte | Batch ID | QC Sample | Units | Original Result | Spike Amount | MSD Result | RPD | QC Limit |
|---|---|---|---|---|---|---|---|---|
| Chloride | GP23125/GN59367 | FA10701-1 | mg/l | 2.1 | 50 | 51.4 | 0.4 | 20% |
| Fluoride | GP23125/GN59367 | FA10701-1 | mg/l | 0.20 | 2.5 | 2.6 | 0.0 | 20% |
| Nitrogen, Nitrate | GP23125/GN59367 | FA10701-1 | mg/l | 0.48 | 2.5 | 3.1 | 0.0 | 20% |
| Nitrogen, Nitrite | GP23125/GN59367 | FA10701-1 | mg/l | 0.050 U | 2.5 | 2.3 | 0.0 | 20% |
| Sulfate | GP23125/GN59367 | FA10701-1 | mg/l | 22.8 | 50 | 71.3 | 0.0 | 20% |
| Sulfide | GN59331 | FA10834-1 | mg/l | 3.5 | 8.16 | 12.6 | 2.6 | 34% |

Associated Samples:
Batch GN59331: FA10890-1, FA10890-2, FA10890-3, FA10890-4
Batch GP23125: FA10890-1, FA10890-2, FA10890-3, FA10890-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

SiREM
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130 Research Lane, Ste 2
Guelph ON N1G 5G3
(519) 822-2265

# Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

**Customer:** Jill Johnson, Geosyntec Consultants
**Project:** CRHE
**Customer Reference:** FR1681

**SiREM Reference:** S-3047
**Report Date:** 31-Dec-13
**Data Files:** MyiQ-DHC-QPCR-1071
MyiQ-DB-DHC-QPCR-0433

## Table 1a: Test Results

| Customer Sample ID | SiREM Sample ID | Sample Collection Date | Sample Matrix | Percent Dhc * | *Dehalococcoides* Enumeration/Liter ** |
|---|---|---|---|---|---|
| CRHE-MW0025-030.0-20131211 | DHC-9878 | 11-Dec-13 | Groundwater | 2 - 6 % | $2 \times 10^7$ |
| CRHE-MW0035-045.0-20131211 | DHC-9879 | 11-Dec-13 | Groundwater | 2 - 7 % | $5 \times 10^7$ |
| CRHE-IW0019I-040.0-20131211 | DHC-9880 | 11-Dec-13 | Groundwater | 2 - 7 % | $2 \times 10^7$ |
| CRHE-MW0029-045.0-20131211 | DHC-9881 | 11-Dec-13 | Groundwater | 2 - 4 % | $1 \times 10^7$ |

**Notes:**

* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

** Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
E Extracted genomic DNA was not detected in sample.

**Analyst:** J. Wilkinson
**Jennifer Wilkinson**
**Senior Laboratory Technician**

**Approved:** Ximena Druar
**Ximena Druar, B.Sc.**
**Genetic Testing Coordinator**

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# Certificate of Analysis: Gene-Trac® VC, Vinyl Chloride Reductase (*vcrA* ) Assay

**Customer:** Jill Johnson, Geosyntec Consultants

**Project:** CRHE

**Customer Reference:** FR1681

**SiREM Reference:** S-3047

**Report Date:** 31-Dec-13

**Data Files:** MyiQ-VC-QPCR-0612
MyiQ-VC-QPCR-0613
VC-QPCR-check-gel-0626
VC-QPCR-check-gel-0627

## Table 1b: Test Results

| Customer Sample ID | SiREM Sample ID | Sample Collection Date | Sample Matrix | Percent *vcrA* * | Vinyl Chloride Reductase (*vcrA* ) Gene Copies/Liter |
|---|---|---|---|---|---|
| CRHE-MW0025-030.0-20131211 | VCR-4373 | 11-Dec-13 | Groundwater | 0.4 - 1 % | $3 \times 10^6$ |
| CRHE-MW0035-045.0-20131211 | VCR-4374 | 11-Dec-13 | Groundwater | 1 - 4 % | $3 \times 10^7$ |
| CRHE-IW0019I-040.0-20131211 | VCR-4398 | 11-Dec-13 | Groundwater | NA | $3 \times 10^3$ U |
| CRHE-MW0029-045.0-20131211 | VCR-4376 | 11-Dec-13 | Groundwater | 0.9 - 3 % | $8 \times 10^6$ |

**Notes:**

* Percent *vcrA* in microbial population. This value is calculated by dividing the number of vinyl chloride reductase A (*vcrA)* gene copies quantified by the total number of bacteria estimated to be in the sample based on the mass of DNA extracted from the sample. Range represents normal variation in enumeration of *vcrA* .

J The associated value is an estimated quantity between the method detection limit and quantitation limit.
U Not detected, associated value is the quantification limit.
B Analyte was also detected in the method blank.
NA Not applicable as *vcrA* not detected and/or quantifiable DNA not extracted from the sample.
I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.
C Correction factor applied to correct for non-specific PCR amplification products, value is an estimated quantity.

**Analyst:** J. Wilkinson
**Jennifer Wilkinson**
**Senior Laboratory Technician**

**Approved:** Ximena Druar
**Ximena Druar, B.Sc.**
**Genetic Testing Coordinator**

## Table 2: Detailed Test Parameters, Gene-Trac Test Reference S-3047

| **Customer Sample ID** | CRHE-MW0025-030.0-20131211 | CRHE-MW0035-045.0-20131211 | CRHE-IW0019I-040.0-20131211 | CRHE-MW0029-045.0-20131211 |
|---|---|---|---|---|
| **SiREM Dhc Sample ID** | DHC-9878 | DHC-9879 | DHC-9880 | DHC-9881 |
| **SiREM *vcrA* Sample ID** | VCR-4373 | VCR-4374 | VCR-4398 | VCR-4376 |
| **Date Received** | 16-Dec-13 | 16-Dec-13 | 16-Dec-13 | 16-Dec-13 |
| **Sample Temperature** | 11 ºC | 11 ºC | 11 ºC | 11 ºC |
| **Filtration Date** | 19-Dec-13 | 19-Dec-13 | 19-Dec-13 | 19-Dec-13 |
| **Volume Used for DNA Extraction** | 500 mL | 200 mL | 500 mL | 500 mL |
| **DNA Extraction Date** | 19-Dec-13 | 19-Dec-13 | 19-Dec-13 | 19-Dec-13 |
| **DNA Concentration in Sample** | 1721 ng/L | 3983 ng/L | 1491 ng/L | 1784 ng/L |
| **PCR Amplifiable DNA** | Detected | Detected | Detected | Detected |
| **Dhc qPCR Date Analyzed** | 24-Dec-13 | 24-Dec-13 | 24-Dec-13 | 24-Dec-13 |
| ***vcrA* qPCR Date Analyzed** | 30-Dec-13 | 30-Dec-13 | 30-Dec-13 | 30-Dec-13 |
| **Laboratory Controls (see Tables 3 & 4)** | Passed | Passed | Passed | Passed |
| **Comments** | - - | - - | - - | - - |

**Notes:**

Refer to Tables 3 & 4 for detailed results of controls.

°C = degrees Celsius

DNA = Deoxyribonucleic acid

PCR = polymerase chain reaction

qPCR = quantitative PCR

Dhc = *Dehalococcoides*

ng/L = nanograms per liter

mL = milliliters

*vcrA* = vinyl chloride reductase

## Table 3: Gene-Trac Dhc Control Results, Test Reference S-3047

| Laboratory Control | Analysis Date | Control Description | Spiked Dhc 16S rRNA Gene Copies per Liter | Recovered Dhc 16S rRNA Gene Copies per Liter | Comments |
|---|---|---|---|---|---|
| **Positive Control Low Concentration** | 24-Dec-13 | qPCR with KB1 genomic DNA (CSLD-0709) | $1.4 \times 10^5$ | $8.2 \times 10^4$ | -- |
| **Positive Control High Concentration** | 24-Dec-13 | qPCR with KB1 genomic DNA (CSHD-0709) | $1.5 \times 10^7$ | $1.0 \times 10^7$ | -- |
| **DNA Extraction Blank** | 24-Dec-13 | DNA extraction sterile water (FB-2088) | 0 | $2.6 \times 10^3$ U | -- |
| **Negative Control** | 24-Dec-13 | Tris Reagent Blank (TBD-0668) | 0 | $2.6 \times 10^3$ U | -- |

**Notes:**

Dhc = *Dehalococcoides*

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

## Table 4: Gene-Trac VC Control Results, Test Reference S-3047

| Laboratory Control | Analysis Date | Control Description | Spiked *vcrA* reductase Gene Copies per Liter | Recovered *vcrA* reductase Gene Copies per Liter | Comments |
|---|---|---|---|---|---|
| **Positive Control Low Concentration** | 30-Dec-13 | qPCR with KB1 genomic DNA (CSLV-0480) | $7.5 \times 10^4$ | $5.2 \times 10^4$ | -- |
| **Positive Control High Concentration** | 30-Dec-13 | qPCR with KB1 genomic DNA (CSHV-0480) | $1.2 \times 10^7$ | $6.1 \times 10^6$ | -- |
| **Negative Control** | 30-Dec-13 | Tris Reagent Blank (TBV-0451) | 0 | $2.4 \times 10^3$ J | See Note 1 |
| **Positive Control Low Concentration** | 30-Dec-13 | qPCR with KB1 genomic DNA (CSLV-0481) | $7.5 \times 10^4$ | $5.9 \times 10^4$ | -- |
| **Positive Control High Concentration** | 30-Dec-13 | qPCR with KB1 genomic DNA (CSHV-0481) | $1.2 \times 10^7$ | $7.6 \times 10^6$ | -- |
| **DNA Extraction Blank** | 30-Dec-13 | DNA extraction sterile water (FB-2088) | 0 | $2.6 \times 10^3$ U | -- |
| **Negative Control** | 30-Dec-13 | Tris Reagent Blank (TBV-0452) | 0 | $2.6 \times 10^3$ U | -- |

**Notes:**

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

*vcrA* = vinyl chloride reductase

[1]Acceptable as test results for relevant samples are greater than 1 order of magnitude above Tris Reagent Blank test result.

SiREM

# Chain-of-Custody Form

siremlab.com

130 Research Lane, Ste 2
Guelph ON, Canada N1G 5G3
(519) 822-2265

Lab # S-3047

| | |
|---|---|
| Project Name: CRHE | Project #: FR1681 |
| Project Manager: Jill Johnson | |
| Email: jjohnson@geosyntec.com | |
| Company: Geosyntec Consultants | |
| Address: 316 South Baylen St., Suite 201 | |
| Pensacola, FL 32502 | |
| Phone #: 850-477-6547 | Fax #: 850-477-6707 |
| Sampler's Signature: E. Lawson for Joseph Bartlett | Sampler's Printed Name: Joseph Bartlett |

**Analysis**

Preservative: DHc and vcrA

**Preservative Key**
0. None
1. HCL
2. Other
3. Other
4. Other
5. Other
6. Other

| Client Sample ID | Lab ID | Sampling Date | Sampling Time | Matrix | # of Containers | Preservative | Other Information |
|---|---|---|---|---|---|---|---|
| CRHE-MW0025-030.0-20131211 | | 12/11/13 | 1800 | GW | 1 | 1 | |
| CRHE-MW0035-045.0-20131211 | | 12/11/13 | 1504 | GW | 1 | 1 | |
| CRHE-IW0019I-040.0-20131211 | | 12/11/13 | 1602 | GW | 1 | 1 | |
| CRHE-MW0029-045.0-20131211 | | 12/11/13 | 1649 | GW | 1 | 1 | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**Sample Receipt**

Cooler Condition: Good

Cooler Temperature: 11°C

Custody Seals: Yes ☐ No ☒

**Invoice Information**

P.O. #

Bill To:

**For Lab Use Only**

| Relinquished By: | Received By: | Relinquished By: | Received By: | Relinquished By: | Received By: |
|---|---|---|---|---|---|
| Signature: E. Lawson | Signature: Fed Ex | Signature: | Signature: J. Wilkinson | Signature: | Signature: |
| Printed Name: Emily M Lawson | Printed Name: | Printed Name: | Printed Name: J. Wilkinson | Printed Name: | Printed Name: |
| Firm: Geosyntec | Firm: | Firm: | Firm: SiREM | Firm: | Firm: |
| Date/Time: 12/12/13 1330 | Date/Time: | Date/Time: | Date/Time: 12/16/13 1420 | Date/Time: | Date/Time: |

*Distribution: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client*

*In the absence of an executed agreement, submission of samples to SiREM implies consent for performance of analyses specified on this Chain-of-Custody form and agreement with the terms and conditions of the SiREM Laboratory Services Agreement. The entity submitting samples shall be responsible for payment in full for said analyses.*

# APPENDIX N

# SELECTED SITE PHOTOGRAPHS
# (electronic copy only)

GEOSYNTEC CONSULTANTS
Photographic Record

| | |
|---|---|
| Client: NASA | Project Number: FR1681 |
| Site Name: CRHE Area | Site Location: KSC |

| | |
|---|---|
| Photograph 1 | |
| Date:<br>June 2010 | |
| Direction:<br>South | |
| Comments: DPT drill rig adjacent to K6-1996H at DPT0105. | |

GEOSYNTEC CONSULTANTS

Photographic Record

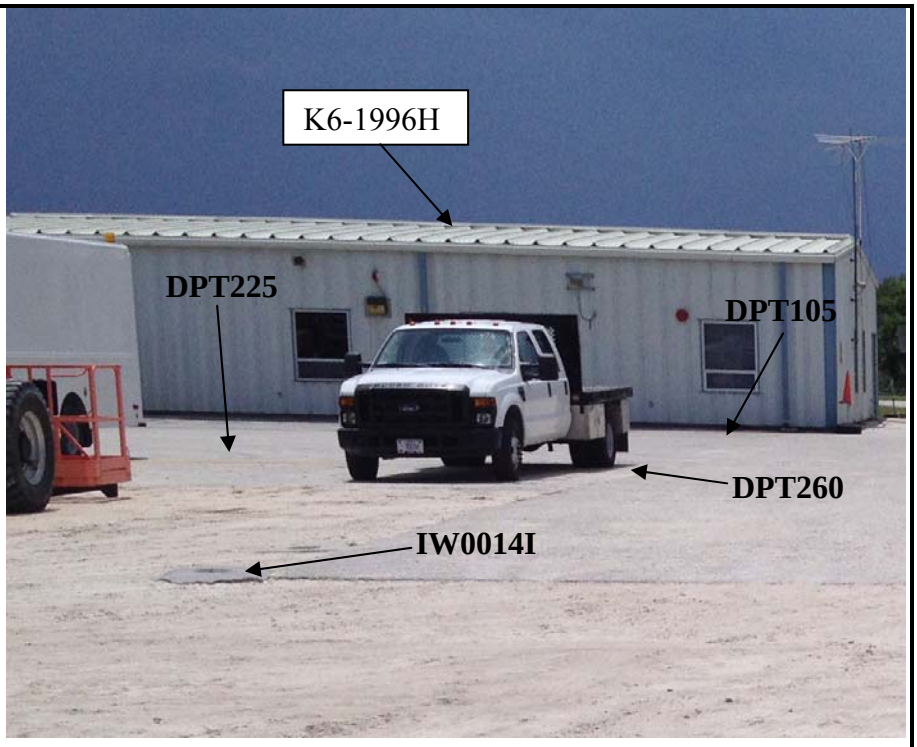
Geosyntec consultants

| | |
|---|---|
| Client: NASA | Project Number: FR1681 |
| Site Name: CRHE Area | Site Location: KSC |

| Photograph 2 | Date: June 2013 | Direction: West to North from left to right | Comments: CRHE laydown yard |
|---|---|---|---|

GEOSYNTEC CONSULTANTS
Photographic Record

| | |
|---|---|
| Client: NASA | Project Number: FR1681 |
| Site Name: CRHE Area | Site Location: KSC |

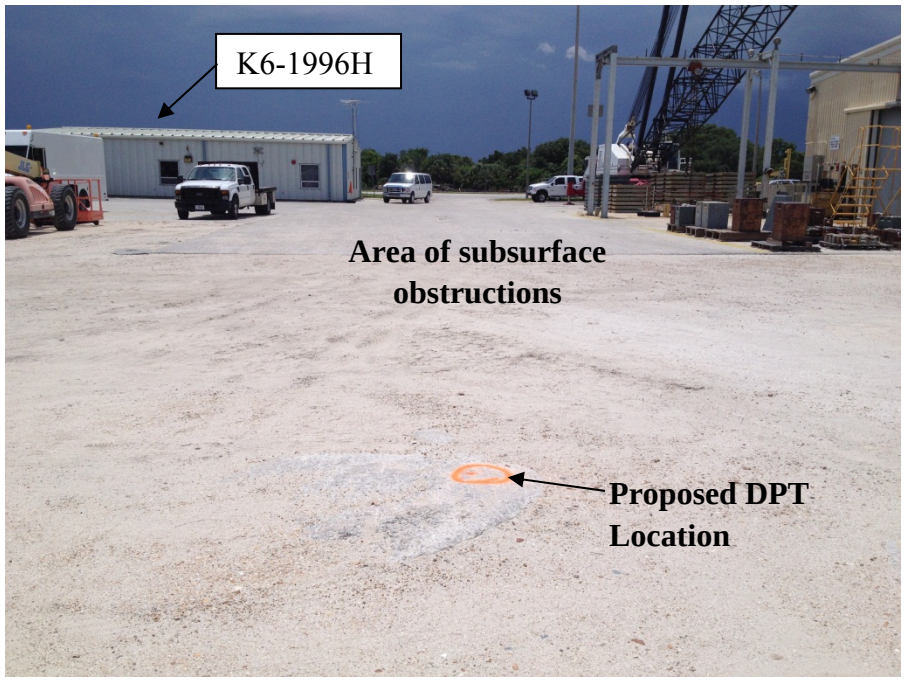
| | |
|---|---|
| Photograph 3<br>Date:<br>December 2011<br>Direction:<br>East<br>Comments: K6-1996H showing approximate DPT and monitoring well locations in immediate vicinity. |  |

| | |
|---|---|
| Photograph 2<br>Date:<br>December 2011<br>Direction:<br>N/A<br>Comments: Sonic drilling activities in the source zone (SB006). | |

GEOSYNTEC CONSULTANTS
Photographic Record

| | |
|---|---|
| Client: NASA | Project Number: FR1681 |
| Site Name: CRHE Area | Site Location: KSC |

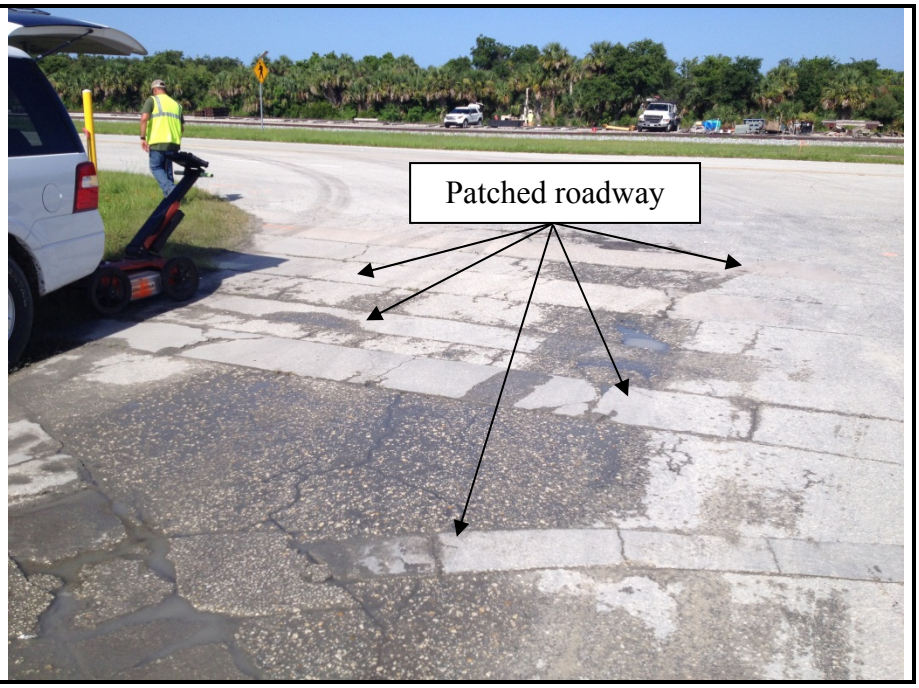
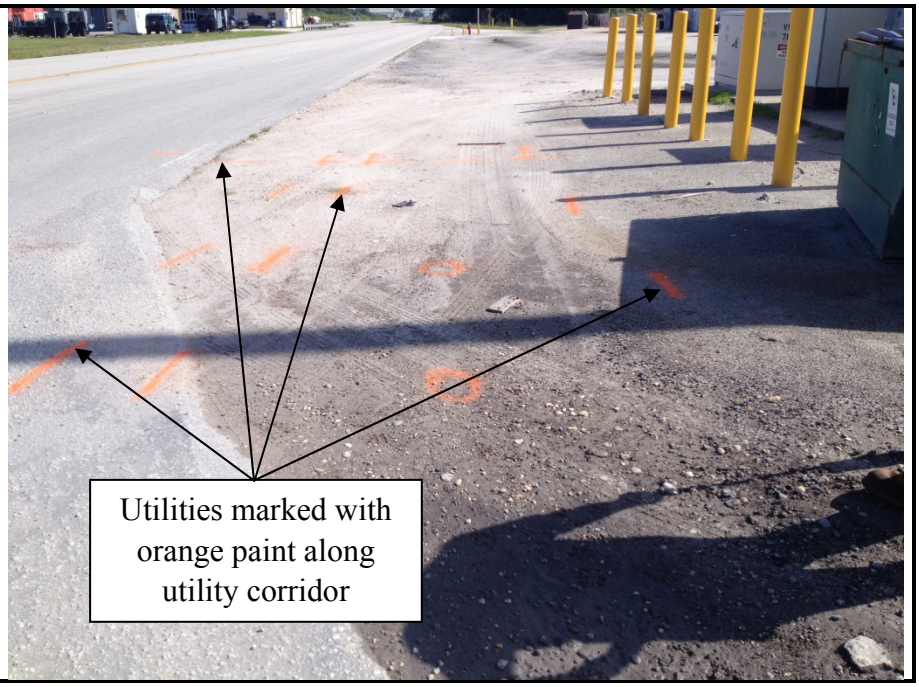
| | |
|---|---|
| Photograph 4 | |
| Date: June 2013 | |
| Direction: West | |
| Comments: Wetlands west of the railroad tracks and DPT0243. | |

| | |
|---|---|
| Photograph 5 |   |
| Date: June 2013 | |
| Direction: West | |
| Comments: Area of subsurface obstructions in driveway leading to the laydown yard from Contractor's Road. Refusal was hit within one foot of the ground surface when attempting the proposed DPT groundwater location within the orange circle. | |

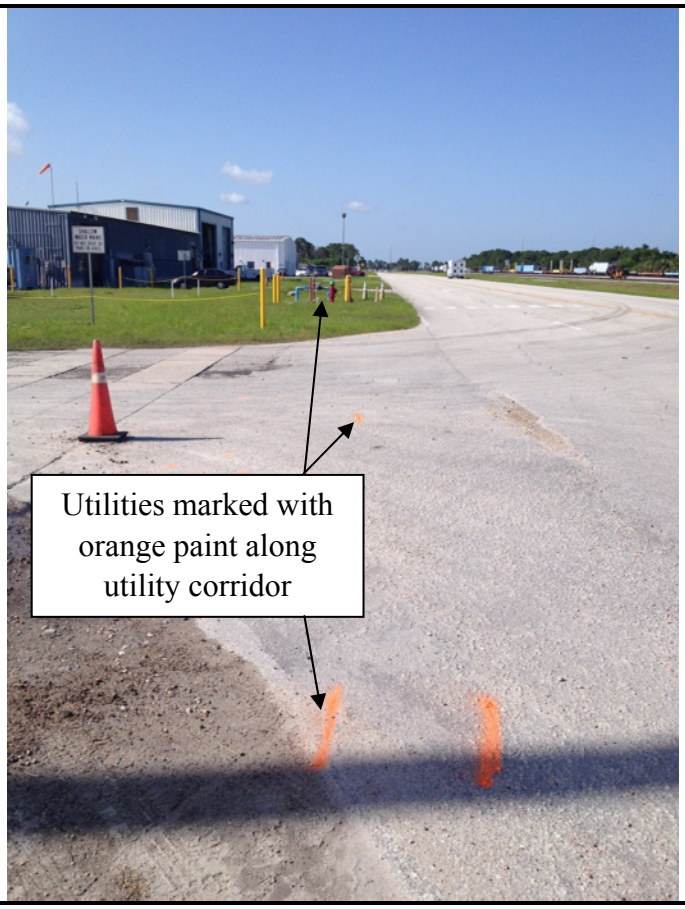
GEOSYNTEC CONSULTANTS
Photographic Record

Geosyntec consultants

| | |
|---|---|
| Client: NASA | Project Number: FR1681 |
| Site Name: CRHE Area | Site Location: KSC |

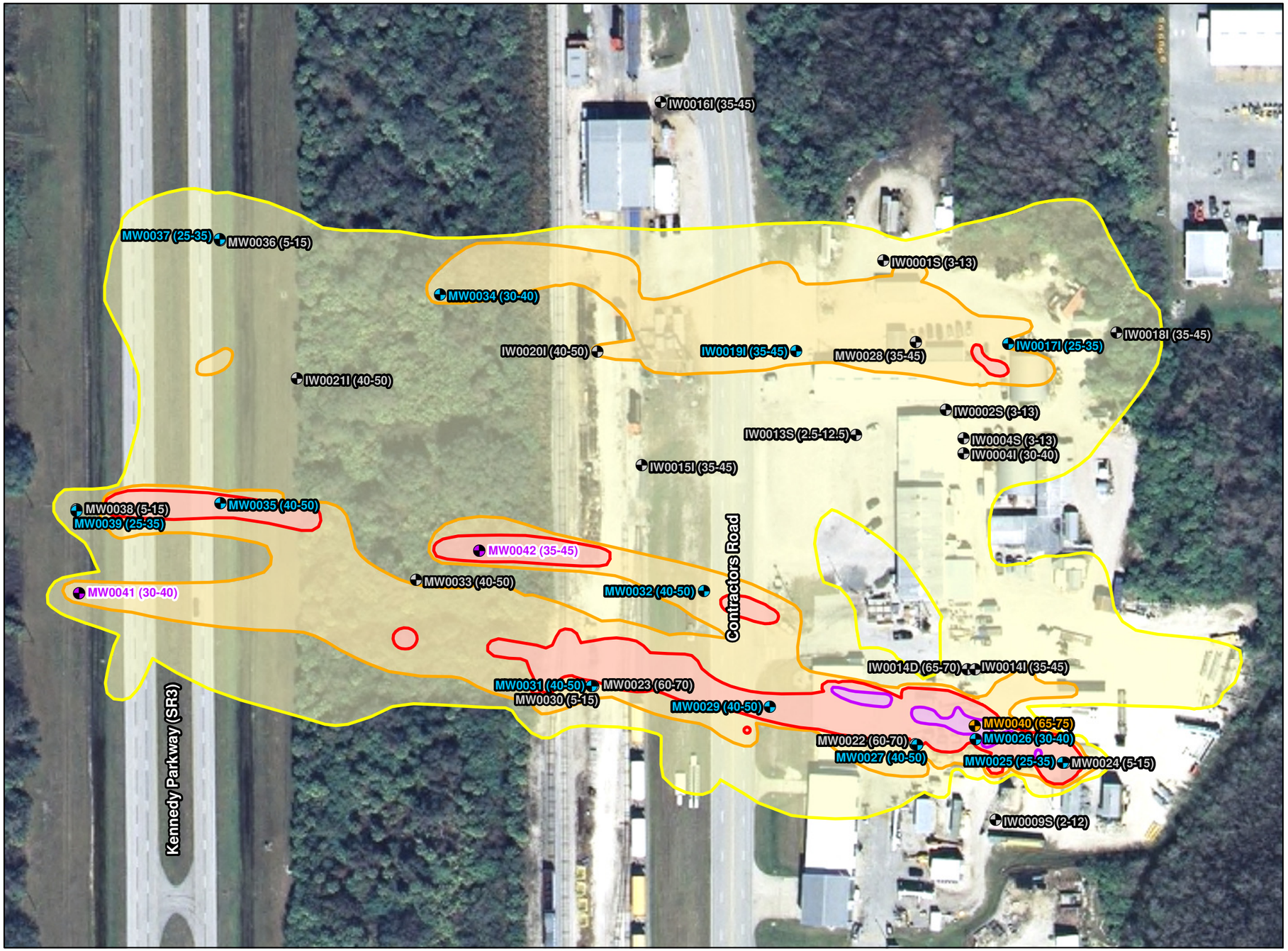
| | |
|---|---|
| Photograph 6<br>Date:<br>June 2013<br>Direction:<br>West<br>Comments: Utility corridor through CRHE Area driveway south of DPT135 and north of DPT127. Patched roadway indicating subsurface utilities, which were verified by the utility locators. |  |
| Photograph 7<br>Date:<br>June 2013<br>Direction:<br>North<br>Comments: Utility corridor north of CRHE Area driveway north of DPT135. Orange paint represents utility lines running parallel with Contractor's Road. |  |

GEOSYNTEC CONSULTANTS
Photographic Record

| | |
|---|---|
| Photograph 8 |  |
| Date:<br>June 2013 | |
| Direction:<br>South | |
| Comments: Utility corridor through and south of CRHE Area driveway south of DPT135. Orange paint represents utility lines running parallel with Contractor's Road. | |

# APPENDIX O

# INTERIM GROUNDWATER MONITORING PLAN




N

120 60 0 120

Feet

**Legend**

- Proposed Monitoring Well Location (Screen Interval)
- Intermediate Monitoring Well Location (Screen Interval)
- Deep Monitoring Well Location (Screen Interval)
- Monitoring Well - Not Part of Interim Groundwater Sampling Plan (Screen Interval)
- Low Concentration Plume
- High Concentration Plume
- Hot Spot
- 1% TCE Solubility Plume

Note:
1. Screen interval is presented in feet, below land surface (ft, BLS).

Path: {Titusville-01\Data\}P:\0GIS\FR1681_CRHE\MXDs\MAR2015\Proposed_MW_MARCH2015.mxd 25 March 2015 MAH

Figure 38
Proposed Monitoring Well Sampling Locations

## Appendix O - Interim Groundwater Monitoring Plan

| Well ID | Screened Interval (ft BLS) | Analytes | Sampling Frequency |
|---|---|---|---|
| CRHE-IW0017I | 25 to 35 | VOCs | Annual** |
| CRHE-IW0019I | 35 to 45 | VOCs | |
| CRHE-MW0025 | 25 to 35 | VOCs; 1,4-D | |
| CRHE-MW0026 | 30 to 40 | VOCs; 1,4-D | |
| CRHE-MW0027 | 40 to 50 | VOCs | |
| CRHE-MW0029 | 40 to 50 | VOCs; 1,4-D | |
| CRHE-MW0031 | 40 to 50 | VOCs | |
| CRHE-MW0032 | 40 to 50 | VOCs | |
| CRHE-MW0034 | 30 to 40 | VOCs | |
| CRHE-MW0035 | 40 to 50 | VOCs; 1,4-D | |
| CRHE-MW0037 | 25 to 35 | VOCs | |
| CRHE-MW0039 | 25 to 35 | VOCs | |
| CRHE-MW0040 | 65 to 75 | VOCs | |
| CRHE-MW0041* | 30 to 40 | VOCs | |
| CRHE-MW0042* | 35 to 45 | VOCs | |

**Notes:**
*Proposed monitoring wells

VOCs = Trichloroethene; cis-1,2-dichloroethane; trans-1,2-dichloroethane; 1,1-dichloroethane; 1,1-dichloroethene; Vinyl Chloride; Acetone; Benzene; Bromodichloromethane; Chlorobenzene; Chloroform; Dibromochloromethane; Dichlorodifluromethane; Methylene Chloride; and Toluene

1,4-D = 1,4-dioxane

**Sampling will be conduct concurrently with interim measures implementation performance monitoring.

# APPENDIX P

# DOCUMENT REVISION LOG

Site Name: Contractor's Road Heavy Equipment (CRHE) Area (SWMU055)

Document Name: CMI Progress Report

Original Document Date: August 2015



| Date | Description of Revision |
|---|---|
| | |
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